**Assignment -1**

Python Programming

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| Assignment Date | 18 September 2022 |
| Student Name | Ajin R |
| Student Roll Number | 962319104009 |
| Maximum Marks | 2 Marks |

**Question-1:**

Simulation of smart home with simple sensors in arudino simulator

**Program :**

#include <Servo.h>

Servo servoGarage;

Servo servoWindow;

void setup()

{

servoGarage.attach(3);

servoWindow.attach(5);

pinMode(13,OUTPUT);

pinMode(4,OUTPUT);

pinMode(2,INPUT);

}

void loop()

{

//door

if(digitalRead(2))

tone(13,8,100); //play a tone if motion is dectected

else

noTone(13);

//parking garage

digitalWrite(4,1);

delayMicroseconds(10);

digitalWrite(4,0);

float duration = pulseIn(A0,1); //get the duration

float distance = (duration\*0.343)/2;

servoGarage.write(map(distance,400,2180,180,0));//rotate the servo

//window

if(analogRead(A1) > 412)/\*open when luminocity > 412\*/ servoWindow.write(180);

else servoWindow.write(0);

}

**Image :**

