Lab Exercise 1

On Multiprogramming with time-sharing systems

1. Generate a random number of **resources** (1-30). Label them as resource 1, resource 2, … , resource 30.

2. Generate a random number of **users** (1-30). Label them as user 1, user 2, … , user 30.

3. Also, generate the random resource that a user will need and the length of the time that the **user** will use the **resource** (1-30 seconds)

4. The program should be able to display the status of the **resources**, including the **user** currently using the **resource**, the time (or time left) that the **user** needs to use the **resource**

5. The program should also be able to list the **users** "in waiting" of a resource, if there are any, and when these **users** will be able to start using the **resource**.

6. Finally, the program should be able to say when the **resources** will be free of **users** (meaning, no user needs to use the resource).

NOTE: As to the order of the usage, just base it on the user number.

You may use any language for implementation.