

Assignment -1
Arudino programming

Assignment Date	18 September 2022
Student Name	Ajin R
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Maximum Marks	2 Marks

Question-1:

Simulation of smart home with simple sensors in arduino 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 luminosity > 412*/ servoWindow.write(180);

else servoWindow.write(0);

}

```

Image :

