```
#include <SoftwareSerial.h>
SoftwareSerial mySerial(A2, A3);//GSM TX - A0(6,7)
                                //GSM RX - A1
#include <Keypad.h>
#include <LiquidCrystal_I2C.h>//FOR I2C SCL - A5
                              // SDA - A4

LiquidCrystal_I2C lcd(0x27,16,2);
const byte ROWS = 4;
const byte COLS = 3;

char hexaKeys[ROWS][COLS] = {
  {'1', '2', '3' },
  {'4', '5', '6' },
  {'7', '8', '9' },
  {'*', '0', '#'}
};

byte rowPins[ROWS] = {2, 3, 4, 5}; //first 4 wire are r1,r2,r3,r4
byte colPins[COLS] = {6, 7, 8}; //second 4 wires are c1,c2,c3,c4

Keypad customKeypad = Keypad(makeKeymap(hexaKeys), rowPins, colPins,
ROWS, COLS);
int i,x,y,z,w,a,b,c,d,e,f,b1,c1,d1,e1,f1,ran[4],a2,b2,c2,p;
long randNumber;
void setup(){
  mySerial.begin(9600);   // Setting the baud rate of GSM Module

    pinMode(11, OUTPUT);//A3 - 0
      pinMode(12, OUTPUT);//A2 - 1

  randomSeed(analogRead(0));


  lcd.init();

  lcd.backlight();
  lcd.clear();
    for(int i=0;i<=10;i++)
  {
     lcd.setCursor(0,0);
  lcd.print("WAITING NETWORK...");
   lcd.setCursor(i,1);
     lcd.print("*");
     delay(2000);

  }

}

void loop() {

 char customKey = customKeypad.getKey();
```

```
   randNumber = random(10000);

 delay(1000);
 ran[3]=(randNumber%10);//last digit
 a2=(randNumber/10);
  ran[2]=(a2%10);//second last digit
  b2=(a2/10);
  ran[1]=(b2%10);//third last digit
 c2= (b2/10);
  ran[0]=c2;//last digit
  f:
 lcd.clear();
  lcd.setCursor(1,0);
  lcd.print("ENTER PASSWORD");
e:
  switch(customKeypad.getKey())
  {
    case '0':
    x=0;
    break;
    case '1':
    x=1;
    break;
    case '2':
    x=2;
    break;
    case '3':
    x=3;
    break;
    case '4':
    x=4;
    break;
    case '5':
    x=5;
    break;
    case '6':
    x=6;
    break;
    case '7':
    x=7;
    break;
    case '8':
    x=8;
    break;
    case '9':
    x=9;
    break;
    default:
     goto e;

  }
 x;
```

```
lcd.setCursor(0,1);
lcd.print(x);
delay(20);
b:
  switch(customKeypad.getKey())
  {
    case '0':
    y=0;
    break;
    case '1':
    y=1;
    break;
    case '2':
    y=2;
    break;
    case '3':
    y=3;
    break;
    case '4':
    y=4;
    break;
    case '5':
    y=5;
    break;
    case '6':
    y=6;
    break;
    case '7':
    y=7;
    break;
    case '8':
    y=8;
    break;
    case '9':
    y=9;
    break;
    default:
     goto b;


  }

 y;
lcd.setCursor(1,1);
lcd.print(y);
delay(20);
c:
  switch(customKeypad.getKey())
  {
    case '0':
    z=0;
    break;
    case '1':
    z=1;
```

```
    break;
    case '2':
    z=2;
    break;
    case '3':
    z=3;
    break;
    case '4':
    z=4;
    break;
    case '5':
    z=5;
    break;
    case '6':
    z=6;
    break;
    case '7':
    z=7;
    break;
    case '8':
    z=8;
    break;
    case '9':
    z=9;
    break;
    default:
     goto c;


  }

 z;
lcd.setCursor(2,1);
lcd.print(z);
delay(20);
d:
  switch(customKeypad.getKey())
  {
    case '0':
    w=0;
    break;
    case '1':
    w=1;
    break;
    case '2':
    w=2;
    break;
    case '3':
    w=3;
    break;
    case '4':
    w=4;
    break;
    case '5':
```

```
    w=5;
    break;
    case '6':
    w=6;
    break;
    case '7':
    w=7;
    break;
    case '8':
    w=8;
    break;
    case '9':
    w=9;
    break;
    default:
     goto d;


  }

 w;
lcd.setCursor(3,1);
lcd.print(w);
delay(200);

if(x==2&&y==3&&z==5&&w==7)
{
 lcd.clear();
lcd.setCursor(0,0);
lcd.print("PASSWORD MATCHED");
x=0;
y=0;
z=0;
w=0;
//------------
mySerial.println("AT+CMGF=1");    //Sets the GSM Module in Text Mode
  delay(1000);  // Delay of 1000 milli seconds or 1 second
  mySerial.println("AT+CMGS=\"+919398297819\"\r"); // Replace x with
mobile number
  delay(1000);
    mySerial.println("OTP FOR KEYPADLOCK");// The SMS text you want to
send
  delay(100);
  mySerial.println(randNumber);// The SMS text you want to send
  delay(100);
   mySerial.println((char)26);// ASCII code of CTRL+Z
  delay(2000);
//------------
lcd.clear();
for(p=0;p<=10;p++)
{

lcd.setCursor(0,0);
lcd.print("SENDING OTP.....");
```

```
lcd.setCursor((p+1),1);
lcd.print("*");
delay(500);
}

//-----------------------------
  f1:
 lcd.clear();
  lcd.setCursor(1,0);
  lcd.print("ENTER OTP");
e1:
  switch(customKeypad.getKey())
  {
    case '0':
    x=0;
    break;
    case '1':
    x=1;
    break;
    case '2':
    x=2;
    break;
    case '3':
    x=3;
    break;
    case '4':
    x=4;
    break;
    case '5':
    x=5;
    break;
    case '6':
    x=6;
    break;
    case '7':
    x=7;
    break;
    case '8':
    x=8;
    break;
    case '9':
    x=9;
    break;
    default:
     goto e1;

  }
 x;
lcd.setCursor(0,1);
lcd.print(x);
delay(20);
b1:
  switch(customKeypad.getKey())
  {
```

```
    case '0':
    y=0;
    break;
    case '1':
    y=1;
    break;
    case '2':
    y=2;
    break;
    case '3':
    y=3;
    break;
    case '4':
    y=4;
    break;
    case '5':
    y=5;
    break;
    case '6':
    y=6;
    break;
    case '7':
    y=7;
    break;
    case '8':
    y=8;
    break;
    case '9':
    y=9;
    break;
    default:
     goto b1;


  }

 y;
lcd.setCursor(1,1);
lcd.print(y);
delay(20);
c1:
  switch(customKeypad.getKey())
  {
    case '0':
    z=0;
    break;
    case '1':
    z=1;
    break;
    case '2':
    z=2;
    break;
    case '3':
    z=3;
```

```
    break;
    case '4':
    z=4;
    break;
    case '5':
    z=5;
    break;
    case '6':
    z=6;
    break;
    case '7':
    z=7;
    break;
    case '8':
    z=8;
    break;
    case '9':
    z=9;
    break;
    default:
     goto c1;


  }

 z;
lcd.setCursor(2,1);
lcd.print(z);
delay(20);
d1:
  switch(customKeypad.getKey())
  {
    case '0':
    w=0;
    break;
    case '1':
    w=1;
    break;
    case '2':
    w=2;
    break;
    case '3':
    w=3;
    break;
    case '4':
    w=4;
    break;
    case '5':
    w=5;
    break;
    case '6':
    w=6;
    break;
    case '7':
```

```
    w=7;
    break;
    case '8':
    w=8;
    break;
    case '9':
    w=9;
    break;
    default:
     goto d1;


  }

 w;
lcd.setCursor(3,1);
lcd.print(w);
delay(200);

if(x==ran[0]&&y==ran[1]&&z==ran[2]&&w==ran[3])
{
 lcd.clear();
lcd.setCursor(0,0);
lcd.print("OTP MATCHED");
lcd.setCursor(0,1);
lcd.print("GATE OPEN");

 digitalWrite(11, HIGH);   // motor clock wise
  delay(1000);
  digitalWrite(11, LOW);
  delay(1000);

//------------------------------
}
else
{
  lcd.clear();
lcd.setCursor(0,0);
lcd.print("OTP not matched");
  delay(500);
  lcd.setCursor(0,1);
  lcd.print("TRY AGAIN");
  delay(500);
  goto f1;
}

}//if condition ends
else
{
 lcd.clear();
lcd.setCursor(0,0);
lcd.print("pass not matched");
  delay(500);
  lcd.setCursor(0,1);
```

```
  lcd.print("TRY AGAIN");
  delay(500);
  goto f;
}
}//loop
```