

❖ **Idea:**

- **Formal idea name: Simple Banking Processing System**
- **Commercial Name: Bankna**

❖ **Group Members:**

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- 2) **Monika Atfy**
- 3) **Ahmed Moustafa**
- 4) **Michael Ashraf**

❖ **Description:**

- 1) **Our system is working on adding new customers.**
- 2) **Updating balances of existing customers when they add or withdraw from their balances.**
- 3) **Reading from and Saving all data of customers to an existing locked file.**

❖ **Features:**

- 1) **Adding customers**
- 2) **Modifying customer's balance data , depending on the employee entering it.**
- 3) **Counting number of transactions made.**
- 4) **Counting number of failed transactions made.**
- 5) **Containing Balance sheet carrying all customers data (Account numbers , names , Account Balances)**
- 6) **Exiting on entering the exit keyword.**

❖ **Technical Description:**

- 1) File IO
- 2) Exception Handling
- 3) Streams

❖ **Memory:**

-Primitives no of variables:

- Global => 4
- Local => 5

-Data Structures:

- Arrays => 3
- Lists => 7

-No of loops => 3

❖ **Decision Points (number of Branches):**

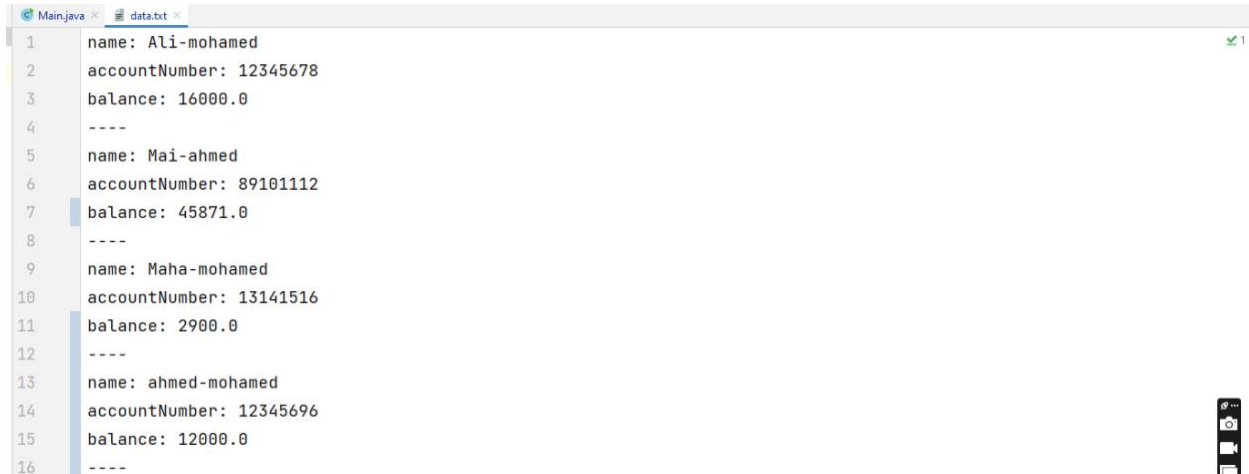
- If condition => 18

❖ **Modules:**

- Classes => 1
- Methods => 2

❖ Screenshots:

❖ Page (1):



The screenshot shows a Java IDE with two tabs: 'Main.java' and 'data.txt'. The 'data.txt' tab is active, displaying a list of account data. The data is organized into four groups, each separated by four dashes. Each group contains three lines: 'name:', 'accountNumber:', and 'balance:'. The accounts are: Ali-mohamed (12345678, 16000.0), Mai-ahmed (89101112, 45871.0), Maha-mohamed (13141516, 2900.0), and ahmed-mohamed (12345696, 12000.0). A green cursor is visible on line 15. On the right side of the IDE, there is a vertical toolbar with icons for a camera, a video camera, and a printer.

```
1 name: Ali-mohamed
2 accountNumber: 12345678
3 balance: 16000.0
4 ----
5 name: Mai-ahmed
6 accountNumber: 89101112
7 balance: 45871.0
8 ----
9 name: Maha-mohamed
10 accountNumber: 13141516
11 balance: 2900.0
12 ----
13 name: ahmed-mohamed
14 accountNumber: 12345696
15 balance: 12000.0
16 ----
```

❖ Page(2):



The screenshot shows a Java IDE with a 'Run' window open. The 'Run' window displays the command 'C:\Program Files\Java\jdk1.8.0_202\bin\java.exe' followed by an ellipsis. Below the command, there is a menu of operations. The menu starts with 'please select operation' followed by a list of six options: 1 journal, 2 balance sheet, 3 transactions count, 4 accounts names with highest balances, 5 Create Account, and 6 exit. A green cursor is visible on line 1.

```
Run: C:\Program Files\Java\jdk1.8.0_202\bin\java.exe" ...

-----
please select operation

1 journal
2 balance sheet
3 transactions count
4 accounts names with highest balances
5 Create Account
6 exit
1
```

❖ Page (3):

```
transaction type or Exit
cr
enter account number
89101112
enter amount
1000
your new balance 46371.0
account holder name Mai-ahmed
Do you want to continue??(y,n,main)
y
```

❖ Page (4):

```
transaction type or Exit
debit
enter account number
89101112
enter amount
500
your new balance 45871.0
account holder name Mai-ahmed
```

❖ Page (5):

```
transaction type or Exit
cr
enter account number
1234
enter amount
1000
wrong operation
Do you want to creat account? [y,n]
y
create Account

Name :
Mohamed-mahmoud
account number :
50403020
Balance:
5000
account created
Do you want to continue??(y,n,main)
y
```

❖ Page (6):

```
account created
Do you want to continue??(y,n,main)
y
transaction type or Exit
debit
enter account number
50403020
enter amount
1000
your new balance 4000.0
account holder name Mohamed-mahmoud
transaction type or Exit
exit
```

❖ Page (7):

```
please select operation

1 journal
2 balance sheet
3 transactions count
4 accounts names with highest balances
5 Create Account
6 exit
2
Account holder name Ali-mohamed , Number 12345678 , Balance 16000.0
Account holder name Mai-ahmed , Number 89101112 , Balance 45871.0
Account holder name Maha-mohamed , Number 13141516 , Balance 2900.0
Account holder name ahmed-mohamed , Number 12345696 , Balance 12000.0
Account holder name Mohamed-mahmoud , Number 50403020 , Balance 4000.0
```

❖ Page (8):

```
please select operation

1 journal
2 balance sheet
3 transactions count
4 accounts names with highest balances
5 Create Account
6 exit
3
Right Transaction 3
Failed Transaction 1

-----
```

❖ Page (9):

```
-----
please select operation

1 journal
2 balance sheet
3 transactions count
4 accounts names with highest balances
5 Create Account
6 exit
4
Mai-ahmed 89101112 45871.0
Ali-mohamed 12345678 16000.0
```

❖ Page (10):

```
-----
please select operation

1 journal
2 balance sheet
3 transactions count
4 accounts names with highest balances
5 Create Account
6 exit
5
Pleas enter new account data
Format Hint: Name:firstname-lastname Account number must be 8 digit
Name :
Diaa-ahmed
account number :
60403020
Balance:
5000
account created
```

❖ Page (11):

```
-----
please select operation

1 journal
2 balance sheet
3 transactions count
4 accounts names with highest balances
5 Create Account
6 exit
2
Account holder name Ali-mohamed , Number 12345678 , Balance 16000.0
Account holder name Mai-ahmed , Number 89101112 , Balance 45871.0
Account holder name Maha-mohamed , Number 13141516 , Balance 2900.0
Account holder name ahmed-mohamed , Number 12345696 , Balance 12000.0
Account holder name Mohamed-mahmoud , Number 50403020 , Balance 4000.0
Account holder name Diaa-ahmed , Number 60403020 , Balance 5000.0
```

❖ Page (12):

```
-----
please select operation

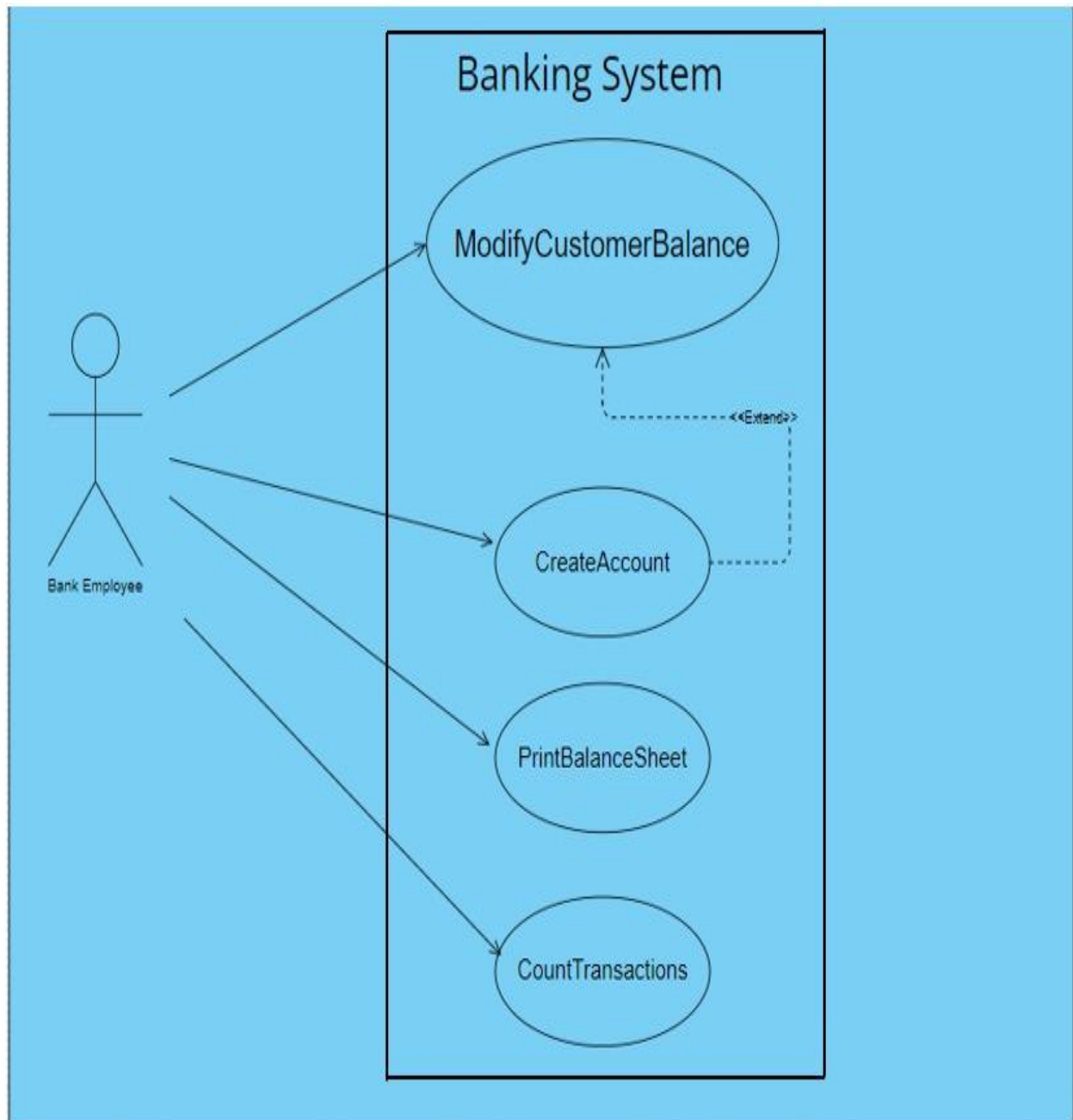
1 journal
2 balance sheet
3 transactions count
4 accounts names with highest balances
5 Create Account
6 exit
6
Process finished with exit code 0
```

Activate Windows
Go to Settings to activate Windows

❖ Page (13):

```
1 name: Ali-mohamed
2 accountNumber: 12345678
3 balance: 16000.0
4 ----
5 name: Mai-ahmed
6 accountNumber: 89101112
7 balance: 45871.0
8 ----
9 name: Maha-mohamed
10 accountNumber: 13141516
11 balance: 2900.0
12 ----
13 name: ahmed-mohamed
14 accountNumber: 12345696
15 balance: 12000.0
16 ----
17 name: Mohamed-mahmoud
18 accountNumber: 50403020
19 balance: 4000.0
20 ----
21 name: Diaa-ahmed
22 accountNumber: 60403020
23 balance: 5000.0
24 ----
25
```

❖ Usecase diagram:



❖ **Class diagram:**

