**Computer Network Assignment 2**

**Team members:**

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1.The communication patterns of the network application.

* The communication pattern of this network application is client to server, in Client-Server Network, a server responds to services which are requested by Client. There is a predefined set of job-types that the job-creator could assign to the seekers. Therefore the job creator is the server while the job seeker is the client. The job creator sends job-types in response to requests.

2. Define the protocol design goals

* Each job-seeker connects to one job-creator at a time, the job- creator assigns the job immediately to the job-seeker or takes a note of the job-seeker availability to give it a job when a job becomes available. Depending on the job size, the creator could give the same job to multiple job-seekers. When the seeker completes the job, it reports the job status and any result to the job creator.

3. We are building a real time, two way interactive message system in which the job seeker can actively communicate with the job creator. The job creator acts as the server while the seeker acts as the client in terms of the client|server architecture

4. Communication rules:

* Each job seeker can only connect to one job creator
* Job creators can connect with multiple job seekers
* Job seekers do not interact with each other
* Job seekers communicate with the job creator when offering services(requesting a job), deciding to reject or accept a job or when they are reporting status and result of the job

2.Argue the need for a new application layer protocol for this network application instead of using existing standard protocols

* We need a new application layer because HTTP is stateless and no information about past client requests is saved. If a job seeker was to send in a new request to a job creator HTTP does not keep track of the request because it is an independent request. Also it has no encryption or decryption. It is insecure.

<https://github.com/OnanefeOsah/ASSIGNMENT_02_CN>