Soal Praktikum *Practicum Case* COMP6362 Data Structures	**BINUS** **MALANG** **Institute of** **Creative Technology**
Teknik Informatika *Computer Science*	CS-COMP6362-Var02.3
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. Mc Ronald wants to run a new business, sell various kind of drinks. 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 drinks**.
- If user chooses **Add New Order**, then:
  - Ask user to input **name of drink** that he/she wants to purchase. The length must be **between 3 and 30 characters**.
  - Ask user to input **quantity of drinks** that he/she wants to purchase. **The quantity** must be **between 1 and 100**.
  - Ask user to input **denomination of drinks** that he/she wants to purchase. **The denomination** must **choose between pieces, dozen, or box.**
  - 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 ---"**
- **-** 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 DRINKS 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 Drink                | Quantity | Denomination |
-+------+------------------------------+---------+-------------+-
|   1. | Cleo 1500ML                  |        4 | pieces      |
|   2. | Aqua 600ML                   |        4 | box         |
|   3. | 7Up                          |        8 | box         |
|   4. | Yakult                       |        4 | dozen       |
|   5. | Fanta Orange                 |       20 | pieces      |
|   6. | fanta                        |        3 | box         |
-+------+------------------------------+---------+-------------+-
```

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

```
Input Name of Drink [3..30]: Cleo 1500ML

Input Quantity of Drink [1..100]: 4
Input Denomination of Drink [pieces/dozen/box]: pieces




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

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

```
                --- ORDER LIST ---

-+------+--------------------------------+----------+--------------+-
 | No.  | Name of Drink                  | Quantity | Denomination |
-+------+--------------------------------+----------+--------------+-
 |   1. | Cleo 1500ML                    |        4 | pieces       |
 |   2. | Aqua 600ML                     |        4 | box          |
 |   3. | 7Up                            |        8 | box          |
 |   4. | Yakult                         |        4 | dozen        |
 |   5. | Fanta Orange                   |       20 | pieces       |
 |   6. | fanta                          |        3 | box          |
-+------+--------------------------------+----------+--------------+-


Input Number of The Order [1..6]: 5


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