

```
// This program uses arrays and bitReading to display the numbers.
// The code is entered as a three digit number.
// The digits are selected using the pot and the button.

byte segA = 11;
byte segB = 10;
byte segC = 9;
byte segD = 8;
byte segE = 7;
byte segF = 6;
byte segG = 5;
byte button = 4;
byte LOCKED = 3;
byte UNLOCKED = 2;
byte pot = A0;
byte number;
int potValue;
byte Segment[] {segA, segB, segC, segD, segE, segF, segG};
           // ZERO, ONE, TWO, THREE, FOUR, FIVE, SIX, SEVEN, EIGHT, NINE, blank
byte NUMBERS[] {0x3F, 0x06, 0x5B, 0x4F, 0x66, 0x6D, 0x7D, 0x27, 0x7F, 0x6F, 0x00};
byte CODE = 274; //This is the number to unlock.
byte selNum = 0; //This is the number that has been selected.
byte blank = 10;

void setup() {
  pinMode(segA, OUTPUT);
  pinMode(segB, OUTPUT);
  pinMode(segC, OUTPUT);
  pinMode(segD, OUTPUT);
  pinMode(segE, OUTPUT);
  pinMode(segF, OUTPUT);
  pinMode(segG, OUTPUT);
  pinMode(LOCKED, OUTPUT);
  pinMode(UNLOCKED, OUTPUT);
  pinMode(button, INPUT);
  pinMode(pot, INPUT);
}

void segDisp(){
  for(int bitCount = 0; bitCount < 7; bitCount++){
    digitalWrite(Segment[bitCount], bitRead(NUMBERS[number], bitCount));
  }
}

void loop() {
  digitalWrite(LOCKED, 1);
  digitalWrite(UNLOCKED, 0);
  number = blank;
  segDisp();
  while(digitalRead(button) == LOW) {
    delay(10);
  }
}
```



```

delay(500);
while(digitalRead(button) == LOW){
    potValue = analogRead(pot);
    number = potValue/103; //1023/100 is 10, and we only need 9
    segDisp();
    delay(10);
}
selNum = number*100;
number = blank;
segDisp();
delay(500);
while(digitalRead(button) == LOW){
    potValue = analogRead(pot);
    number = potValue/103;
    segDisp();
    delay(10);
}
selNum = selNum + (number*10);
number = blank;
segDisp();
delay(500);
while(digitalRead(button) == LOW){
    potValue = analogRead(pot);
    number = potValue/103;
    segDisp();
    delay(10);
}
selNum = selNum + number;
number = blank;
segDisp();
delay(500);
if(selNum == CODE){
    digitalWrite(LOCKED,0);
    digitalWrite(UNLOCKED,1);
    while(digitalRead(button) == LOW){
        delay(10);
    }
}
else{
    for(int flashCount = 0;flashCount < 7;flashCount++){
        digitalWrite(LOCKED,0);
        delay(200);
        digitalWrite(LOCKED,1);
        delay(200);
    }
}
delay(1000);
selNum = 0;
}

```

