Protocol

Here is a description of how I decided to use the 4 bytes to convey the messages the client sends to the server.

As stated in the exam, the client must send at least three types of messages which are:

1. A message which gets(fetches) a job from the server
2. A message which alerts the server that the client has terminated normally.
3. A message which alerts the server that the client has terminated because of fail.

Usage of the 4 bytes

The **first byte** holds the "ClientMessageType". As we can see in the include/message.h, the client message type are represented by four types which are:

0-GET_JOB = 0;
1-NORMAL_TERMINATION
2-FAIL_TERMINATION
3-QUIT_PROGRAM

The **second byte** holds two alternatives.

0- "all jobs are not selected"
1- "get all jobs"

The **third** and the **forth** bytes holds X Number of Jobs.

to illustrate how different choices from the user manipulated, I prepare this table below.

User options	First byte value(ClientMessageType)	Second byte	Third byte	Forth byte
1-Get one job from the server	0	0	0	1
2-Get X number of jobs from the server	0	0	X number of jobs	X number of jobs
3-Get all jobs from the server	0	1	§ Not relevant	§ Not relevant
4-Quit program	1	0	0	0

N.B. when the option 3 “get all jobs from the server” is selected the second byte value becomes “1” and there is no need to use the third and fourth bytes.