

Metro State University of Denver, Department of Mathematics and Computer Science
CS 3700-001: Computer Networks
Spring 2013
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Homework 2, Due Date: 10:00am 02/07/2013
Submission: Upload all source code (.java) files to Blackboard

Write a client process and a server process to implement the following protocol based on **UDP service**. Please test your program using multiple clients.

- Client Process:

1. Display the following table on the standard output:

Item ID	Item Description
00001	New Inspiron 15
00002	New Inspiron 17
00003	New Inspiron 15R
00004	New Inspiron 15z Ultrabook
00005	XPS 14 Ultrabook
00006	New XPS 12 UltrabookXPS

2. Display a message on the standard output to ask the User to input an Item ID, and validate the user input. If the input is not a valid Item ID, ask the User to re-type it.
3. Once getting a valid item ID from the User, send a request including this Item ID (e.g., 00005 or "00005") to the Server Process to ask for a quote.
4. Receive and interpret the response from the Server process, and display the following information on the standard output, (e.g., if 00005 were provided by the User earlier on)

Item ID	Item Description	Unit Price	Inventory
00005	XPS 14 Ultrabook	\$999.99	261
5. Display a message on the standard output to ask the User whether to continue. If yes, repeat steps 2 through 4. Otherwise, close the socket and terminate the Client process.

- Server Process:

1. Maintain the following information using an appropriate data structure of your choice (i.e., an array of a Class you defined). You do not have to place it in a file although you certainly can if you like.

Item ID	Item Description	Unit Price	Inventory
00001	New Inspiron 15	\$379.99	157
00002	New Inspiron 17	\$449.99	128
00003	New Inspiron 15R	\$549.99	202
00004	New Inspiron 15z Ultrabook	\$749.99	315
00005	XPS 14 Ultrabook	\$999.99	261
00006	New XPS 12 UltrabookXPS	\$1199.99	178

2. Wait for receiving a packet from a Client.
3. Once a packet is received from a Client, retrieve the information relevant to the requested Item ID from the data structure you used in Step 1 and send back such information to the Client.
4. Repeat Step 3 infinitely until an exception is caught.
5. Close the datagram socket.