

### Examination 3

Total marks: 30

Max. Time: 3 Hrs

Date: 02/04/2018

### FINGER USER INFORMATION PROTOCOL(RFC 1288)

Implement FUIP server and client as like as the description given below, for the UNIX like commands WHO and WHOAMI, as shown below.

### Flow of Events

Finger is based on the Transmission Control Protocol, using TCP port 79 decimal. The local host opens a TCP connection to a remote host on the Finger port. An FUIP becomes available on the remote end of the connection to process the request. The local host sends the FUIP a one line query based upon the Finger query specification, and waits for the FUIP to respond. The FUIP receives and processes the query, returns an answer, then initiates the close of the connection. The local host receives the answer and the close signal, and then proceeds closing its end of the connection.

**FEATURE 1: WHO (Who are all currently logged in with the server; display the result as shown below)** [15 marks]

Login name	Port No	Total bytes*
abc	2569	345
pqr	3356	459
xyz	7829	150

\* **Total bytes** represent the total number of bytes read from and send to a server by a particular client, including the size of FUIP commands

- 8 marks for Login name and Port No and 7 marks for Total bytes

**FEATURE 2: WHOAMI (It displays the current client and its details)**

Login name	Port no	Total bytes	[10 marks]
xyz	7829	150	

- 8 marks for Login name and Port No and 7 marks for Total bytes

**FEATURE 3:** Client registration must be supported dynamically. That means, a new client must be able to register with the FUIP Server at any time using a valid Login name, which is not already been taken by another user.

**[5 marks]**

**Important Note:**

1: The assumption is that a set of clients are communicating with the Server at any time. Hence the **Total bytes** field value will vary from one client to another as the communication happens dynamically and concurrently.

2: The messages received from Clients must be processed by the Server and it must respond to the clients either with the details shown above or with a suitable error message that the format of the command is not valid.

3: Client registration may be done with unique User name alone, as done previous labs.