Assignment -1

C Programming

Assignment Date	10 October 2022
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Maximum Marks	4 Marks

Question-1:

Design the home automation model for WATER LEVEL CONTROLLING SYSTEM

Solution:

```
#define echo 11
#define motor 9
#define buzzer 12

LiquidCrystal lcd(7,6,5,4,3,2);

float time =0,distance=0;
int temp=0;
void setup()
{
lcd.begin(16,2);
pinMode (trigger,OUTPUT);
pinMode(echo,INPUT);
pinMode(motor,OUTPUT);
pinMode(buzzer,OUTPUT);
lcd.print(" Water Level ");
lcd.setCursor(0,1);
lcd.print(" Indicator ");
delay(2000);
}
void loop()
{
lcd.clear();
digitalwrite(trigger,LOW);
delayMicroseconds(2);
digitalWrite(trigger,HIGH);
```

```
delayMicroseconds(10);
digitalWrite(trigger,LOW);
delayMicroseconds(2);
time=pulseIn(echo,HIGH);
distance=time*340/20000;
lcd.clear();
lcd.print(" Water Space In ");
lcd.setCursor(0,1);
lcd.print("Tank is: ");
lcd.print(distance);
lcd.print("Cm");
delay(2000);
if (distance<12 && temp--0)
{
    digitalWrite(motor,LOW);
    digital Write(buzzer,HIGH);
    lcd.clear();
    lcd.print("Water Tank Full ");
    lcd.setCursor(0,1);
    lcd.print("Motor Turned OFF ");
    delay (2000);
    digitalWrite(buzzer,LOW);
    delay(3000);
    temp=1;
}
else if(distance<12 && temp==1)
{
    digitalWrite(motor,LOW);
    lcd.clear();
    lcd.print(" Water Tank Full ");
    lcd.setCursor(0,1);
    lcd.print("Motor Turned OFF ");
    delay(5000);l
}
else if (distance<30)
{
    digitalWrite(motor,HIGH);
    lcd.clear();
```

```
    lcd.print("LOW Water Level ");
    lcd.setCursor(0,1);
    lcd.print(" Motor Turned ON");
    delay(5000);
}
else if (distance>30)
{
    digitalWrite(motor,HIGH);
    lcd.clear();
    lcd.print("LOW Water Level");
    lcd.setCursor(0,1);
    lcd.print("Motor Turned ON");
    delay (5000);
    temp=0;
}
```