```
int a = 5;

int b = 7;

int c = 9;

int d = 11;

int e = 12;

int f = 6;

int g = 8;

int p = 10;


int d4 = 4;

int d3 = 3;

int d2 = 2;

int d1 = 1;


int startStopReset = 13;



long n = 0;

int x = 100;

int del = 55;

int currState = 0;


void setup()

{

  pinMode(d1, OUTPUT);

  pinMode(d2, OUTPUT);
```

```arduino
  pinMode(d3, OUTPUT);

  pinMode(d4, OUTPUT);

  pinMode(a, OUTPUT);

  pinMode(b, OUTPUT);

  pinMode(c, OUTPUT);

  pinMode(d, OUTPUT);

  pinMode(e, OUTPUT);

  pinMode(f, OUTPUT);

  pinMode(g, OUTPUT);

  pinMode(p, OUTPUT);

  pinMode(startStopReset, INPUT);

  digitalWrite(startStopReset, HIGH);


}


void loop()

{


  int swButtonState = digitalRead(startStopReset);


  if(swButtonState == LOW) {

    currState++;

    while (digitalRead(startStopReset) == LOW) {}

  }



  clearLEDs();

  pickDigit(1);
```

```
    pickNumber((n/x/1000)%10);

    delayMicroseconds(del);


    clearLEDs();

    pickDigit(2);

    pickNumber((n/x/100)%10);

    delayMicroseconds(del);


    clearLEDs();

    pickDigit(3);

    dispDec(3);

    pickNumber((n/x/10)%10);

    delayMicroseconds(del);


    clearLEDs();

    pickDigit(4);

    pickNumber(n/x%10);

    delayMicroseconds(del);


    if ((currstate%3) == 0)

    n=0;

    else if ((currstate%3) == 1)

    n++;

    else

    {}

}
```

```
  switch(x)

  {

  case 1:

    digitalWrite(d1, LOW);

    break;

  case 2:

    digitalWrite(d2, LOW);

    break;

  case 3:

    digitalWrite(d3, LOW);

    digitalWrite(p, HIGH);

    break;

  default:

    digitalWrite(d4, LOW);

    break;

  }

}

void pickNumber(int x)

{

  switch(x)

  {

  default:

    zero();

    break;

  case 1:

    one();
```

```
      break;
   case 2:
    two();
      break;
   case 3:
    three();
      break;
   case 4:
    four();
      break;
   case 5:
    five();
      break;
   case 6:
    six();
      break;
   case 7:
    seven();
      break;
   case 8:
    eight();
      break;
   case 9:
    nine();
      break;
   }
  }
```

```
void dispDec(int x)

{

  digitalWrite(p, LOW);

}


void clearLEDs()

{

  digitalWrite(a, LOW);

  digitalWrite(b, LOW);

  digitalWrite(c, LOW);

  digitalWrite(d, LOW);

  digitalWrite(e, LOW);

  digitalWrite(f, LOW);

  digitalWrite(g, LOW);

  digitalWrite(p, LOW);

}


void zero()

{

  digitalWrite(a, HIGH);

  digitalWrite(b, HIGH);

  digitalWrite(c, HIGH);

  digitalWrite(d, HIGH);

  digitalWrite(e, HIGH);

  digitalWrite(f, HIGH);

  digitalWrite(g, LOW);

}
```

```
void one()
{
  digitalWrite(a, LOW);

  digitalWrite(b, HIGH);

  digitalWrite(c, HIGH);

  digitalWrite(d, LOW);

  digitalWrite(e, LOW);

  digitalWrite(f, LOW);

  digitalWrite(g, LOW);
}


void two()
{
  digitalWrite(a, HIGH);

  digitalWrite(b, HIGH);

  digitalWrite(c, LOW);

  digitalWrite(d, HIGH);

  digitalWrite(e, HIGH);

  digitalWrite(f, LOW);

  digitalWrite(g, HIGH);
}


void three()
{
  digitalWrite(a, HIGH);

  digitalWrite(b, HIGH);

  digitalWrite(c, HIGH);

  digitalWrite(d, HIGH);
```

```
  digitalWrite(e, LOW);

  digitalWrite(f, LOW);

  digitalWrite(g, HIGH);

}


void four()

{

  digitalWrite(a, LOW);

  digitalWrite(b, HIGH);

  digitalWrite(c, HIGH);

  digitalWrite(d, LOW);

  digitalWrite(e, LOW);

  digitalWrite(f, HIGH);

  digitalWrite(g, HIGH);

}


void five()

{

  digitalWrite(a, HIGH);

  digitalWrite(b, LOW);

  digitalWrite(c, HIGH);

  digitalWrite(d, HIGH);

  digitalWrite(e, LOW);

  digitalWrite(f, HIGH);

  digitalWrite(g, HIGH);

}


void six()
```

```
{
  digitalWrite(a, HIGH);

  digitalWrite(b, LOW);

  digitalWrite(c, HIGH);

  digitalWrite(d, HIGH);

  digitalWrite(e, HIGH);

  digitalWrite(f, HIGH);

  digitalWrite(g, HIGH);
}

void seven()
{
  digitalWrite(a, HIGH);

  digitalWrite(b, HIGH);

  digitalWrite(c, HIGH);

  digitalWrite(d, LOW);

  digitalWrite(e, LOW);

  digitalWrite(f, LOW);

  digitalWrite(g, LOW);
}

void eight()
{
  digitalWrite(a, HIGH);

  digitalWrite(b, HIGH);

  digitalWrite(c, HIGH);

  digitalWrite(d, HIGH);

  digitalWrite(e, HIGH);
```

```
   digitalWrite(f, HIGH);

   digitalWrite(g, HIGH);

 }


void nine()

{

  digitalWrite(a, HIGH);

  digitalWrite(b, HIGH);

  digitalWrite(c, HIGH);

  digitalWrite(d, HIGH);

  digitalWrite(e, LOW);

  digitalWrite(f, HIGH);

  digitalWrite(g, HIGH);

 }
```