**ASSIGNMENT-4**

Develop a Smart water pump controller using ESP32.

The tasks to be covered are:

1. use an ultrasonic sensor for monitoring tank  water level and send the values to the mobile app using Bluetooth communication
2. Integrate buttons in the mobile app for controlling the water pump
3. when the buttons are clicked send the data to ESP32 using Bluetooth communication
4. receive the data from the mobile app using ESP32 and control the pump accordingly.

#include "BluetoothSerial.h"

int trigpin=26;

int echopin=27;

BluetoothSerial SerialBT;

void setup() {

// put your setup code here, to run once:

pinMode(4,OUTPUT);

Serial.begin(115200);

Serial.println("data");

delay(3000);

SerialBT.begin("ESP32test"); //Bluetooth device name

Serial.println("The device has started, now you can pair it with bluetooth!");

pinMode(echopin,INPUT);

pinMode(trigpin,OUTPUT);

}

void loop() {

// put your main code here, to run repeatedly:

if (Serial.available()) {

SerialBT.write(Serial.read());

}

if (SerialBT.available()) {

Serial.write(SerialBT.read());

}

digitalWrite(trigpin,HIGH);

delay(1000);

digitalWrite(trigpin,LOW);

#include "BluetoothSerial.h"

#if !defined(CONFIG\_BT\_ENABLED) || !defined(CONFIG\_BLUEDROID\_ENABLED)

#error Bluetooth is not enabled! Please run `make menuconfig` to and enable it

#endif

BluetoothSerial SerialBT;

int selected;

char supply;

const char turnON ='O';

const char turnOFF ='F';

const int LEDpin = 2;

void setup() {

Serial.begin(115200);

SerialBT.begin("ESP32");

Serial.println("The device started, now you can pair it with bluetooth!");

Serial.println("To turn ON WATER SUPPLY CHOOSE: O");

Serial.println("To turn OFF WATER SUPPLY CHOOSE: F");

pinMode(LEDpin, OUTPUT);

}

void loop() {

supply =(char)SerialBT.read();

if (Serial.available()) {

SerialBT.write(Serial.read());