

Do the "setup" to reflect the pin configuration above.

Turn "BCD 7 Segment" into a subroutine called "readPot" as shown on the following page.

Create a new subroutine called "blank". The BCD decoder will display nothing if the binary number is greater than 9.

```

loop
  blank
  digitalWrite() # Locked HIGH
  digitalWrite() # Open LOW
  test digitalRead() # Button == LOW
  while Commands delay ms milliseconds 10
  delay ms milliseconds 500
  test digitalRead() # Button == LOW
  while Commands readPot
  delay ms milliseconds 10
  blank
  int = variable digit1 value selectedNum
  delay ms milliseconds 500
  test digitalRead() # Button == LOW
  while Commands readPot
  delay ms milliseconds 10
  blank
  int = variable digit2 value selectedNum
  delay ms milliseconds 500
  test digit1 == 2 and digit2 == 7
  then
  digitalWrite() # Locked LOW
  digitalWrite() # Open HIGH
  if
  test digitalRead() # Button == LOW
  while Commands delay ms milliseconds 10
  delay ms milliseconds 500
  
```

```

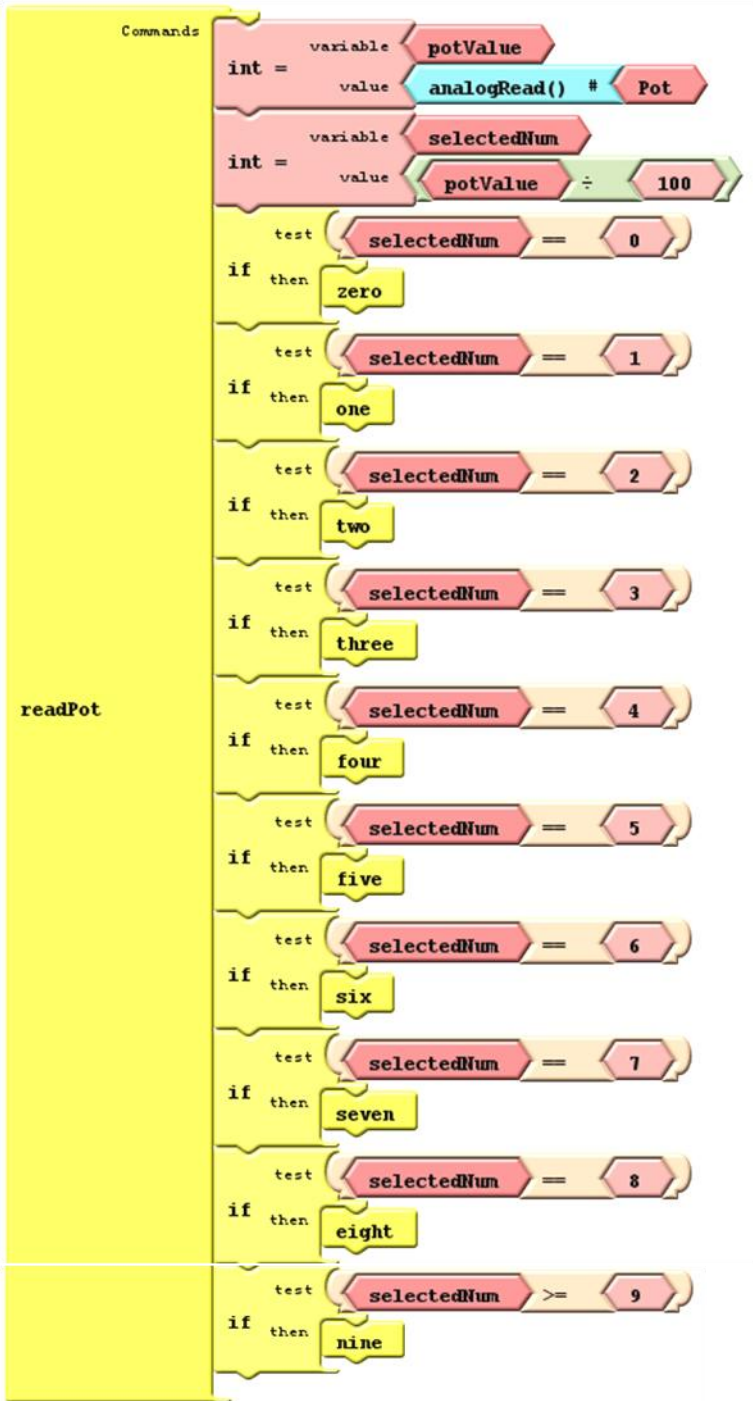
Commands
  digitalWrite() # bit1 HIGH
  digitalWrite() # bit2 HIGH
  digitalWrite() # bit3 HIGH
  digitalWrite() # bit4 HIGH
  blank
  
```



The code is set by the Digit1 and Digit2 in the "if" test. (eg 2 and 7.)

Push the button to start. Turn dial to select number. Push the button when correct number displayed. If the "Code" is correct the unlock light will come on.

Push the button to relock.



In the "if" statements include a "selectedNum" that reflects the number on the display. This will remain the same when the button is pushed and can be used to insert into digit 1 in the next step.



