


Soal Praktikum <i>Practicum Case</i>	
COMP6362 Data Structures	
Teknik Informatika <i>Computer Science</i>	CS-COMP6362-Var03.4
Periode Berlaku Mulai Semester Genap 2020/2021 Valid on Even Semester Year 2020/2021	Revisi 00 <i>Revision 00</i>

Learning Outcomes

- Explain the concept of data structure and its usage in application

Topic

- Session 01 - Array and Structure

Sub Topics

- Array of Struct
- Struct Declaration
- Struct Implementation
- Array of Struct Implementation

Soal

Case

Blink mobile phone accessories shop is your mobile phone accessories shop. As the owner and also as a brilliant programmer, you want to change the cashier system to be paperless. Therefore, the cashier program must be able to handle every transaction.

- Program always shows List of mobile phone accessories which contains some descriptions such as **No**, **Code**, **Mobile Phone Accessories Name**, **Available**, and **Price** of the available mobile phone accessories.

No.	Code	Product Name	Available	Price
01.	MB007	Charging Cable	21	Rp. 50000,-
02.	MB010	Foldable Stand	15	Rp. 65000,-
03.	MB014	Bluetooth Speaker	25	Rp. 75000,-
04.	MB019	Screen Protector	20	Rp. 90000,-
05.	MB025	Crystal Clear Case	17	Rp. 125000,-
06.	MB028	Power Bank	26	Rp. 240000,-
07.	MB031	Wireless Charging Stand	10	Rp. 300000,-

- The program consists of 3 menus:
 1. Sell
 2. Add Stock
 3. Exit
- If user chooses **Sell**, then:
 - Ask user to input **mobile phone accessories code** he/she wants to sell.
 - **The code must consist of 5 characters** and be available in **the list of mobile phone accessories**. If user inputs **the wrong code or another code**, the program will show the message **“--- The mobile phone accessories code doesn't exist ---”** and ask *user* to input again. **The mobile phone accessories code** is case sensitive.
 - Then ask user to input **the quantity**.
 - **The quantity must be between 0 and x**, where $x = [\text{available chosen mobile phone accessories}]$.
 - The user cannot sell the mobile phone accessories more than **the quantity** available on the list. If user tries to do so, show the message **“...The quantity of mobile phone accessories is not enough...”**
 - If user succeeds to sell, then show:
“Total Price is: Rp [price of accessories],- x [quantity of accessories] = Rp [total price],-”
“--- Thank You ---”
 - Then update **the stock of available mobile phone accessories**.
 $[\text{available accessories}] = [\text{available accessories}] - [\text{quantity of accessories that has been sold}]$
- If user chooses **Add Stock**, then:
 - Ask user to input **the mobile phone accessories code** he/she wants to add to the list.
 - The accessories code must **consist of 5 characters** and be available in **the list of mobile phone accessories**. If user inputs **the wrong code or another code**, program will show the message **“--- The mobile phone accessories code doesn't exist ---”** and ask *user* to input again. **The mobile phone accessories code** is case sensitive.
 - Then ask user to input **the quantity**.
 - Validate **the quantity of mobile phone accessories** must be **between 1 and 100**.
 - If user succeeds to add stock, then show: **“--- Adding Stock Success ---”**
 - Then update **the stock of available mobile phone accessories**.
 $[\text{available mobile phone accessories}] = [\text{available mobile phone accessories}] + [\text{quantity of mobile phone accessories added}]$
- If user chooses **Exit**, then the program ends.

Print Screen of Main Menu

```
BLINK MOBILE PHONE ACCESSORIES SHOP CASHIER
=====
```

No. :	Code :	Product Name	Available :	Price
01.	MB007	Charging Cable	21	Rp. 50000,-
02.	MB010	Foldable Stand	15	Rp. 65000,-
03.	MB014	Bluetooth Speaker	25	Rp. 75000,-
04.	MB019	Screen Protector	20	Rp. 90000,-
05.	MB025	Crystal Clear Case	17	Rp. 125000,-
06.	MB028	Power Bank	26	Rp. 240000,-
07.	MB031	Wireless Charging Stand	10	Rp. 300000,-

```
-----
Menu :
1. Sell
2. Add Stock
3. Exit
Input choice : _
```

Print Screen of Sell Menu (Menu '1')

```
Menu :
1. Sell
2. Add Stock
3. Exit
Input choice : 1

Input Product Code [5 chars]: MB010
Input Quantity [0..15]: 11

Total Price is : Rp 65000,- x 11 = Rp 715000,-
--- Thank You ---
```

No. :	Code :	Product Name	Available :	Price
01.	MB007	Charging Cable	21	Rp. 50000,-
02.	MB010	Foldable Stand	4	Rp. 65000,-
03.	MB014	Bluetooth Speaker	25	Rp. 75000,-
04.	MB019	Screen Protector	20	Rp. 90000,-
05.	MB025	Crystal Clear Case	17	Rp. 125000,-
06.	MB028	Power Bank	26	Rp. 240000,-
07.	MB031	Wireless Charging Stand	10	Rp. 300000,-

The list is updated

Print Screen of Add Stock (Menu '2')

```

Menu :
1. Sell
2. Add Stock
3. Exit
Input choice : 2

Input Product Code [5 chars]: MB028
Input Quantity [1..100]: 100

--- Adding Stock Success ---

```

No. :	Code	Product Name	Available	Price
01.	MB007	Charging Cable	21	Rp. 50000,-
02.	MB010	Foldable Stand	4	Rp. 65000,-
03.	MB014	Bluetooth Speaker	25	Rp. 75000,-
04.	MB019	Screen Protector	20	Rp. 90000,-
05.	MB025	Crystal Clear Case	17	Rp. 125000,-
06.	MB028	Power Bank	126	Rp. 240000,-
07.	MB031	Wireless Charging Stand	10	Rp. 300000,-

The list is updated