German University in Cairo
Information Engineering and Technology (IET)
Networks Department
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Milestone 3

Deadline: Thursday 14.11.2019 @ 11:59 PM

1 Requirements

In this milestone you should have your IOT network (Sensors + ESP Wi-Fi modules + Server) connected by doing the following:

1. Connect one sensor to each ESP module.
2. Send the readings obtained by the sensor to the server every constant time interval. (15 seconds for example).
3. The server part should save the received readings from each client in a database (just an array List for now or any data structure).
4. After each received reading, calculate the average of the readings for each client every time the server receive a new record (reading).

Note that: The server must identify each client by a unique ID (Could be String or Integer)

For example:

Client 1 can have a String starting with "ONE……."

Client 2 can have a String starting with "TWO……."

Links:

1. Connect Temperature Sensor (LM35) Example: https://www.instructables.com/id/Interface-LM35-With-NodeMCU/

Milestone Must Satisfy These Points:

1- Free from any THREAD EXCEPTIONS
2- Free from any NULL POINTER EXCEPTIONS
3- No connection issues (Sure that there is a connection between the server and the client)

4- No multiple clients will be accepted (Only at the server, there are 2 clients only)
5- Port no. at Server must be the same of ID of a member of each team
6- There is a method to distinguish between the values coming from **ESP_1** and **ESP_2**. (You should be creative and keep it also simple.)
7- You have to submit both **JAVA CODE (SERVER + THREADING CLASSES)** and **ARDUINO** FILES as a zipped file
8- Name of the zipped file **MUST** be submitted with this format **(Team-X).**

2 Submission

Milestone 3 is a team task. Each team should have **at least 2 members and Maximum 4 members**. Any cheating will be graded **ZERO**.

The Deadline for submitting milestone 3 on Thursday 14.11 @ 11:59 PM.

You should submit your milestone 3 using the following google form.

https://drive.google.com/open?id=1ldMxDdc7cZgTWOG33vwO3IicGmqUPIbt-SjmfZU_dGo