


Soal Tugas Mandiri <i>Assignment Case</i>	
COMP6120 Network Programming	
Teknik Informatika <i>Computer Science</i>	E3-COMP6120-DV01
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Soal Case

Blue Custom Pizza Delivery

Blue Custom Pizza Delivery is pizza restaurant that can be order with custom pizza and will be deliver to your house. The owner want you as a programmer to build a program to help **Blue Custom Pizza Delivery** manage the orders. This program is divides into a **client – server** program. Server must be established first, in which it can receive requests from client.

1. Server

- a. To execute server program, user must input parameter for **port number**

Example: `./server 8088`

- b. Then, server will be established and wait for client to connect

```

=====
| Blue Custom      |
|      Pizza Delivery |
|          SERVER   |
|=====|
Server active !
Waiting for client.....

```

- c. If there is incoming client, then display:

```
Client connected sockfd 4
```

- d. Then, the server will wait for data from the client
- e. After receive data from client, server will generate **code** using the following format:

PZXXX
X is a random number **between 0 and 9**

- f. Server will calculate the **base price** using the following formula:

Base price = Total topping * 20000

- g. Server will **loop** as much as **total topping** and determine the **topping price** based on the following table:

Topping	Topping price
Cheese	5000
Mushroom	10000
Beef	15000

- h. Server will calculate **total price** with the following formula:

$$\text{Total price} = \text{Base price} + \text{Topping price}$$

- i. Then server will show the following data:

Bill	
=====	
Code	: PZ427
Name	: David
Address	: Jakarta Street

Pizza name	: American favorite
Topping 1	: Cheese
	: Price + Rp 5000
Topping 2	: BEEF
	: Price + Rp 15000
Base price	: Rp 40000
Total price	: Rp 60000
=====	

- j. If the client input “**Exit**” (case insensitive) in **name**, then show the message and the program will end

Thanks for ordering in Blue Custom Pizza Delivery!!

2. Client

- a. To execute client program, user must input 2 parameters for **port number** based on server port and **IP Address**

Example: **./client 8088 127.0.0.1**

- b. The program will ask the user to:

- Input **name** and validate **name length** must be **between 5 and 20 characters**

```
Input your name [5...20 | "Exit" to close the program]: Andi
Input your name [5...20 | "Exit" to close the program]: Jaka Budi Hartanto Sunarya Sinaga
Input your name [5...20 | "Exit" to close the program]: David
```

- Input **address** and validate **address** must **ends with “Street”** (case sensitive)

```
Input your address [ends with "Street"]: Jakarta
Input your address [ends with "Street"]: Street jakarta
Input your address [ends with "Street"]: Jakarta Street
```

- Input **pizza name** and validate **pizza name length** must be **between 5 and 20 characters**

```
Input pizza name [5...20]: Cool
Input pizza name [5...20]: Americano alejandro delisioso dekanzo
Input pizza name [5...20]: American favorite
```

- Input **total topping** and validate **total topping** must be **between 1 and 3**

```
Input total topping [1...3]: 0
Input total topping [1...3]: 4
Input total topping [1...3]: Three
Input total topping [1...3]: 2
```

- **Loop** as much as **total topping** and input **topping** must be **either “cheese”, “mushroom”, or “beef”** (case insensitive)

```
Input topping 1 [cheese | mushroom | beef]: Chicken
Input topping 1 [cheese | mushroom | beef]: Cheese
```

- Send the data to the server and wait for the server calculating total price
- Client will receive data from server and show the following details:

```
Pizza code          : PZ427
Pizza will be delivered to : Jakarta Street
Total price         : Rp 60000
Press Enter to Continue....
```

- If the user input **“Exit”** in **name** (case insensitive), program will **notify the server that the client program is over**. Then show the message and the program **will end**

```
Thanks for ordering in Blue Custom Pizza Delivery!!
```

Run the program for more details!