

```

#define DECODER_BITS 5
#define LEDES_PER_ROW 5
#define pEN 12
#define MICRO 25

#define p0 4
#define p1 3
#define p2 2
#define p3 6
#define p4 5

#define Z0 7
#define Z1 8
#define Z2 9
#define Z3 10
#define Z4 11

unsigned int decoderPins[] = {p0, p1, p2, p3, p4};
unsigned int cathodePins[] = {Z0, Z1, Z2, Z3, Z4};

//individual LEDES
void LED1() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, LOW);
    digitalWrite(p1, LOW);
    digitalWrite(p2, LOW);
    digitalWrite(p3, LOW);
    digitalWrite(p4, LOW);
}

void LED2() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, HIGH);
    digitalWrite(p1, LOW);
    digitalWrite(p2, LOW);
    digitalWrite(p3, LOW);
    digitalWrite(p4, LOW);
}

void LED3() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, LOW);
    digitalWrite(p1, HIGH);
    digitalWrite(p2, LOW);
}

```

```
    digitalWrite(p3, LOW);
    digitalWrite(p4, LOW);
}
void LED4() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, HIGH);
    digitalWrite(p1, HIGH);
    digitalWrite(p2, LOW);
    digitalWrite(p3, LOW);
    digitalWrite(p4, LOW);
}
void LED5() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, LOW);
    digitalWrite(p1, LOW);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, LOW);
    digitalWrite(p4, LOW);
}
void LED6() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, HIGH);
    digitalWrite(p1, LOW);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, LOW);
    digitalWrite(p4, LOW);
}
void LED7() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, LOW);
    digitalWrite(p1, HIGH);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, LOW);
    digitalWrite(p4, LOW);
}
void LED8() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
```

```
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
}
void LED9() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED10() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED11() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED12() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
```

```
}  
void LED13() {  
    digitalWrite(Z0, HIGH);  
    digitalWrite(Z1, LOW);  
    digitalWrite(Z2, LOW);  
    digitalWrite(Z3, LOW);  
    digitalWrite(Z4, LOW);  
    digitalWrite(p0, LOW);  
    digitalWrite(p1, LOW);  
    digitalWrite(p2, HIGH);  
    digitalWrite(p3, HIGH);  
    digitalWrite(p4, LOW);  
}  
void LED14() {  
    digitalWrite(Z0, HIGH);  
    digitalWrite(Z1, LOW);  
    digitalWrite(Z2, LOW);  
    digitalWrite(Z3, LOW);  
    digitalWrite(Z4, LOW);  
    digitalWrite(p0, HIGH);  
    digitalWrite(p1, LOW);  
    digitalWrite(p2, HIGH);  
    digitalWrite(p3, HIGH);  
    digitalWrite(p4, LOW);  
}  
void LED15() {  
    digitalWrite(Z0, HIGH);  
    digitalWrite(Z1, LOW);  
    digitalWrite(Z2, LOW);  
    digitalWrite(Z3, LOW);  
    digitalWrite(Z4, LOW);  
    digitalWrite(p0, LOW);  
    digitalWrite(p1, HIGH);  
    digitalWrite(p2, LOW);  
    digitalWrite(p3, HIGH);  
    digitalWrite(p4, LOW);  
}  
void LED16() {  
    digitalWrite(Z0, HIGH);  
    digitalWrite(Z1, LOW);  
    digitalWrite(Z2, LOW);  
    digitalWrite(Z3, LOW);  
    digitalWrite(Z4, LOW);  
    digitalWrite(p0, HIGH);  
    digitalWrite(p1, HIGH);  
    digitalWrite(p2, HIGH);  
    digitalWrite(p3, HIGH);  
    digitalWrite(p4, LOW);  
}  
void LED17() {  
    digitalWrite(Z0, HIGH);  
    digitalWrite(Z1, LOW);  
    digitalWrite(Z2, LOW);  
    digitalWrite(Z3, LOW);  
    digitalWrite(Z4, LOW);
```

```
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED18() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED19() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED20() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED21() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED22() {
```

```
digitalWrite(Z0, HIGH);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED23() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED24() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED25() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, HIGH);
}
void LED26() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
```

```
digitalWrite(p1, LOW);  
digitalWrite(p2, LOW);  
digitalWrite(p3, LOW);  
digitalWrite(p4, LOW);  
}
```

```
void LED27() {  
digitalWrite(Z0, LOW);  
digitalWrite(Z1, HIGH);  
digitalWrite(Z2, LOW);  
digitalWrite(Z3, LOW);  
digitalWrite(Z4, LOW);  
digitalWrite(p0, HIGH);  
digitalWrite(p1, LOW);  
digitalWrite(p2, LOW);  
digitalWrite(p3, LOW);  
digitalWrite(p4, LOW);  
}
```

```
void LED28() {  
digitalWrite(Z0, LOW);  
digitalWrite(Z1, HIGH);  
digitalWrite(Z2, LOW);  
digitalWrite(Z3, LOW);  
digitalWrite(Z4, LOW);  
digitalWrite(p0, LOW);  
digitalWrite(p1, HIGH);  
digitalWrite(p2, LOW);  
digitalWrite(p3, LOW);  
digitalWrite(p4, LOW);  
}
```

```
void LED29() {  
digitalWrite(Z0, LOW);  
digitalWrite(Z1, HIGH);  
digitalWrite(Z2, LOW);  
digitalWrite(Z3, LOW);  
digitalWrite(Z4, LOW);  
digitalWrite(p0, HIGH);  
digitalWrite(p1, HIGH);  
digitalWrite(p2, LOW);  
digitalWrite(p3, LOW);  
digitalWrite(p4, LOW);  
}
```

```
void LED30() {  
digitalWrite(Z0, LOW);  
digitalWrite(Z1, HIGH);  
digitalWrite(Z2, LOW);  
digitalWrite(Z3, LOW);  
digitalWrite(Z4, LOW);  
digitalWrite(p0, LOW);  
digitalWrite(p1, LOW);  
digitalWrite(p2, HIGH);  
digitalWrite(p3, LOW);  
digitalWrite(p4, LOW);  
}
```

```
void LED31() {
```

```
digitalWrite(Z0, LOW);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
}
void LED32() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
}
void LED33() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
}
void LED34() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED35() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
```



```
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED36() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED37() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED38() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, HIGH);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED39() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, HIGH);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED40() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, HIGH);
```

```
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED41() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED42() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED43() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED44() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
}
```

```
    digitalWrite(p4, HIGH);
}
void LED45() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, HIGH);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, HIGH);
    digitalWrite(p1, HIGH);
    digitalWrite(p2, LOW);
    digitalWrite(p3, LOW);
    digitalWrite(p4, HIGH);
}
void LED46() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, HIGH);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, LOW);
    digitalWrite(p1, LOW);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, LOW);
    digitalWrite(p4, HIGH);
}
void LED47() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, HIGH);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, HIGH);
    digitalWrite(p1, LOW);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, LOW);
    digitalWrite(p4, HIGH);
}
void LED48() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, HIGH);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, LOW);
    digitalWrite(p1, HIGH);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, LOW);
    digitalWrite(p4, HIGH);
}
void LED49() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, HIGH);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, LOW);
```

```
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED50() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, HIGH);
}
```

```
void LED51() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
}
```

```
void LED52() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
}
```

```
void LED53() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
}
```

```
    digitalWrite(p4, LOW);
}
void LED54() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, HIGH);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, HIGH);
    digitalWrite(p1, HIGH);
    digitalWrite(p2, LOW);
    digitalWrite(p3, LOW);
    digitalWrite(p4, LOW);
}
void LED55() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, HIGH);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, LOW);
    digitalWrite(p1, LOW);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, LOW);
    digitalWrite(p4, LOW);
}
void LED56() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, HIGH);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, HIGH);
    digitalWrite(p1, LOW);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, LOW);
    digitalWrite(p4, LOW);
}
void LED57() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, HIGH);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, LOW);
    digitalWrite(p1, HIGH);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, LOW);
    digitalWrite(p4, LOW);
}
void LED58() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, HIGH);
    digitalWrite(Z3, LOW);
```

```
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
}
void LED59() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED60() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED61() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED62() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
```

```
void LED63() {
  digitalWrite(Z0, LOW);
  digitalWrite(Z1, LOW);
  digitalWrite(Z2, HIGH);
  digitalWrite(Z3, LOW);
  digitalWrite(Z4, LOW);
  digitalWrite(p0, LOW);
  digitalWrite(p1, LOW);
  digitalWrite(p2, HIGH);
  digitalWrite(p3, HIGH);
  digitalWrite(p4, LOW);
}
void LED64() {
  digitalWrite(Z0, LOW);
  digitalWrite(Z1, LOW);
  digitalWrite(Z2, HIGH);
  digitalWrite(Z3, LOW);
  digitalWrite(Z4, LOW);
  digitalWrite(p0, HIGH);
  digitalWrite(p1, LOW);
  digitalWrite(p2, HIGH);
  digitalWrite(p3, HIGH);
  digitalWrite(p4, LOW);
}
void LED65() {
  digitalWrite(Z0, LOW);
  digitalWrite(Z1, LOW);
  digitalWrite(Z2, HIGH);
  digitalWrite(Z3, LOW);
  digitalWrite(Z4, LOW);
  digitalWrite(p0, LOW);
  digitalWrite(p1, HIGH);
  digitalWrite(p2, HIGH);
  digitalWrite(p3, HIGH);
  digitalWrite(p4, LOW);
}
void LED66() {
  digitalWrite(Z0, LOW);
  digitalWrite(Z1, LOW);
  digitalWrite(Z2, HIGH);
  digitalWrite(Z3, LOW);
  digitalWrite(Z4, LOW);
  digitalWrite(p0, HIGH);
  digitalWrite(p1, HIGH);
  digitalWrite(p2, HIGH);
  digitalWrite(p3, HIGH);
  digitalWrite(p4, LOW);
}
void LED67() {
  digitalWrite(Z0, LOW);
  digitalWrite(Z1, LOW);
  digitalWrite(Z2, HIGH);
  digitalWrite(Z3, LOW);
  digitalWrite(Z4, LOW);
  digitalWrite(p0, LOW);
```

```
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED68() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED69() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED70() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED71() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED72() {
digitalWrite(Z0, LOW);
```



```
digitalWrite(Z1, LOW);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED73() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED74() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED75() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, LOW);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, HIGH);
}
void LED76() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
```

```
digitalWrite(p2, LOW);  
digitalWrite(p3, LOW);  
digitalWrite(p4, LOW);  
}
```

```
void LED77() {  
digitalWrite(Z0, LOW);  
digitalWrite(Z1, LOW);  
digitalWrite(Z2, LOW);  
digitalWrite(Z3, HIGH);  
digitalWrite(Z4, LOW);  
digitalWrite(p0, HIGH);  
digitalWrite(p1, LOW);  
digitalWrite(p2, LOW);  
digitalWrite(p3, LOW);  
digitalWrite(p4, LOW);  
}
```

```
void LED78() {  
digitalWrite(Z0, LOW);  
digitalWrite(Z1, LOW);  
digitalWrite(Z2, LOW);  
digitalWrite(Z3, HIGH);  
digitalWrite(Z4, LOW);  
digitalWrite(p0, LOW);  
digitalWrite(p1, HIGH);  
digitalWrite(p2, LOW);  
digitalWrite(p3, LOW);  
digitalWrite(p4, LOW);  
}
```

```
void LED79() {  
digitalWrite(Z0, LOW);  
digitalWrite(Z1, LOW);  
digitalWrite(Z2, LOW);  
digitalWrite(Z3, HIGH);  
digitalWrite(Z4, LOW);  
digitalWrite(p0, HIGH);  
digitalWrite(p1, HIGH);  
digitalWrite(p2, LOW);  
digitalWrite(p3, LOW);  
digitalWrite(p4, LOW);  
}
```

```
void LED80() {  
digitalWrite(Z0, LOW);  
digitalWrite(Z1, LOW);  
digitalWrite(Z2, LOW);  
digitalWrite(Z3, HIGH);  
digitalWrite(Z4, LOW);  
digitalWrite(p0, LOW);  
digitalWrite(p1, LOW);  
digitalWrite(p2, HIGH);  
digitalWrite(p3, LOW);  
digitalWrite(p4, LOW);  
}
```

```
void LED81() {  
digitalWrite(Z0, LOW);
```

```
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
}
void LED82() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
}
void LED83() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
}
void LED84() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED85() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
}
```

```
    digitalWrite(p3, HIGH);
    digitalWrite(p4, LOW);
}
void LED86() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, HIGH);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, LOW);
    digitalWrite(p1, HIGH);
    digitalWrite(p2, LOW);
    digitalWrite(p3, HIGH);
    digitalWrite(p4, LOW);
}
void LED87() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, HIGH);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, HIGH);
    digitalWrite(p1, HIGH);
    digitalWrite(p2, LOW);
    digitalWrite(p3, HIGH);
    digitalWrite(p4, LOW);
}
void LED88() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, HIGH);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, LOW);
    digitalWrite(p1, LOW);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, HIGH);
    digitalWrite(p4, LOW);
}
void LED89() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, HIGH);
    digitalWrite(Z4, LOW);
    digitalWrite(p0, HIGH);
    digitalWrite(p1, LOW);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, HIGH);
    digitalWrite(p4, LOW);
}
void LED90() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
```

```
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED91() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED92() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED93() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED94() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
```

```
}  
void LED95() {  
    digitalWrite(Z0, LOW);  
    digitalWrite(Z1, LOW);  
    digitalWrite(Z2, LOW);  
    digitalWrite(Z3, HIGH);  
    digitalWrite(Z4, LOW);  
    digitalWrite(p0, HIGH);  
    digitalWrite(p1, HIGH);  
    digitalWrite(p2, LOW);  
    digitalWrite(p3, LOW);  
    digitalWrite(p4, HIGH);  
}  
void LED96() {  
    digitalWrite(Z0, LOW);  
    digitalWrite(Z1, LOW);  
    digitalWrite(Z2, LOW);  
    digitalWrite(Z3, HIGH);  
    digitalWrite(Z4, LOW);  
    digitalWrite(p0, LOW);  
    digitalWrite(p1, LOW);  
    digitalWrite(p2, HIGH);  
    digitalWrite(p3, LOW);  
    digitalWrite(p4, HIGH);  
}  
void LED97() {  
    digitalWrite(Z0, LOW);  
    digitalWrite(Z1, LOW);  
    digitalWrite(Z2, LOW);  
    digitalWrite(Z3, HIGH);  
    digitalWrite(Z4, LOW);  
    digitalWrite(p0, HIGH);  
    digitalWrite(p1, LOW);  
    digitalWrite(p2, HIGH);  
    digitalWrite(p3, LOW);  
    digitalWrite(p4, HIGH);  
}  
void LED98() {  
    digitalWrite(Z0, LOW);  
    digitalWrite(Z1, LOW);  
    digitalWrite(Z2, LOW);  
    digitalWrite(Z3, HIGH);  
    digitalWrite(Z4, LOW);  
    digitalWrite(p0, LOW);  
    digitalWrite(p1, HIGH);  
    digitalWrite(p2, HIGH);  
    digitalWrite(p3, LOW);  
    digitalWrite(p4, HIGH);  
}  
void LED99() {  
    digitalWrite(Z0, LOW);  
    digitalWrite(Z1, LOW);  
    digitalWrite(Z2, LOW);  
    digitalWrite(Z3, HIGH);  
    digitalWrite(Z4, LOW);
```

```
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED100() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, HIGH);
}
void LED101() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, HIGH);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
}

void LED102() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, HIGH);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
}
void LED103() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, HIGH);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
}
```

```
void LED104() {
  digitalWrite(Z0, LOW);
  digitalWrite(Z1, LOW);
  digitalWrite(Z2, LOW);
  digitalWrite(Z3, LOW);
  digitalWrite(Z4, HIGH);
  digitalWrite(p0, HIGH);
  digitalWrite(p1, HIGH);
  digitalWrite(p2, LOW);
  digitalWrite(p3, LOW);
  digitalWrite(p4, LOW);
}
void LED105() {
  digitalWrite(Z0, LOW);
  digitalWrite(Z1, LOW);
  digitalWrite(Z2, LOW);
  digitalWrite(Z3, LOW);
  digitalWrite(Z4, HIGH);
  digitalWrite(p0, LOW);
  digitalWrite(p1, LOW);
  digitalWrite(p2, HIGH);
  digitalWrite(p3, LOW);
  digitalWrite(p4, LOW);
}
void LED106() {
  digitalWrite(Z0, LOW);
  digitalWrite(Z1, LOW);
  digitalWrite(Z2, LOW);
  digitalWrite(Z3, LOW);
  digitalWrite(Z4, HIGH);
  digitalWrite(p0, HIGH);
  digitalWrite(p1, LOW);
  digitalWrite(p2, HIGH);
  digitalWrite(p3, LOW);
  digitalWrite(p4, LOW);
}
void LED107() {
  digitalWrite(Z0, LOW);
  digitalWrite(Z1, LOW);
  digitalWrite(Z2, LOW);
  digitalWrite(Z3, LOW);
  digitalWrite(Z4, HIGH);
  digitalWrite(p0, LOW);
  digitalWrite(p1, HIGH);
  digitalWrite(p2, HIGH);
  digitalWrite(p3, LOW);
  digitalWrite(p4, LOW);
}
void LED108() {
  digitalWrite(Z0, LOW);
  digitalWrite(Z1, LOW);
  digitalWrite(Z2, LOW);
  digitalWrite(Z3, LOW);
  digitalWrite(Z4, HIGH);
  digitalWrite(p0, HIGH);
}
```



```
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
}
void LED109() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, HIGH);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED110() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, HIGH);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED111() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, HIGH);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED112() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, HIGH);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED113() {
digitalWrite(Z0, LOW);
```

```
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, HIGH);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, HIGH);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED114() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, HIGH);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, HIGH);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED115() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, HIGH);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED116() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, HIGH);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void LED117() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, HIGH);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
}
```

```
    digitalWrite(p3, LOW);
    digitalWrite(p4, HIGH);
}
void LED118() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, HIGH);
    digitalWrite(p0, HIGH);
    digitalWrite(p1, LOW);
    digitalWrite(p2, LOW);
    digitalWrite(p3, LOW);
    digitalWrite(p4, HIGH);
}
void LED119() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, HIGH);
    digitalWrite(p0, LOW);
    digitalWrite(p1, HIGH);
    digitalWrite(p2, LOW);
    digitalWrite(p3, LOW);
    digitalWrite(p4, HIGH);
}
void LED120() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, HIGH);
    digitalWrite(p0, HIGH);
    digitalWrite(p1, HIGH);
    digitalWrite(p2, LOW);
    digitalWrite(p3, LOW);
    digitalWrite(p4, HIGH);
}
void LED121() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
    digitalWrite(Z3, LOW);
    digitalWrite(Z4, HIGH);
    digitalWrite(p0, LOW);
    digitalWrite(p1, LOW);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, LOW);
    digitalWrite(p4, HIGH);
}
void LED122() {
    digitalWrite(Z0, LOW);
    digitalWrite(Z1, LOW);
    digitalWrite(Z2, LOW);
```

```
digitalWrite(Z3, LOW);
digitalWrite(Z4, HIGH);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED123() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, HIGH);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED124() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, HIGH);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void LED125() {
digitalWrite(Z0, LOW);
digitalWrite(Z1, LOW);
digitalWrite(Z2, LOW);
digitalWrite(Z3, LOW);
digitalWrite(Z4, HIGH);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, HIGH);
}

//COLUMNS
void COL1() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, HIGH);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
```

```
digitalWrite(p3, LOW);  
digitalWrite(p4, LOW);  
}
```

```
void COL2() {  
digitalWrite(Z0, HIGH);  
digitalWrite(Z1, HIGH);  
digitalWrite(Z2, HIGH);  
digitalWrite(Z3, HIGH);  
digitalWrite(Z4, HIGH);  
digitalWrite(p0, HIGH);  
digitalWrite(p1, LOW);  
digitalWrite(p2, LOW);  
digitalWrite(p3, LOW);  
digitalWrite(p4, LOW);  
}
```

```
void COL3() {  
digitalWrite(Z0, HIGH);  
digitalWrite(Z1, HIGH);  
digitalWrite(Z2, HIGH);  
digitalWrite(Z3, HIGH);  
digitalWrite(Z4, HIGH);  
digitalWrite(p0, LOW);  
digitalWrite(p1, HIGH);  
digitalWrite(p2, LOW);  
digitalWrite(p3, LOW);  
digitalWrite(p4, LOW);  
}
```

```
void COL4() {  
digitalWrite(Z0, HIGH);  
digitalWrite(Z1, HIGH);  
digitalWrite(Z2, HIGH);  
digitalWrite(Z3, HIGH);  
digitalWrite(Z4, HIGH);  
digitalWrite(p0, HIGH);  
digitalWrite(p1, HIGH);  
digitalWrite(p2, LOW);  
digitalWrite(p3, LOW);  
digitalWrite(p4, LOW);  
}
```

```
void COL5() {  
digitalWrite(Z0, HIGH);  
digitalWrite(Z1, HIGH);  
digitalWrite(Z2, HIGH);  
digitalWrite(Z3, HIGH);  
digitalWrite(Z4, HIGH);  
digitalWrite(p0, LOW);  
digitalWrite(p1, LOW);  
digitalWrite(p2, HIGH);  
digitalWrite(p3, LOW);  
digitalWrite(p4, LOW);  
}
```

```
void COL6() {  
digitalWrite(Z0, HIGH);  
digitalWrite(Z1, HIGH);
```

```
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, HIGH);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
}
void COL7() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, HIGH);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
}
void COL8() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, HIGH);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
}
void COL9() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, HIGH);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void COL10() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, HIGH);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
}
```

```
    digitalWrite(p4, LOW);
}
void COL11() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, HIGH);
    digitalWrite(Z2, HIGH);
    digitalWrite(Z3, HIGH);
    digitalWrite(Z4, HIGH);
    digitalWrite(p0, LOW);
    digitalWrite(p1, HIGH);
    digitalWrite(p2, LOW);
    digitalWrite(p3, HIGH);
    digitalWrite(p4, LOW);
}
void COL12() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, HIGH);
    digitalWrite(Z2, HIGH);
    digitalWrite(Z3, HIGH);
    digitalWrite(Z4, HIGH);
    digitalWrite(p0, HIGH);
    digitalWrite(p1, HIGH);
    digitalWrite(p2, LOW);
    digitalWrite(p3, HIGH);
    digitalWrite(p4, LOW);
}
void COL13() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, HIGH);
    digitalWrite(Z2, HIGH);
    digitalWrite(Z3, HIGH);
    digitalWrite(Z4, HIGH);
    digitalWrite(p0, LOW);
    digitalWrite(p1, LOW);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, HIGH);
    digitalWrite(p4, LOW);
}
void COL14() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, HIGH);
    digitalWrite(Z2, HIGH);
    digitalWrite(Z3, HIGH);
    digitalWrite(Z4, HIGH);
    digitalWrite(p0, HIGH);
    digitalWrite(p1, LOW);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, HIGH);
    digitalWrite(p4, LOW);
}
void COL15() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, HIGH);
    digitalWrite(Z2, HIGH);
    digitalWrite(Z3, HIGH);
}
```

```
digitalWrite(Z4, HIGH);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void COL16() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, HIGH);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
}
void COL17() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, HIGH);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void COL18() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, HIGH);
digitalWrite(p0, HIGH);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void COL19() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, HIGH);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
```



```
void COL20() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, HIGH);
    digitalWrite(Z2, HIGH);
    digitalWrite(Z3, HIGH);
    digitalWrite(Z4, HIGH);
    digitalWrite(p0, HIGH);
    digitalWrite(p1, HIGH);
    digitalWrite(p2, LOW);
    digitalWrite(p3, LOW);
    digitalWrite(p4, HIGH);
}
void COL21() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, HIGH);
    digitalWrite(Z2, HIGH);
    digitalWrite(Z3, HIGH);
    digitalWrite(Z4, HIGH);
    digitalWrite(p0, LOW);
    digitalWrite(p1, LOW);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, LOW);
    digitalWrite(p4, HIGH);
}
void COL22() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, HIGH);
    digitalWrite(Z2, HIGH);
    digitalWrite(Z3, HIGH);
    digitalWrite(Z4, HIGH);
    digitalWrite(p0, HIGH);
    digitalWrite(p1, LOW);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, LOW);
    digitalWrite(p4, HIGH);
}
void COL23() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, HIGH);
    digitalWrite(Z2, HIGH);
    digitalWrite(Z3, HIGH);
    digitalWrite(Z4, HIGH);
    digitalWrite(p0, LOW);
    digitalWrite(p1, HIGH);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, LOW);
    digitalWrite(p4, HIGH);
}
void COL24() {
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, HIGH);
    digitalWrite(Z2, HIGH);
    digitalWrite(Z3, HIGH);
    digitalWrite(Z4, HIGH);
    digitalWrite(p0, HIGH);
}
```

```
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
}
void COL25() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, HIGH);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, HIGH);
}
```

```
//LAYERS
void LEVELA(){
LED1();
delay(5);
LED2();
delay(5);
LED3();
delay(5);
LED4();
delay(5);
LED5();
delay(5);
LED6();
delay(5);
LED7();
delay(5);
LED8();
delay(5);
LED9();
delay(5);
LED10();
delay(5);
LED11();
delay(5);
LED12();
delay(5);
LED13();
delay(5);
LED14();
delay(5);
LED15();
delay(5);
LED16();
delay(5);
LED17();
delay(5);
LED18();
```

```
delay(5);
LED19();
delay(5);
LED20();
delay(5);
LED21();
delay(5);
LED22();
delay(5);
LED23();
delay(5);
LED24();
delay(5);
LED25();
delay(5);
}
```

```
void LEVELB(){
  LED26();
  delay(5);
  LED27();
  delay(5);
  LED28();
  delay(5);
  LED29();
  delay(5);
  LED25();
  delay(5);
  LED31();
  delay(5);
  LED32();
  delay(5);
  LED33();
  delay(5);
  LED34();
  delay(5);
  LED35();
  delay(5);
  LED36();
  delay(5);
  LED37();
  delay(5);
  LED38();
  delay(5);
  LED39();
  delay(5);
  LED40();
  delay(5);
  LED41();
  delay(5);
  LED42();
  delay(5);
  LED43();
  delay(5);
  LED44();
}
```

```
delay(5);
LED45();
delay(5);
LED46();
delay(5);
LED47();
delay(5);
LED48();
delay(5);
LED49();
delay(5);
LED50();
delay(5);
```

```
}
```

```
void LEVELC(){
```

```
LED51();
delay(5);
LED52();
delay(5);
LED53();
delay(5);
LED54();
delay(5);
LED55();
delay(5);
LED56();
delay(5);
LED57();
delay(5);
LED58();
delay(5);
LED59();
delay(5);
LED60();
delay(5);
LED61();
delay(5);
LED62();
delay(5);
LED63();
delay(5);
LED64();
delay(5);
LED65();
delay(5);
LED66();
delay(5);
LED67();
delay(5);
LED68();
delay(5);
LED69();
delay(5);
```

```
LED70();  
delay(5);  
LED71();  
delay(5);  
LED72();  
delay(5);  
LED73();  
delay(5);  
LED74();  
delay(5);  
LED75();  
delay(5);
```

```
}
```

```
void LEVELD(){
```

```
LED76();  
delay(5);  
LED77();  
delay(5);  
LED78();  
delay(5);  
LED79();  
delay(5);  
LED80();  
delay(5);  
LED81();  
delay(5);  
LED82();  
delay(5);  
LED83();  
delay(5);  
LED84();  
delay(5);  
LED85();  
delay(5);  
LED86();  
delay(5);  
LED87();  
delay(5);  
LED88();  
delay(5);  
LED89();  
delay(5);  
LED90();  
delay(5);  
LED91();  
delay(5);  
LED92();  
delay(5);  
LED93();  
delay(5);  
LED94();  
delay(5);  
LED95();
```

```
delay(5);
LED96();
delay(5);
LED97();
delay(5);
LED98();
delay(5);
LED99();
delay(5);
LED100();
delay(5);
```

```
}
```

```
void LEVELE(){
LED101();
delay(5);
LED102();
delay(5);
LED103();
delay(5);
LED104();
delay(5);
LED105();
delay(5);
LED106();
delay(5);
LED107();
delay(5);
LED108();
delay(5);
LED109();
delay(5);
LED110();
delay(5);
LED111();
delay(5);
LED112();
delay(5);
LED113();
delay(5);
LED114();
delay(5);
LED115();
delay(5);
LED116();
delay(5);
LED117();
delay(5);
LED118();
delay(5);
LED119();
delay(5);
LED120();
delay(5);
```

```
LED121();
delay(5);
LED122();
delay(5);
LED123();
delay(5);
LED124();
delay(5);
LED125();
delay(5);

}

//LETTERS

void A() {
digitalWrite(Z0, HIGH);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);

delay(10);

digitalWrite(Z0, HIGH);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, HIGH);

delay(10);

LED122();
delay(10);
LED123();
delay(10);
LED124();
delay(10);

LED72();
delay(10);
LED73();
delay(10);
LED74();
delay(30);
```

```
}
```

```
void N(){  
  digitalWrite(Z0, HIGH);  
  digitalWrite(Z1, HIGH);  
  digitalWrite(Z2, HIGH);  
  digitalWrite(Z3, HIGH);  
  digitalWrite(Z4, HIGH);  
  digitalWrite(p0, LOW);  
  digitalWrite(p1, LOW);  
  digitalWrite(p2, HIGH);  
  digitalWrite(p3, LOW);  
  digitalWrite(p4, HIGH);
```

```
  delay(10);
```

```
  digitalWrite(Z0, HIGH);  
  digitalWrite(Z1, HIGH);  
  digitalWrite(Z2, HIGH);  
  digitalWrite(Z3, HIGH);  
  digitalWrite(Z4, HIGH);  
  digitalWrite(p0, LOW);  
  digitalWrite(p1, LOW);  
  digitalWrite(p2, LOW);  
  digitalWrite(p3, HIGH);  
  digitalWrite(p4, HIGH);
```

```
  delay(10);
```

```
  LED97();  
  delay(10);  
  LED73();  
  delay(10);  
  LED49();  
  delay(10);  
}
```

```
void I(){  
  digitalWrite(Z0, HIGH);  
  digitalWrite(Z1, HIGH);  
  digitalWrite(Z2, HIGH);  
  digitalWrite(Z3, HIGH);  
  digitalWrite(Z4, HIGH);  
  digitalWrite(p0, LOW);  
  digitalWrite(p1, HIGH);  
  digitalWrite(p2, HIGH);  
  digitalWrite(p3, LOW);  
  digitalWrite(p4, HIGH);  
  delay(10);
```

```
  LED121();  
  delay(10);  
  LED122();  
  delay(10);  
  LED123();
```



```
delay(10);
LED124();
delay(10);
LED125();
delay(10);
LED21();
delay(10);
LED22();
delay(10);
LED23();
delay(10);
LED24();
delay(10);
LED25();
delay(10);
```

```
}
```

```
void E(){
```

```
    digitalWrite(Z0, HIGH);
    digitalWrite(Z1, HIGH);
    digitalWrite(Z2, HIGH);
    digitalWrite(Z3, HIGH);
    digitalWrite(Z4, HIGH);
    digitalWrite(p0, LOW);
    digitalWrite(p1, LOW);
    digitalWrite(p2, HIGH);
    digitalWrite(p3, LOW);
    digitalWrite(p4, HIGH);
```

```
delay(10);
```

```
LED121();
delay(10);
LED122();
delay(10);
LED123();
delay(10);
LED124();
delay(10);
LED125();
delay(10);
LED21();
delay(10);
LED22();
delay(10);
LED23();
delay(10);
LED24();
delay(10);
LED25();
delay(10);
```

```
LED710;  
delay(10);  
LED720;  
delay(10);  
LED730;  
delay(10);  
}
```

```
void D() {  
COL210;  
delay(10);
```

```
LED1220;  
delay(10);  
LED1230;  
delay(10);  
LED1240;  
delay(10);  
LED1000;  
delay(10);  
LED750;  
delay(10);  
LED500;  
delay(10);  
LED220;  
delay(10);  
LED230;  
delay(10);  
LED240;  
delay(10);  
}
```

```
void W(){  
COL210;  
delay(10);  
COL250;  
delay(10);
```

```
LED470;  
delay(10);  
LED490;  
delay(10);  
LED730;  
delay(10);  
}
```

```
void G(){  
COL210;  
delay(10);
```

```
LED1210;  
delay(10);  
LED1220;  
delay(10);
```

```
LED123();  
delay(10);  
LED124();  
delay(10);  
LED125();  
delay(10);
```

```
LED21();  
delay(10);  
LED22();  
delay(10);  
LED23();  
delay(10);  
LED24();  
delay(10);  
LED25();  
delay(10);
```

```
LED50();  
delay(10);  
LED75();  
delay(10);  
LED74();  
delay(10);  
LED73();  
delay(10);  
}
```

```
void H(){  
COL21();  
delay(10);  
COL25();  
delay(10);
```

```
LED72();  
delay(10);  
LED73();  
delay(10);  
LED74();  
delay(10);  
}
```

```
void T(){  
COL23();  
delay(10);  
LED121();  
delay(10);  
LED122();  
delay(10);  
LED124();  
delay(10);  
LED125();  
delay(10);  
}
```

```
void S(){  
  LED121();  
  delay(10);  
  LED122();  
  delay(10);  
  LED123();  
  delay(10);  
  LED124();  
  delay(10);  
  LED125();  
  delay(10);
```

```
  LED96();  
  delay(10);
```

```
  LED71();  
  delay(10);  
  LED72();  
  delay(10);  
  LED73();  
  delay(10);  
  LED74();  
  delay(10);  
  LED75();  
  delay(10);
```

```
  LED50();  
  delay(10);
```

```
  LED21();  
  delay(10);  
  LED22();  
  delay(10);  
  LED23();  
  delay(10);  
  LED24();  
  delay(10);  
  LED25();  
  delay(10);  
}
```

```
void C(){  
  LED121();  
  delay(10);  
  LED122();  
  delay(10);  
  LED123();  
  delay(10);  
  LED124();  
  delay(10);  
  LED125();  
  delay(10);
```

```
  COL21();  
  delay(10);
```

```
LED21();  
delay(10);  
LED22();  
delay(10);  
LED23();  
delay(10);  
LED24();  
delay(10);  
LED25();  
delay(10);  
}
```

```
void O(){  
COL21();  
delay(10);  
COL25();  
delay(10);
```

```
LED122();  
delay(10);  
LED123();  
delay(10);  
LED124();  
delay(10);
```

```
LED22();  
delay(10);  
LED23();  
delay(10);  
LED24();  
delay(10);  
}
```

```
void L(){  
COL21();  
delay(10);
```

```
LED22();  
delay(10);  
LED23();  
delay(10);  
LED24();  
delay(10);  
LED25();  
delay(10);  
}
```

```
//PATTERNS  
void FADEBACK(){  
COL21();  
delay(5);  
COL22();
```

delay(5);
COL230;
delay(5);
COL240;
delay(5);
COL250;
delay(5);
COL210;
delay(5);
COL220;
delay(5);
COL230;
delay(5);
COL240;
delay(5);
COL250;
delay(5);
COL210;
delay(5);
COL220;
delay(5);
COL230;
delay(5);
COL240;
delay(5);
COL250;
delay(30);

COL160;
delay(5);
COL170;
delay(5);
COL180;
delay(5);
COL190;
delay(5);
COL200;
delay(5);
COL160;
delay(5);
COL170;
delay(5);
COL180;
delay(5);
COL190;
delay(5);
COL200;
delay(5);
COL160;
delay(5);
COL170;
delay(5);
COL180;
delay(5);
COL190;

delay(5);
COL20();
delay(30);

COL11();
delay(5);
COL12();
delay(5);
COL13();
delay(5);
COL14();
delay(5);
COL15();
delay(5);
COL11();
delay(5);
COL12();
delay(5);
COL13();
delay(5);
COL14();
delay(5);
COL15();
delay(5);
COL11();
delay(5);
COL12();
delay(5);
COL13();
delay(5);
COL14();
delay(5);
COL15();
delay(30);

COL6();
delay(5);
COL7();
delay(5);
COL8();
delay(5);
COL9();
delay(5);
COL10();
delay(5);
COL6();
delay(5);
COL7();
delay(5);
COL8();
delay(5);
COL9();
delay(5);
COL10();
delay(5);

```
COL6();  
delay(5);  
COL7();  
delay(5);  
COL8();  
delay(5);  
COL9();  
delay(5);  
COL10();  
delay(30);
```

```
COL1();  
delay(5);  
COL2();  
delay(5);  
COL3();  
delay(5);  
COL4();  
delay(5);  
COL5();  
delay(5);  
COL1();  
delay(5);  
COL2();  
delay(5);  
COL3();  
delay(5);  
COL4();  
delay(5);  
COL5();  
delay(5);  
COL1();  
delay(5);  
COL2();  
delay(5);  
COL3();  
delay(5);  
COL4();  
delay(5);  
COL5();  
delay(30);
```

```
}
```

```
void FADEFRONT(){  
COL1();  
delay(5);  
COL2();  
delay(5);  
COL3();  
delay(5);  
COL4();  
delay(5);  
COL5();  
delay(5);
```


COL10;
delay(5);
COL20;
delay(5);
COL30;
delay(5);
COL40;
delay(5);
COL50;
delay(5);
COL10;
delay(5);
COL20;
delay(5);
COL30;
delay(5);
COL40;
delay(5);
COL50;
delay(30);

COL60;
delay(5);
COL70;
delay(5);
COL80;
delay(5);
COL90;
delay(5);
COL100;
delay(5);
COL60;
delay(5);
COL70;
delay(5);
COL80;
delay(5);
COL90;
delay(5);
COL100;
delay(5);
COL60;
delay(5);
COL70;
delay(5);
COL80;
delay(5);
COL90;
delay(5);
COL100;
delay(30);

COL110;
delay(5);
COL120;

delay(5);
COL130;
delay(5);
COL140;
delay(5);
COL150;
delay(5);
COL110;
delay(5);
COL120;
delay(5);
COL130;
delay(5);
COL140;
delay(5);
COL150;
delay(5);
COL110;
delay(5);
COL120;
delay(5);
COL130;
delay(5);
COL140;
delay(5);
COL150;
delay(30);

COL160;
delay(5);
COL170;
delay(5);
COL180;
delay(5);
COL190;
delay(5);
COL200;
delay(5);
COL160;
delay(5);
COL170;
delay(5);
COL180;
delay(5);
COL190;
delay(5);
COL200;
delay(5);
COL160;
delay(5);
COL170;
delay(5);
COL180;
delay(5);
COL190;

```
delay(5);  
COL20();  
delay(30);
```

```
COL21();  
delay(5);  
COL22();  
delay(5);  
COL23();  
delay(5);  
COL24();  
delay(5);  
COL25();  
delay(5);  
COL21();  
delay(5);  
COL22();  
delay(5);  
COL23();  
delay(5);  
COL24();  
delay(5);  
COL25();  
delay(5);  
COL21();  
delay(5);  
COL22();  
delay(5);  
COL23();  
delay(5);  
COL24();  
delay(5);  
COL25();  
delay(30);
```

```
}
```

```
void COLFADER(){  
COL1();  
delay(30);
```

```
COL2();  
delay(5);  
COL6();  
COL2();  
delay(5);  
COL6();  
COL2();  
delay(5);  
COL6();  
COL2();  
delay(5);  
COL6();  
COL2();  
delay(5);
```

COL60;
delay(30);

COL30;
delay(5);
COL70;
delay(5);
COL110;
delay(5);
COL30;
delay(5);
COL70;
delay(5);
COL110;
delay(5);
COL30;
delay(5);
COL70;
delay(5);
COL110;
delay(5);
COL30;
delay(5);
COL70;
delay(5);
COL110;
delay(5);
COL30;
delay(5);
COL70;
delay(5);
COL110;
delay(30);

COL40;
delay(5);
COL80;
delay(5);
COL120;
delay(5);
COL160;
delay(5);
COL40;
delay(5);
COL80;
delay(5);
COL120;
delay(5);
COL160;
delay(5);
COL40;
delay(5);
COL80;
delay(5);
COL120;

delay(5);
COL160;
delay(5);
COL40;
delay(5);
COL80;
delay(5);
COL120;
delay(5);
COL160;
delay(5);
COL40;
delay(5);
COL80;
delay(5);
COL120;
delay(5);
COL160;
delay(30);

COL50;
delay(5);
COL90;
delay(5);
COL130;
delay(5);
COL170;
delay(5);
COL210;
delay(5);
COL50;
delay(5);
COL90;
delay(5);
COL130;
delay(5);
COL170;
delay(5);
COL210;
delay(5);
COL50;
delay(5);
COL90;
delay(5);
COL130;
delay(5);
COL170;
delay(5);
COL210;
delay(5);
COL50;
delay(5);
COL90;
delay(5);
COL130;

delay(5);
COL170;
delay(5);
COL210;
delay(5);
COL50;
delay(5);
COL90;
delay(5);
COL130;
delay(5);
COL170;
delay(5);
COL210;
delay(30);

COL100;
delay(5);
COL140;
delay(5);
COL180;
delay(5);
COL220;
delay(5);
COL100;
delay(5);
COL140;
delay(5);
COL180;
delay(5);
COL220;
delay(5);
COL100;
delay(5);
COL140;
delay(5);
COL180;
delay(5);
COL220;
delay(5);
COL100;
delay(5);
COL140;
delay(5);
COL180;
delay(5);
COL220;
delay(5);
COL100;
delay(5);
COL140;
delay(5);
COL180;
delay(5);
COL220;

delay(30);

COL15Q;
delay(5);
COL19Q;
delay(5);
COL23Q;
delay(5);
COL15Q;
delay(5);
COL19Q;
delay(5);
COL23Q;
delay(5);
COL15Q;
delay(5);
COL19Q;
delay(5);
COL23Q;
delay(5);
COL15Q;
delay(5);
COL19Q;
delay(5);
COL23Q;
delay(5);
COL15Q;
delay(5);
COL19Q;
delay(5);
COL23Q;
delay(30);

COL20Q;
delay(5);
COL24Q;
delay(5);
COL20Q;
delay(5);
COL24Q;
delay(5);
COL20Q;
delay(5);
COL24Q;
delay(5);
COL20Q;
delay(5);
COL24Q;
delay(5);
COL20Q;
delay(5);
COL24Q;
delay(30);

COL25Q;

```
delay(30);
```

```
}
```

```
void COLFADEL(){
```

```
    COL25();  
    delay(30);
```

```
    COL20();  
    delay(5);  
    COL24();  
    delay(5);  
    COL20();  
    delay(5);  
    COL24();  
    delay(5);  
    COL20();  
    delay(5);  
    COL24();  
    delay(5);  
    COL20();  
    delay(5);  
    COL24();  
    delay(5);  
    COL20();  
    delay(5);  
    COL24();  
    delay(30);
```

```
    COL15();  
    delay(5);  
    COL19();  
    delay(5);  
    COL23();  
    delay(5);  
    COL15();  
    delay(5);  
    COL19();  
    delay(5);  
    COL23();  
    delay(5);  
    COL15();  
    delay(5);  
    COL19();  
    delay(5);  
    COL23();  
    delay(5);  
    COL15();  
    delay(5);  
    COL19();  
    delay(5);  
    COL23();  
    delay(5);  
    COL15();  
    delay(5);  
    COL19();  
    delay(5);  
    COL23();  
    delay(5);  
    COL15();
```


delay(5);
COL190;
delay(5);
COL230;
delay(30);

COL100;
delay(5);
COL140;
delay(5);
COL180;
delay(5);
COL220;
delay(5);
COL100;
delay(5);
COL140;
delay(5);
COL180;
delay(5);
COL220;
delay(5);
COL100;
delay(5);
COL140;
delay(5);
COL180;
delay(5);
COL220;
delay(5);
COL100;
delay(5);
COL140;
delay(5);
COL180;
delay(5);
COL220;
delay(30);

COL50;
delay(5);
COL90;
delay(5);
COL130;
delay(5);
COL170;
delay(5);

COL210;
delay(5);
COL50;
delay(5);
COL90;
delay(5);
COL130;
delay(5);
COL170;
delay(5);
COL210;
delay(5);
COL50;
delay(5);
COL90;
delay(5);
COL130;
delay(5);
COL170;
delay(5);
COL210;
delay(5);
COL50;
delay(5);
COL90;
delay(5);
COL130;
delay(5);
COL170;
delay(5);
COL210;
delay(5);
COL50;
delay(5);
COL90;
delay(5);
COL130;
delay(5);
COL170;
delay(5);
COL210;
delay(30);

COL40;
delay(5);
COL80;
delay(5);
COL120;
delay(5);
COL160;
delay(5);
COL40;
delay(5);
COL80;
delay(5);

COL120;
delay(5);
COL160;
delay(5);
COL40;
delay(5);
COL80;
delay(5);
COL120;
delay(5);
COL160;
delay(5);
COL40;
delay(5);
COL80;
delay(5);
COL120;
delay(5);
COL160;
delay(5);
COL40;
delay(5);
COL80;
delay(5);
COL120;
delay(5);
COL160;
delay(30);

COL30;
delay(5);
COL70;
delay(5);
COL110;
delay(5);
COL30;
delay(5);
COL70;
delay(5);
COL110;
delay(5);
COL30;
delay(5);
COL70;
delay(5);
COL110;
delay(5);
COL30;
delay(5);
COL70;
delay(5);
COL110;
delay(5);
COL30;
delay(5);

```
COL7();  
delay(5);  
COL11();  
delay(30);
```

```
COL2();  
delay(5);  
COL6();  
COL2();  
delay(5);  
COL6();  
COL2();  
delay(5);  
COL6();  
COL2();  
delay(5);  
COL6();  
COL2();  
delay(5);  
COL6();  
delay(30);
```

```
COL1();  
delay(30);
```

```
}  
void SPIRAL() {  
COL1();  
delay(25);  
COL2();  
delay(25);  
COL3();  
delay(25);  
COL4();  
delay(25);  
COL5();  
delay(25);  
COL10();  
delay(25);  
COL15();  
delay(25);  
COL20();  
delay(25);  
COL25();  
delay(25);  
COL24();  
delay(25);  
COL23();  
delay(25);  
COL22();  
delay(25);  
COL21();  
delay(25);  
}
```

COL16();
delay(25);
COL11();
delay(25);
COL6();
delay(25);
COL7();
delay(25);
COL8();
delay(25);
COL9();
delay(25);
COL14();
delay(25);
COL19();
delay(25);
COL18();
delay(25);
COL17();
delay(25);
COL12();
delay(25);
COL13();
delay(25);
COL12();
delay(25);
COL17();
delay(25);
COL18();
delay(25);
COL19();
delay(25);
COL14();
delay(25);
COL9();
delay(25);
COL8();
delay(25);
COL7();
delay(25);
COL6();
delay(25);
COL11();
delay(25);
COL16();
delay(25);
COL21();
delay(25);
COL22();
delay(25);
COL23();
delay(25);
COL24();
delay(25);
COL25();

```
delay(25);
COL20();
delay(25);
COL15();
delay(25);
COL10();
delay(25);
COL5();
delay(25);
COL4();
delay(25);
COL3();
delay(25);
COL2();
delay(25);
COL1();
delay(25);
```

```
}
```

```
void TESTLED() {
  LED1();
  delay(25);
  LED2();
  delay(25);
  LED3();
  delay(25);
  LED4();
  delay(25);
  LED5();
  delay(25);
  LED6();
  delay(25);
  LED7();
  delay(25);
  LED8();
  delay(25);
  LED9();
  delay(25);
  LED10();
  delay(25);
  LED11();
  delay(25);
  LED12();
  delay(25);
  LED13();
  delay(25);
  LED14();
  delay(25);
  LED15();
  delay(25);
  LED16();
  delay(25);
  LED17();
  delay(25);
```

```
LED18();
delay(25);
LED19();
delay(25);
LED20();
delay(25);
LED21();
delay(25);
LED22();
delay(25);
LED23();
delay(25);
LED24();
delay(25);
LED25();
delay(25);
LED26();
delay(25);
LED27();
delay(25);
LED28();
delay(25);
LED29();
delay(25);
LED30();
delay(25);
LED31();
delay(25);
LED32();
delay(25);
LED33();
delay(25);
LED34();
delay(25);
LED35();
delay(25);
LED36();
delay(25);
LED37();
delay(25);
LED38();
delay(25);
LED39();
delay(25);
LED40();
delay(25);
LED41();
delay(25);
LED42();
delay(25);
LED43();
delay(25);
LED44();
delay(25);
LED45();
```

```
delay(25);
LED46();
delay(25);
LED47();
delay(25);
LED48();
delay(25);
LED49();
delay(25);
LED50();
delay(25);
LED51();
delay(25);
LED52();
delay(25);
LED53();
delay(25);
LED54();
delay(25);
LED55();
delay(25);
LED56();
delay(25);
LED57();
delay(25);
LED58();
delay(25);
LED59();
delay(25);
LED60();
delay(25);
LED61();
delay(25);
LED62();
delay(25);
LED63();
delay(25);
LED64();
delay(25);
LED65();
delay(25);
LED66();
delay(25);
LED67();
delay(25);
LED68();
delay(25);
LED69();
delay(25);
LED70();
delay(25);
LED71();
delay(25);
LED72();
delay(25);
```



```
LED73();
delay(25);
LED74();
delay(25);
LED75();
delay(25);
LED76();
delay(25);
LED77();
delay(25);
LED78();
delay(25);
LED79();
delay(25);
LED80();
delay(25);
LED81();
delay(25);
LED82();
delay(25);
LED83();
delay(25);
LED84();
delay(25);
LED85();
delay(25);
LED86();
delay(25);
LED87();
delay(25);
LED88();
delay(25);
LED89();
delay(25);
LED90();
delay(25);
LED91();
delay(25);
LED92();
delay(25);
LED93();
delay(25);
LED94();
delay(25);
LED95();
delay(25);
LED96();
delay(25);
LED97();
delay(25);
LED98();
delay(25);
LED99();
delay(25);
LED100();
```

```
delay(25);
LED101();
delay(25);
LED102();
delay(25);
LED103();
delay(25);
LED104();
delay(25);
LED105();
delay(25);
LED106();
delay(25);
LED107();
delay(25);
LED108();
delay(25);
LED109();
delay(25);
LED110();
delay(25);
LED111();
delay(25);
LED112();
delay(25);
LED113();
delay(25);
LED114();
delay(25);
LED115();
delay(25);
LED116();
delay(25);
LED117();
delay(25);
LED118();
delay(25);
LED119();
delay(25);
LED120();
delay(25);
LED121();
delay(25);
LED122();
delay(25);
LED123();
delay(25);
LED124();
delay(25);
LED125();
delay(25);
}
```

```
void ANNIE(){
```

```
AO;
AO;
AO;
AO;
AO;
AO;
delay(30);
NO;
NO;
NO;
NO;
NO;
NO;
delay(150);
NO;
NO;
NO;
NO;
NO;
NO;
delay(30);
IO;
IO;
IO;
IO;
IO;
IO;
delay(30);
EO;
EO;
EO;
EO;
EO;
EO;
delay(30);
}
```

```
//void DWIGHT(){
//DO;
//DO;
//DO;
//DO;
//DO;
//DO;
//delay(30);
//WO;
//WO;
//WO;
//WO;
//WO;
//WO;
//delay(30);
//IO;
//IO;
```



```
//L0;  
//L0;  
//L0;  
//L0;  
//L0;  
//L0;  
//L0;  
//delay(200);  
//  
//}
```

```
void AMOVE() {  
  digitalWrite(Z0, HIGH);  
  digitalWrite(Z1, HIGH);  
  digitalWrite(Z2, HIGH);  
  digitalWrite(Z3, HIGH);  
  digitalWrite(Z4, LOW);  
  digitalWrite(p0, LOW);  
  digitalWrite(p1, LOW);  
  digitalWrite(p2, HIGH);  
  digitalWrite(p3, LOW);  
  digitalWrite(p4, HIGH);
```

```
  delay(10);
```

```
  digitalWrite(Z0, HIGH);  
  digitalWrite(Z1, HIGH);  
  digitalWrite(Z2, HIGH);  
  digitalWrite(Z3, HIGH);  
  digitalWrite(Z4, LOW);  
  digitalWrite(p0, LOW);  
  digitalWrite(p1, LOW);  
  digitalWrite(p2, LOW);  
  digitalWrite(p3, HIGH);  
  digitalWrite(p4, HIGH);
```

```
  delay(10);
```

```
  LED122();  
  delay(10);  
  LED123();  
  delay(10);  
  LED124();  
  delay(10);
```

```
  LED72();  
  delay(10);  
  LED73();  
  delay(10);  
  LED74();  
  delay(30);
```

```
  digitalWrite(Z0, HIGH);  
  digitalWrite(Z1, HIGH);  
  digitalWrite(Z2, HIGH);
```

```
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, HIGH);
digitalWrite(p1, HIGH);
digitalWrite(p2, HIGH);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
```

```
delay(10);
```

```
digitalWrite(Z0, HIGH);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, HIGH);
```

```
delay(10);
```

```
LED117();
delay(10);
LED118();
delay(10);
LED119();
delay(10);
```

```
LED67();
delay(10);
LED68();
delay(10);
LED69();
delay(30);
```

```
digitalWrite(Z0, HIGH);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, HIGH);
digitalWrite(p2, LOW);
digitalWrite(p3, HIGH);
digitalWrite(p4, LOW);
```

```
delay(10);
```

```
digitalWrite(Z0, HIGH);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
```

```
digitalWrite(Z4, LOW);  
digitalWrite(p0, LOW);  
digitalWrite(p1, HIGH);  
digitalWrite(p2, LOW);  
digitalWrite(p3, HIGH);  
digitalWrite(p4, LOW);
```

```
delay(10);
```

```
LED112();  
delay(10);  
LED113();  
delay(10);  
LED114();  
delay(10);
```

```
LED62();  
delay(10);  
LED63();  
delay(10);  
LED64();  
delay(30);
```

```
digitalWrite(Z0, HIGH);  
digitalWrite(Z1, HIGH);  
digitalWrite(Z2, HIGH);  
digitalWrite(Z3, HIGH);  
digitalWrite(Z4, LOW);  
digitalWrite(p0, HIGH);  
digitalWrite(p1, LOW);  
digitalWrite(p2, HIGH);  
digitalWrite(p3, LOW);  
digitalWrite(p4, LOW);
```

```
delay(10);
```

```
digitalWrite(Z0, HIGH);  
digitalWrite(Z1, HIGH);  
digitalWrite(Z2, HIGH);  
digitalWrite(Z3, HIGH);  
digitalWrite(Z4, LOW);  
digitalWrite(p0, HIGH);  
digitalWrite(p1, LOW);  
digitalWrite(p2, LOW);  
digitalWrite(p3, HIGH);  
digitalWrite(p4, LOW);
```

```
delay(10);
```

```
LED107();  
delay(10);  
LED108();  
delay(10);  
LED109();  
delay(10);
```

```
LED57();
delay(10);
LED58();
delay(10);
LED59();
delay(30);
```

```
digitalWrite(Z0, HIGH);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, LOW);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
```

```
delay(10);
```

```
digitalWrite(Z0, HIGH);
digitalWrite(Z1, HIGH);
digitalWrite(Z2, HIGH);
digitalWrite(Z3, HIGH);
digitalWrite(Z4, LOW);
digitalWrite(p0, LOW);
digitalWrite(p1, LOW);
digitalWrite(p2, HIGH);
digitalWrite(p3, LOW);
digitalWrite(p4, LOW);
```

```
delay(10);
```

```
LED102();
delay(10);
LED103();
delay(10);
LED104();
delay(10);
```

```
LED52();
delay(10);
LED53();
delay(10);
LED54();
delay(30);
```

```
}
```

```
void LEVELS() {
LEVELA();
LEVELA();
LEVELA();
LEVELA();
}
```



```
LEVELA();  
LEVELB();  
LEVELB();  
LEVELB();  
LEVELB();  
LEVELB();  
LEVELB();  
LEVELC();  
LEVELC();  
LEVELC();  
LEVELC();  
LEVELC();  
LEVELD();  
LEVELD();  
LEVELD();  
LEVELD();  
LEVELD();  
LEVELD();  
LEVELE();  
LEVELE();  
LEVELE();  
LEVELE();  
LEVELE();
```

```
}
```

```
void setup() {  
  //set decoder pins to low  
  pinMode(p0, OUTPUT);  
  digitalWrite(p0, LOW);  
  pinMode(p1, OUTPUT);  
  digitalWrite(p0, LOW);  
  pinMode(p2, OUTPUT);  
  digitalWrite(p0, LOW);  
  pinMode(p3, OUTPUT);  
  digitalWrite(p0, LOW);  
  pinMode(p4, OUTPUT);  
  digitalWrite(p0, LOW);  
  
  //set cathode pins to low  
  pinMode(Z0, OUTPUT);  
  digitalWrite(Z0, LOW);  
  pinMode(Z1, OUTPUT);  
  digitalWrite(Z1, LOW);  
  pinMode(Z2, OUTPUT);  
  digitalWrite(Z2, LOW);  
  pinMode(Z3, OUTPUT);  
  digitalWrite(Z3, LOW);  
  pinMode(Z4, OUTPUT);  
  digitalWrite(Z4, LOW);  
  
  //enable decoders  
  pinMode(pEN, OUTPUT);  
  digitalWrite(pEN, HIGH);
```

```
}  
  
void loop() {  
  TESTLED();  
  TESTLED();  
  TESTLED();  
  A();  
  A();  
  A();  
  A();  
  A();  
  A();  
  A();  
  A();  
  A();  
  AMOVE();  
  AMOVE();  
  AMOVE();  
  AMOVE();  
  AMOVE();  
  LEVELS();  
  LEVELS();  
  ANNIE();  
  ANNIE();  
  SPIRAL();  
  SPIRAL();  
  SPIRAL();  
  SPIRAL();  
  COLFADER();  
  COLFADER();  
  COLFADER();  
  COLFADEL();  
  COLFADEL();  
  COLFADEL();  
  COLFADEL();  
  COLFADER();  
  COLFADEL();  
  COLFADER();  
  COLFADEL();  
  COLFADER();  
  COLFADEL();  
  COLFADER();  
  COLFADEL();  
  FADEFRONT();  
  FADEFRONT();  
  FADEFRONT();  
  FADEBACK();  
  FADEBACK();  
  FADEBACK();  
  FADEFRONT();  
  FADEBACK();  
  FADEFRONT();  
  FADEBACK();  
  FADEFRONT();  
  FADEBACK();  
  // DWIGHT();  
}
```