**TEST CASES**

1. Temperature Sensor(002):
   1. Requirement: Basic
   2. Module Tested: DHT11 (ADA\_fruit)
   3. Test case: should give temperature in celsius, set thresholds according to real life requirements.
   4. Input: Analog
   5. Expected output: Analog temperature of the surrounding
   6. Status: Passed

1. Humidity Sensor(003):
   1. Requirement: Basic
   2. Module Tested: DHT11 (ADA\_fruit)
   3. Test case: should give humidity in percent, set thresholds according to real life requirements.
   4. Input: Analog
   5. Expected output: Analog humidity in percent
   6. Status: Passed
2. Pressure Sensor(004):
   1. Requirement: Basic
   2. Module Tested: BMP180
   3. Test case: Gives pressure in Pascal, set thresholds according to real life requirements.
   4. Input: Analog
   5. Expected output: Analog value of pressure in Pascal
   6. Status: Passed
3. Test AirQuality sensor(001):
   1. Requirement: Basic
   2. Module Tested: MQ2 module (ADA\_fruit)
   3. Test case: Should send air quality index in ppm to arduino, set thresholds according to real life requirements.
   4. Input: Analog
   5. Expected output: Analog air quality index value updated every second
   6. Test case: FAIL
   7. Solution: Changed Module and connected with Arduino.
   8. Final Result: Passed

1. Database connection(005):
   1. Requirement: Basic
   2. Module Tested: PHPAdmin connection with raspberry pi3, As air Quality sensor failed before, PHPAdmin connection with Arduino UNO using Ethernet,
   3. Test case: Established connection and table generation with user details with data being received without fault or corrupted value.
   4. Input: Analog
   5. Expected output: Table created with valid user detail received from raspberry pi and arduino both.
   6. Status: Passed
2. BLYNK app connection(006):
   1. Requirement: Basic
   2. Module Tested: connect with PHP admin
   3. Test case: Established connection and table generation with user details with data being received without fault or corrupted value.Also check if data is updated at every second
   4. Input: Analog
   5. Expected output: BLYNK app displays data received from database, allows to login and register new user
   6. Status: Passed
3. Combined Components data processing(007):
   1. Requirement: Basic
   2. Module Tested: PHP Admin, DHT11, MQ2, BMP180
   3. Test case: synchronise sensors receiving and processing rate with update rate in database. Testing with various changes at different time and clock cycles
   4. Input: Analog, string
   5. Expected output: Updating data without delay, with right values and before next time inverval
   6. Status: Passed , Clock cycle for receiving and updating locked for that particular version of sensors.
4. BLYNK app alert (008):
   1. Requirement: Advanced
   2. Module Tested: PHP Admin, BLYNK
   3. Test case: according to user requirements, if any of the sensors values are crossing the threshold, generate alert on text/email.
   4. Input: Analog, string
   5. Expected output: Get alert Text message or email as per requirement
   6. Status: Passed
5. USER deletion (009):
   1. Requirement: not mandatory
   2. Module Tested: PHP Admin
   3. Test case: If user wants to unsubscribe or end the service.
   4. Input: none
   5. Expected output: Update Database, change details of that particular user or delete that user
   6. Status: Passed
6. Changing user requirements(010):
   1. Requirement: basic
   2. Module Tested: PHP Admin, BLYNK app alerts
   3. Test case: If user wants to change thresholds, alert generation
   4. Input: string, analog
   5. Expected output: Update Database, change details of that particular user.
   6. Status: Passed
7. Checking subscription(011):
   1. Requirement: basic
   2. Module Tested: PHP Admin
   3. Test case: check user is subscribed user or not
   4. Input: trigger
   5. Expected output: boolean that user is subscribed user or not
   6. Status: Passed
8. Data averaging and deletion(012):
   1. Requirement: Advanced
   2. Module Tested: PHP Admin
   3. Test case: check user is subscribed user or not
   4. Input: trigger
   5. Expected output: Average data of 3 months, delete data older than 3 months
   6. Status: Passed