| **Soal Praktikum** <br> *Practicum Case* | <br> **BINUS** <br> **MALANG** <br><br> **Institute of** <br> **Creative Technology** |
|---|---|
| COMP6362 <br> Data Structures | |
| **Teknik Informatika** <br> *Computer Science* | CS-COMP6362-Var02.1 |
| **Periode Berlaku Mulai** Semester Genap 2019/2020 <br> ***Valid on*** *Even Semester Year* 2019/2020 | **Revisi 00** <br> *Revision 00* |

**Learning Outcomes**
- Demonstrate how to create any learned data structure
- Analyze the usage of data structure in application

**Topic**
- Session 02 - Single Linked List

**Sub Topics**
- Pointer of Struct
- Malloc
- Free
- Operator
- Push Head
- Push Tail
- Push Middle
- Pop Head
- Pop Tail
- Pop Middle

**Soal**
*Case*

Mr. Ade Store is a seller of makaroni snack. Due to his makaroni stock system is not too good, he asks you to make a program using a stack with a concept of array of struct. Here are the descriptions of the program:
- Program always show makaroni stock in stack view.
- Program consists of 3 menus:
  1. Stock of makaroni
  2. Sell makaroni
  3. Exit
- If user chooses **Stock of makaroni**, then:
  - Ask user to input **type of makaroni**. Validate that **type of makaroni** must be **'small', 'medium', or 'large' with case sensitive**. Then add **type of makaroni** with **'makaroni'** automatically.

- Ask user to input **hot level of makaroni**. Validate that the hot level of **makaroni** must be **between 5 and 15**.
- Maximum data that can be stored in the **makaroni** stack is only **10**. If the data has reached **10**, then show the message **"--- The Makaroni Storage is Full ---"**
- If data has been successfully inputted, show the message **"--- Add Makaroni Success ---"**

- If user chooses **Sell CD,** then:
  - If there is no data in linked list, then show the message **"---The Makaroni Storage is Empty---"**.
  - If data is already in the linked list, the program will delete the last data in the stack and show the message **"--- Sell Makaroni Success ---"**

- If user chooses **Exit**, then:
  - Delete all data.
  - Program ends.

**Please run the EXE file to see the sample program.**

**Print Screen of Main Menu**

```
ADE MAKARONI STOCK
_____


 Makaroni Stock (STACK)



Option :
1. Stock of makaroni
2. Sell makaroni
3. Exit

>> Input choice :
```

**Print Screen of Makaroni Menu (Menu '1')**

```
Input makaroni type [small/medium/large] : small

Input the hot level of makaroni [5..15 level]: 10



--- Add Makaroni Success ---
```

**Print Screen of Main Menu after Doing Stock Makaroni Menu**

```
ADE MAKARONI STOCK
_____

 Makaroni Stock (STACK)

 [ medium makaroni :  hot level 11 ] -> [top]
 [ large makaroni  :  hot level 15 ]
 [ small makaroni  :  hot level 10 ]


Option :
1. Stock of makaroni
2. Sell makaroni
3. Exit

>> Input choice :
```

**Print Screen of Makaroni Menu (Menu '2')**

```
--- Sell Makaroni Success ---
```

**Print Screen of Makaroni Menu (Menu '2' but there is no data in linked list)**

```
--- The Makaroni Storage is Empty ---
```