Soal Praktikum *Practicum Case* COMP6362 Data Structures	
Teknik Informatika *Computer Science*	CS-COMP6362-Var03.3
Periode Berlaku Mulai Semester Genap 2020/2021 ***Valid on*** *Even Semester Year* 2020/2021	**Revisi 00** *Revision 00*

Learning Outcomes
- Explain the concept of data structure and its usage in application
- Demonstrate how to create any learned data structure

Topic
- Session 07 – Circular Double Linked List

Subtopics
- Representation
- Operation: insert, delete, search.

Soal
Case

Ms. Debby wants to run a new business, "EXTRAVAGANT MOVIE SHOP". She wants to make a program to support her business operation. Therefore, she asks you as her good friend to make a program using the **circular double linked list** concept. Here are the descriptions of the program:

- Program consists of 4 menus:
  1. View Movie List
  2. Add A New Movie
  3. Take Movie
  4. Exit
- If user chooses **View Movie List**, then show **MOVIE LIST**.

- If user chooses **Add New Movie**, then:
  - Ask user to input **Movie name**. The length must be **between 3 and 21 characters**.
  - Ask user to input **Movie genre**. The length must be **between 3 and 30 characters**.
  - Ask user to input **Movie price**. The price must be **between $ 10 and 1000**.
  - If the data has been successfully inputted, then show the message **"--Add New Movie Success--"**

- If user chooses **Take Movie,** then:
  - If there is no data in the linked list, then show the message **"--There is No Movie in The List--"**

- If data is already in the linked list, the program will show **the list of movies** and ask the user to input **the number of the movie** that he/she wants to take. Validate that user must input **between 1 and the total number of all movie in the list**.
- If it has been successfully taken, then show the message **"--- Take Movie Success ---"**

- If user chooses **Exit**, then:
    - Delete all data in the linked list.
    - Program ends.

Additional Features:
- Add A New Movie (Add beginning, Add middle, Add end)
- Take Movie (Delete beginning, Delete middle, Delete end)

Please run the EXE file to see the sample program.

Print Screen of Main Menu

```
EXTRAVAGANT MOVIE SHOP
----------------------

1. View Movie List
2. Add New Movie
3. Take Movie
4. Exit

>> Input choice :
```


Print Screen of View Movie List Menu (Menu '1')

```
                            --- MOVIE LIST ---

-+------+------------------------+------------------------------------+----------+-
 ¦ No. ¦     Name of Movie       ¦                Genre                ¦  Price  ¦
-+------+------------------------+------------------------------------+----------+-

-+------+------------------------+------------------------------------+----------+-
```


Print Screen of Add New Movie Menu (Menu '2')

```
Input Movie Name [3..21]: Captain Marvel

Input Movie Genre [3..30]: Action, Adventure, Sci-Fi

Input Movie Price [$ 10...1000]: $ 214



--- Add New Movie Success ---
```

Print Screen of Take Movie Menu (Menu '3')

```
                    --- MOVIE LIST ---

-+------+--------------------------+----------------------------------------+----------+-
 | No. |     Name of Movie        |              Genre                     |  Price   |
-+------+--------------------------+----------------------------------------+----------+-
 | 1.  | Captain Marvel           | Action, Adventure, Sci-Fi              |   214    |
 | 2.  | Dumbo                    | Adventure, Family, Fantasy             |   127    |
 | 3.  | UglyDolls                | Animation, Adventure, Comedy           |   189    |
-+------+--------------------------+----------------------------------------+----------+-


Input Number of The Movie [1..3]: 2



--- Buy a Movie Success ---
```