Project name:

Opening door using passeord

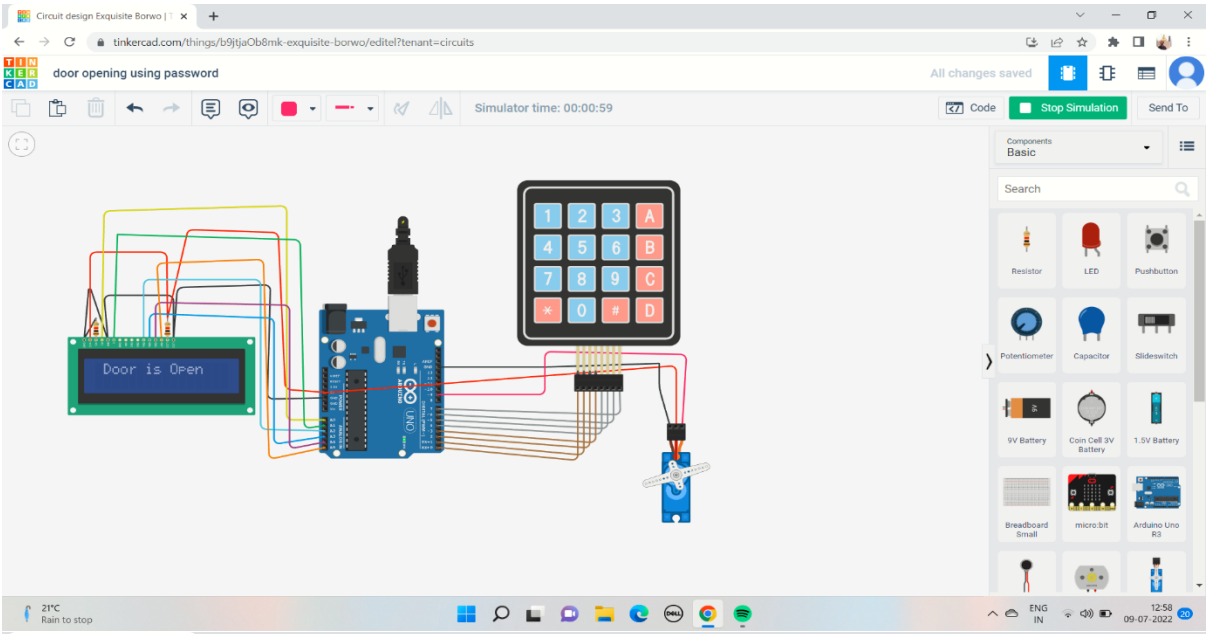
Code:

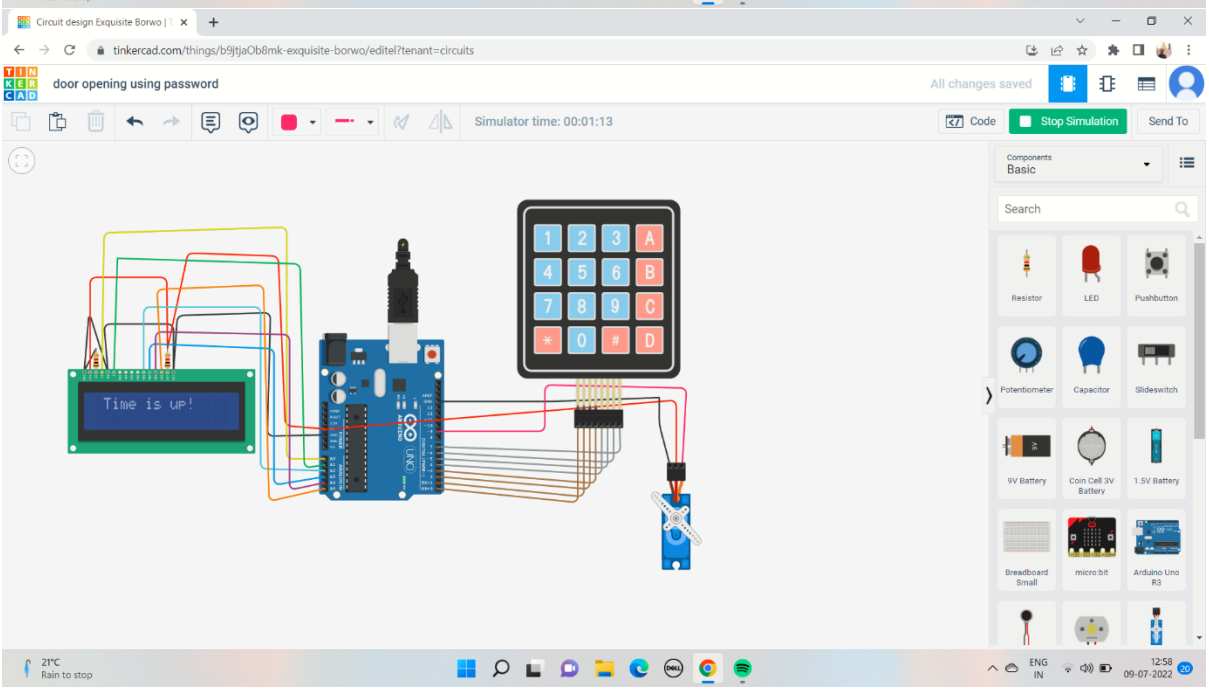
```
#include <Keypad.h>
#include <LiquidCrystal.h>
#include <Servo.h>
#define Password_Length 5
Servo myservo;
LiquidCrystal lcd(A0, A1, A2, A3, A4, A5);
int pos = 0;
char Data[Password_Length];
char Master[Password_Length] = "7890";
byte data_count = 0, master_count = 0;
bool Pass_is_good;
bool door = true;
char customKey;
/*---preparing keypad---*/
const byte ROWS = 4;
const byte COLS = 4;
char keys[ROWS][COLS] = {
 {'1', '2', '3', 'A'},
 {'4', '5', '6', 'B'},
 {'7', '8', '9', 'C'},
{'*', '0', '#', 'D'}
};
byte rowPins[ROWS] = {0, 1, 2, 3};
byte colPins[COLS] = {4, 5, 6, 7};

Keypad customKeypad( makeKeymap(keys), rowPins, colPins, ROWS, COLS);
/*--- Main Action ---*/
void setup()
```

```
{
  myservo.attach(9, 2000, 2400);
  ServoClose();
  lcd.begin(16, 2);
  lcd.print("Protected Door");
  loading("Loading");
  lcd.clear();
  Serial.begin(9600);
}
void loop()
{
  if (door == true)
  {
    customKey = customKeypad.getKey();
    if (customKey == '#')
    {
      lcd.clear();
      ServoClose();
      lcd.print("Door is closed");
      delay(3000);
      door = false;
    }
  }
  else
    Open();
}
void loading (char msg[]) {
  lcd.setCursor(0, 1);
  lcd.print(msg);
for (int i = 0; i < 9; i++) {
    delay(1000);
    lcd.print(".");
```

```
}
}
void clearData()
{
  while (data_count != 0)
  {
    Data[data_count--] = 0;
  }
  return;
}
void ServoClose()
{
  for (pos = 90; pos >= 0; pos -= 10) {
    myservo.write(pos);
  }
}
void ServoOpen()
{
  for (pos = 0; pos <= 90; pos += 10) {
    myservo.write(pos);
  }
}
void Open()
{
  lcd.setCursor(0, 0);
  lcd.print("Enter Password");
  customKey = customKeypad.getKey();
  if (customKey)
  {
    Data[data_count] = customKey;
    lcd.setCursor(data_count, 1);
    lcd.print(Data[data_count]);
```

```
data_count++;
  }
if (data_count == Password_Length - 1)
  {
    if (!strcmp(Data, Master))
    {
      lcd.clear();
      ServoOpen();
      lcd.print(" Door is Open ");
      door = true;
      delay(5000);
      loading("Waiting");
      lcd.clear();
      lcd.print(" Time is up! ");
      delay(1000);
      ServoClose();
      door = false;
    }
    else
    {
      lcd.clear();
      lcd.print(" Wrong Password ");
      door = false;
    }
    delay(1000);
    lcd.clear();
    clearData();
  }
}
```


Circuit design Exquisite Borwo |
tinkercad.com/things/b9jtjaOb8mk-exquisite-borwo/editel?tenant=circuits
door opening using password
All changes saved
Simulator time: 00:00:59
Code
Stop Simulation
Send To
Components
Basic
Search
Door is Open
Resistor
LED
Pushbutton
Potentiometer
Capacitor
Slideswitch
9V Battery
Coin Cell 3V Battery
1.5V Battery
Breadboard Small
micro:bit
Arduino Uno R3
21°C
Rain to stop
ENG
IN
12:58
09-07-2022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