**Steps to start the Visualization Code on Your PC**

Step 1: Download Wamp Server, MySQL Workbench, and Eclipse. Then Install them.

Step 2: Open Eclipse, Create a new Project, and Add the Java files ‘sqlFBG’, ‘sqLServer’ to the ‘src’ folder.

Step 3: Add to the Project’s path the Library: ‘mysql-connector-java-5.1.41-bin’ .

Step 4: Open MySQL, and Create a new Database called research.

Step 5: Add a Table to the Database, holding the FBG data. This can be done in 2 ways:

Way 1: Upload an existing extracted data from the table, this will auto-generate all the table entries for you. You only have to set change the table name to ‘myfbg’. Make sure the data types are in accordance with the data coming in.

Way 2: Create a new table in the Research database, and call it ‘myfbg’. Add the Entries as follows:

sensorID: INT

StructureID: INT

Time: DOUBLE

Lattitutude: DOUBLE

Longitude: DOUBLE

Altitude: DOUBLE

Strain: DOUBLE

Step 6: Create another table to the Database, holding the wearable’s data. This can be done in 2 ways:

Way 1: Upload an existing extracted data from the table, this will auto-generate all the table entries for you. You only have to set change the table name to ‘measures’. Make sure the data types are in accordance with the data coming in.

Way 2: Create a new table in the Research database, and call it ‘myfbg’. Add the Entries as follows:

ID: INT

Time: DOUBLE

Satellites: INT

Lattitutude: DOUBLE

Longitude: DOUBLE

Altitude: DOUBLE

AX: DOUBLE

AY: DOUBLE

AZ: DOUBLE

GX: DOUBLE

GY: DOUBLE

GZ: DOUBLE

MX: DOUBLE

MY: DOUBLE

MZ: DOUBLE

Temperature: DOUBLE

Pressure: DOUBLE

Step 7: Add All the visualization files to C:/wamp64/www/”Add new File”.

Step 8: Run the WAMP64 app.

Step 9: Run the 2 Java files added, This will create a new Server Socket on ports 9999 for the wearables sensors, and 9998 for the FBG data.

Step 10: Open your browser (preferably Chrome), and write in: localhost/”New FileName”/BeirutNew.php

Attention: Ideally, The server should be on the cloud, with a Unique IP Address, and not installable on different platforms, since IP Addresses change. Therefore, you should program your wearables and FBG to connect to the IP address of the PC you wish to run as Server.