DOCUMENTATION OF THE MODULES AND SCREENSHOTS OF THE UNIT TESTS ON QUEUES:

This file provides documentation for the 6 modules described in the Remote Health Monitoring System. At the end of the document, the screenshots of the Unit Test results of the Queue implementation are displayed.

All the modules make use of the Flask framework of Python.

1. Authorization:
   During login, the username and password are taken from the user and a unique token is generated.
   Invalid username and password return an Invalid statement.
   Authorization helps validate the generated tokens during access.

2. Data Reading:
   Generated tokens get validated to verify access.
   Once the access token is validated, the sensor_id, sensor_data, timestamp are extracted.

3. Device Interface:
   Access token verification - to GET device
   Register the device - POST
   Update the device - POST
   Delete the device - DELETE

4. Report Generation:
   Initializing queue to generate reports and start thread
   Generating access tokens based on the username and password
   Validate the authenticity of tokens, enqueue report and GET patient_id and report_data and PUT the same in the queue

5. Notifications:
   Initializing queue to generate notifications and start thread
   Enqueue notifications by GETting the notification_type, data and and recipient_id and PUTting the same in the queue

6. User Management:
   GET list of users, GET specific user (both using usernames)
   Creating new user with PUT (username, password, email, role)
   Updating an existing user with PUT after verifying the existence of username
   Delete existing user with DELETE

Unit Testing Result Screenshots: