Code:

```cpp
#include <LiquidCrystal.h>
#include <Servo.h>
#include <Keypad.h>
Servo myservo;
int pos=0; // position of servo motor
LiquidCrystal lcd(A4, A5, A3, A2, A1, A0);
const byte rows=4;
const byte cols=3;

char key[rows][cols]={
{'1','2','3'},
{'4','5','6'},
{'7','8','9'},
{'*','0','#'}
};
byte rowPins[rows]={0,1,2,3};
byte colPins[cols]={4,5,6};
Keypad keypad= Keypad(makeKeymap(key),rowPins,colPins,rows,cols);
char* password="2511";
int currentposition=0;

void setup()
{

displayscreen();
//Serial.begin(9600);
myservo.attach(8); //Servo motor connection
lcd.begin(16,2);

}
void loop()
{
if( currentposition==0)
{
displayscreen();

}
int l ;
char code=keypad.getKey();
if(code!=NO_KEY)
{
lcd. Clear ();
lcd.setCursor(0,0);
```

```
lcd.print("PASSWORD:");
lcd.setCursor(7,1);
lcd.print (" ");
lcd. setCursor(7,1);
for(l=0;l<=currentposition;++l)
{

lcd.print("*");
//keypress();
}

if (code==password[currentposition])
{
++currentposition;
if(currentposition==4)
{

unlockdoor();
currentposition=0;

}

}
else
{
incorrect();
currentposition=0;

}
}
}

//----------------- Function 1- OPEN THE DOOR--------------//

void unlockdoor ()
{
delay(900);

lcd.setCursor(0,0);
lcd.println(" ");
lcd.setCursor(1,0);
lcd.print("POORVI GS");
lcd.setCursor(4,1);
lcd.println("WELCOME!!");
lcd.setCursor(15,1);
```

```
lcd.println(" ");
lcd.setCursor(16,1);
lcd.println(" ");
lcd.setCursor(14,1);
lcd.println(" ");
lcd.setCursor(13,1);
lcd.println(" ");

for(pos = 180; pos>=0; pos-=5) // open the door
{
myservo.write(pos);
delay(5);
}
delay(1000);
counterbeep();

delay(1000);

for(pos = 0; pos <= 180; pos +=5) // close the door
{ // in steps of 1 degree
myservo.write(pos);
delay(15);
}

currentposition=0;

lcd.clear();
displayscreen();
}

//-------------------Function 2- Wrong code-------------//

void incorrect()
{
delay(500);
lcd.clear();
lcd.setCursor(1,0);
lcd.print("CODE");
lcd.setCursor(6,0);
lcd.print("INCORRECT");
lcd.setCursor(15,1);
lcd.println(" ");
lcd.setCursor(4,1);
lcd.println("TRY AGAIN !!!");
 lcd.setCursor(13,1);
```

```
lcd.println(" ");
Serial.println("CODE INCORRECT YOU ARE UNAUTHORIZED");
delay(1000);
delay(3000);
lcd.clear();
displayscreen();
}
//-------Function 3 - CLEAR THE SCREEN--------------------/
void clearscreen()
{
lcd.setCursor(0,0);
lcd.println(" ");
lcd.setCursor(0,1);
lcd.println(" ");
lcd.setCursor(0,2);
lcd.println(" ");
lcd.setCursor(0,3);
lcd.println(" ");
}

//------------Function 4 - DISPLAY FUNCTION-------------------//
void displayscreen()
{

lcd.setCursor(0,0);
lcd.println("ENTER THE CODE");
lcd.setCursor(1 ,1);

lcd.println("TO OPEN DOOR!!");
}
//-------------Function 5 - Count down-----------------//
void counterbeep()
{
delay(1200);


lcd.clear();

lcd.setCursor(2,15);
lcd.println(" ");
lcd.setCursor(2,14);
lcd.println(" ");
lcd.setCursor(2,0);
delay(200);
lcd.println("GET IN WITHIN:::");
```

```
lcd.setCursor(4,1);
lcd.print("5");
delay(200);
lcd.clear();
lcd.setCursor(2,0);
lcd.println("GET IN WITHIN:");
delay(1000);
lcd.setCursor(2,0);
lcd.println("GET IN WITHIN:");
lcd.setCursor(4,1); //2
lcd.print("4");
delay(100);
lcd.clear();
lcd.setCursor(2,0);
lcd.println("GET IN WITHIN:");
delay(1000);

lcd.setCursor(2,0);
lcd.println("GET IN WITHIN:");
lcd.setCursor(4,1);
lcd.print("3");
delay(100);
lcd.clear();
lcd.setCursor(2,0);
lcd.println("GET IN WITHIN:");
delay(1000);

lcd.setCursor(2,0);
lcd.println("GET IN WITHIN:");
lcd.setCursor(4,1);
lcd.print("2");
delay(100);
lcd.clear();
lcd.setCursor(2,0);
lcd.println("GET IN WITHIN:");
delay (1000);

lcd.setCursor(4,1);
lcd.print("1");
delay(100);
lcd.clear();
lcd.setCursor(2,0);
lcd.println("GET IN WITHIN::");
```

```
delay(1000);
delay(40);
lcd.clear();
lcd.setCursor(2,0);
lcd.print("RE-LOCKING");
delay(500);
lcd. setCursor(12,0);
lcd.print(".");
delay(500);
lcd.setCursor(13,0);
lcd.print(".");
delay(500);
lcd.setCursor(14,0);
lcd.print(".");
delay(400);
lcd.clear();
lcd.setCursor(4,0);
lcd.print("LOCKED!");
delay(440);

}
```