Soal Tugas Mandiri *Assignment Case* COMP6120 Network Programming	BINUS **UNIVERSITY** **Software Laboratory** **Center**
Teknik Informatika *Computer Science*	**E3-COMP6120-DV01**
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Soal
Case

Blue Cinema Creator

Blue Cinema Creator is cinema production that creates some great movie with a lot of great director. The CEO of **Blue Cinema Creator** wants you to build a program to help them to manage the cinema will be launch. This program is divides into **a client** – **server** program using **UDP Broadcast** concept. The program should be like:

1. **Server program**

    a. After running, the server will display:

    ```
    ================================
    | Welcome To                   |
    |          Blue Cinema Creator |
    |          ~SERVER~            |
    ================================

    Server Active!

    Waiting data from client.....
    ```

    b. After the server receive data from client, the server will:

    • Generate **code** with the following format:

Genre	Code	Example
Action	**ACXXX** **X = random** between **0** and **9**	AC229
Drama	**DRXXX** **X = random** between **0** and **9**	DR567
Comedy	**COXXX** **X = random** between **0** and **9**	CO951

- Generate **rating category** based on the following table:

Genre	Rating category
Action	Parental Guidance (PG)
Drama	Teen (T)
Comedy	Everyone (E)

- Server will calculate **total studio** that will be open using the following table:

Duration (minutes)	Total studio
>= 120 minutes	2
< 120 minutes	1

- Server will calculate **base price** using the following table:

Total studio	Base price
2	100000
1	80000

- Server will determine **genre price** using the following table:

Genre	Genre price
Action	35000
Drama	30000
Comedy	25000

Server will calculate **total price** using the following formula:

Total price = **Base price** + **Genre price**

c. Server will record all data from all clients

    d.   Show all data that have been recorded

```
Receive data from client !!!!


=======================================================================

Data no         : 1
Movie code      : AC291
Movie title     : Dragon Feast
Release year    : 2020
Movie genre     : action
Movie duration  : 124 minutes
Director        : Christopher Nolan
Rating category: Parental Guidance (PG)
Total studio    : 2
Total price     : Rp. 135000


=======================================================================

Waiting data from client.....
```

    e.   Server will **broadcast message** to all clients the last data that have been recorded

    f.   If the client input "**exit**" (case sensitive) in **title**, then show the message

```
One client disconnected !!
```

    g.   To end the server program, press **Ctrl + c**

2. **Client program**

    a.   After running, the program will ask the user to:

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

```
===================================
| Welcome To                      |
|         Blue Cinema Creator |
|            ~CLIENT~             |
===================================
Input title [5...20 | exit] : MvZ
Input title [5...20 | exit] : Dinasty Ming vs Dinasty Zhen
Input title [5...20 | exit] : Dragon Feast
```

- Input **genre** and validate **genre** must be **either** "**Action**", "**Drama**", or "**Comedy**" (case insensitive)

```
Input type ['Action' | 'Drama' | 'Comedy'] : horror
Input type ['Action' | 'Drama' | 'Comedy'] : action
```

- Input **director** and validate **director** must consist of **minimum 2 words**

```
Input director [minimum 2 word] : Nolan
Input director [minimum 2 word] : Christopher Nolan
```

- Input **duration** (**minutes**) and validate **duration** must be **between 30** and **250**

```
Input duration (minutes) [30...250] : 23
Input duration (minutes) [30...250] : 260
Input duration (minutes) [30...250] : 124
```

- Input **year** and validate **year** must be **minimum 2016**

```
Input year [min 2016] : 2015
Input year [min 2016] : 2020
```

b. Send data to the server and wait the server generate all data

c. Each client will receive broadcast data from server and show the following details:

```
Receive data from server !!!!

========================Broadcast Message=========================

Movie Code     : AC053
Movie Title    : Dragon Feast
Release Year   : 2020
Movie Genre    : action
Movie Duration : 124 minutes
Director       : Christopher Nolan
Rating category: Parental Guidance (PG)
Total Studio   : 2
Total Price    : Rp. 135000


==================================================================
Press Enter to continue....
```

d. If the user input "**exit**" in **title name** (case sensitive), program will **notify the server that the client program is over**. Then show message and the program will end

```
=================================
| Welcome To                    |
|          Blue Cinema Creator  |
|            ~CLIENT~            |
=================================
Input title [5...20 | exit] : exit

Thanks for using this apps !!
```

Run the program for more details!