Q2) Argue the need for a new application layer protocol for this network application instead of using existing standard protocols (e.g. HTTP, SMTP, WebSocket, etc.)

We need a new application layer protocol for this specific network application because they specify the order in which the messages will be exchanged in between different processes. In this specific case between the job seeker and the job creators. *After the job is assigned to the seeker, the connection could be maintained or terminated depending on the job.*
The application layer protocol is only one piece of the network application. In the same example we can see how the web is the network application where the job seeker and the creator can exchange documents from it. The Hypertext Transfer Protocol (HTTP) is the application layer protocol that defines the order and how the messages are passed between the users. In this case the exchange order of the process is crucial to the functionality of the network, actions like connection maintenance after the message has been received and termination of the same.

The application-layer protocol would define: how messages are exchanged, request/response messages, the where/how a process responds after a specific response.

Application, Transport protocols (Web)

Application	Application layer protocol	Underlying transport protocol
e-mail	SMTP [RFC 2821]	TCP
remote terminal access	Telnet [RFC 854]	TCP
Web	HTTP [RFC 2616]	TCP
file transfer	FTP [RFC 959]	TCP

HTTP- Client/Server model

Client: Browser in charge of the request, using HTTP protocols and received web objects.

Server- Web server sends objects using HTTP protocol in response to requests. The server doesn't keep any information about the client.