Soal Praktikum *Practicum Case* COMP6362 Data Structures	**BINUS** **MALANG** **Institute of** **Creative Technology**
Teknik Informatika *Computer Science*	CS-COMP6362-Var02.1
Periode Berlaku Mulai Semester Genap 2019/2020 ***Valid on*** *Even Semester Year* 2019/2020	**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 05 - Queue

Sub Topics
- Queue Implementation Using Linked List
- Circular Queue Implementation

Soal
Case

Ms. Aikawa wants to run a new business, "motorcycle parts". He wants to make a program to support his business operation. Therefore, he asks you as his good friend to make a program using the double linked list concept. Here are the descriptions of the program:
- Program consists of 4 menus:
  1. View Order List
  2. Add A New Order
  3. Take Order
  4. Exit
- If user chooses **View Order List**, then show **the list of ordered motorcycle parts**.
- If user chooses **Add New Order**, then:
  - Ask user to input **name of motorcycle's part** that he/she wants to purchase. The length must be **between 3 and 30 characters**.
  - Ask user to input **quantity of motorcycle's parts** that he/she wants to purchase. **The quantity** must be **between 1 and 20**.
  - If the data has been successfully inputted, then show the message **"--- Add New Order Success ---"**
- If user chooses **Take Order,** then:
  - If there is no data in the linked list, then show the message **"--- There is No Order in The List ---"**

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- **-** If data is already in the linked list, the program will show **the list of ordered motorcycle parts** and ask the user to input **the number of the order** that he/she wants to take. Validate that user must input **between 1 and the total number of all parts in the list**.
  - If it was been successfully taken, then show the message **"--- Take Order Success ---"**
- If user chooses **Exit**, then:
  - Delete all data in the linked list..
  - Program ends.

Please run the EXE file to see the sample program.

Print Screen of Main Menu

```
BLUE TOYS SHOP
....................

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

>> Input choice :
```

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

```
            --- ORDER LIST ---

-+------+----------------------------+----------+-
| No.  | Name of Toys               | Price    |
-+------+----------------------------+----------+-
|   1. | Barbie House               |   500000 |
|   2. | Transformer Robot          |   750000 |
|   3. | Gundam                     |   300000 |
|   4. | Hot Wheels                 |    25000 |
-+------+----------------------------+----------+-
```

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

```
Input Name of Toy [3..30]: Hot Wheels

Input Price of Toy [IDR 10000 .. 1000000]: 25000



--- Add New Order Success ---
```

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

```
            --- ORDER LIST ---

-+------+----------------------------+----------+-
| No.  | Name of Toys               | Price    |
-+------+----------------------------+----------+-
|   1. | Barbie House               |   500000 |
|   2. | Transformer Robot          |   750000 |
|   3. | Gundam                     |   300000 |
|   4. | Hot Wheels                 |    25000 |
-+------+----------------------------+----------+-


Input Number of The Order [1..4]: 2



--- Take Order Success ---
```