**FLAWLESS FLASKET**

**ABSTRACT:**

Due to rapid growth of biosensors, they have generated new opportunities for personalized eHealth and mHealth services. Smart objects equipped with physiological sensors can provide robust monitoring of activities of daily living and context for wearable physiological sensors. We present a case study of an flawless flasket that can precisely measures the parameters of water. Leveraging data-driven insights, users can better understand their hydration patterns, make informed decisions about their water intake, and improve their overall well-being. This abstract explores the design, functionality, and potential benefits of the flawless flasket in promoting hydration and supporting healthier lifestyles. The Smart Water Bottle with integrated pH, temperature, and turbidity sensors represents a groundbreaking advancement in hydration monitoring technology. By combining these sensors with wireless connectivity and data analytics capabilities, this device offers comprehensive insights into water quality, temperature, and clarity, in addition to tracking hydration levels. The pH sensor enables monitoring of water acidity or alkalinity, while the temperature sensor provides real-time temperature readings, and the turbidity sensor detects water clarity. Through continuous monitoring and analysis, users can maintain optimal hydration levels while ensuring the quality and safety of their water intake. This abstract explores the design, functionality, and potential applications of the flawless flasket with multi-sensor integration in promoting hydration and supporting overall health and wellness.

**Components**

1. **Sensor**
2. **Bluetooth Module**
3. **Battery**
4. **LED Indicators**
5. **Microcontroller**
6. **Water Temperature Sensor**
7. **Display or Screen**
8. **Touch controls**
9. **Waterproofing**
10. PH sensor
11. **Turbidity sensor**

**Program**

#define BLYNK\_PRINT Serial

#include <ESP8266WiFi.h>

#include <BlynkSimpleEsp8266.h>

#include <DHT.h>

char auth[] = "EqF6GGkVt\_kFgBJHIX0v32TrFcc\_Wxy5"; // blynk token

char ssid[] = "edison science corner"; //ssid

char pass[] = "eeeeeeee"; //password

int readD1;

int readD2;

int moisture\_sensor1;

int moisture\_sensor2;

int Pin\_D1 = 5;

int Pin\_D2 = 4;

int Pin\_D4 = 2;

#define DHTPIN 0

#define DHTTYPE DHT11

const int dry = 600; // value for dry sensor

const int wet = 200; // value for wet sensor

DHT dht(DHTPIN, DHTTYPE);

BlynkTimer timer;

const int dry = 600; // value for dry sensor

const int wet = 200; // value for wet sensor

void setup()

{

Serial.begin(9600);

pinMode(Pin\_D1,OUTPUT);

pinMode(Pin\_D2,OUTPUT);

pinMode(Pin\_D4,OUTPUT);

pinMode(A0,INPUT);

dht.begin();

timer.setInterval(1000L, sendSensor);

Blynk.begin(auth, ssid, pass);

}

void sendSensor()

{

float h = dht.readHumidity();

float t = dht.readTemperature(); // or dht.readTemperature(true) for Fahrenheit

Blynk.virtualWrite(V7, t);

Blynk.virtualWrite(V8 , h);

}

void loop()

{

Blynk.run();

//for first sensor

digitalWrite(Pin\_D1, HIGH); //Turn D1 On

delay(100);

readD1 = analogRead(0); //Read Analog value of first sensor

digitalWrite(Pin\_D1, LOW); //Turn D1 Off

delay(100);

//for second sensor

digitalWrite(Pin\_D2, HIGH); //Turn D2 On

delay(100);

readD2 = analogRead(0); //Read Analog value of second sensor

digitalWrite(Pin\_D2, LOW); //Turn D2 Off

delay(100);

moisture\_sensor1=map(readD1, wet, dry, 100, 0);

moisture\_sensor2=map(readD2, wet, dry, 100, 0);

//to the serial monitor

Serial.print("sensor 1 = ");

Serial.print(readD1);

Serial.print(" / sensor 2 = ");

Serial.println(readD2);

if (moisture\_sensor2<=50)

{

digitalWrite(Pin\_D4,HIGH);

delay(10);

}

if (moisture\_sensor2>50)

{

digitalWrite(Pin\_D4,LOW);

delay(10);

}

Blynk.virtualWrite(V5, moisture\_sensor1); // to Blynk server

Blynk.virtualWrite(V6, moisture\_sensor2); // to Blynk server

timer.run();

}