

# Project 1 Report

Students:

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(حسين محمد الطاهر الجفري (442002930)

Instructor: محمد احمد احمد

## Details:

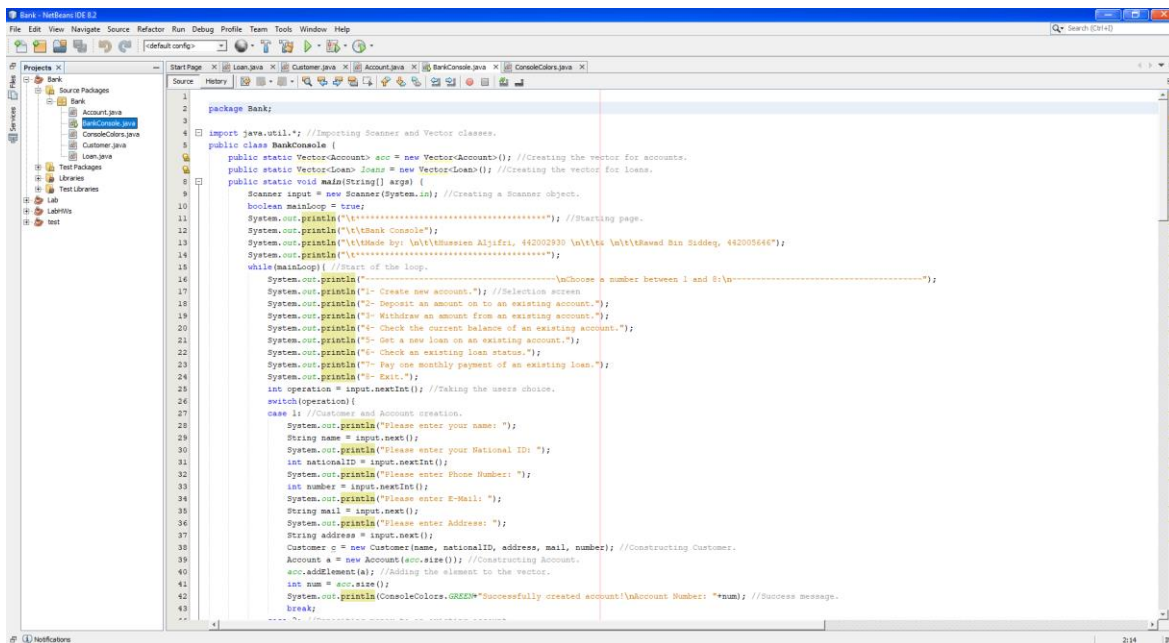
Package name: Bank

Number of classes: 5 (4 + 1 ConsoleColors):

## BankConsole (main method) - Customer - Account - Loan

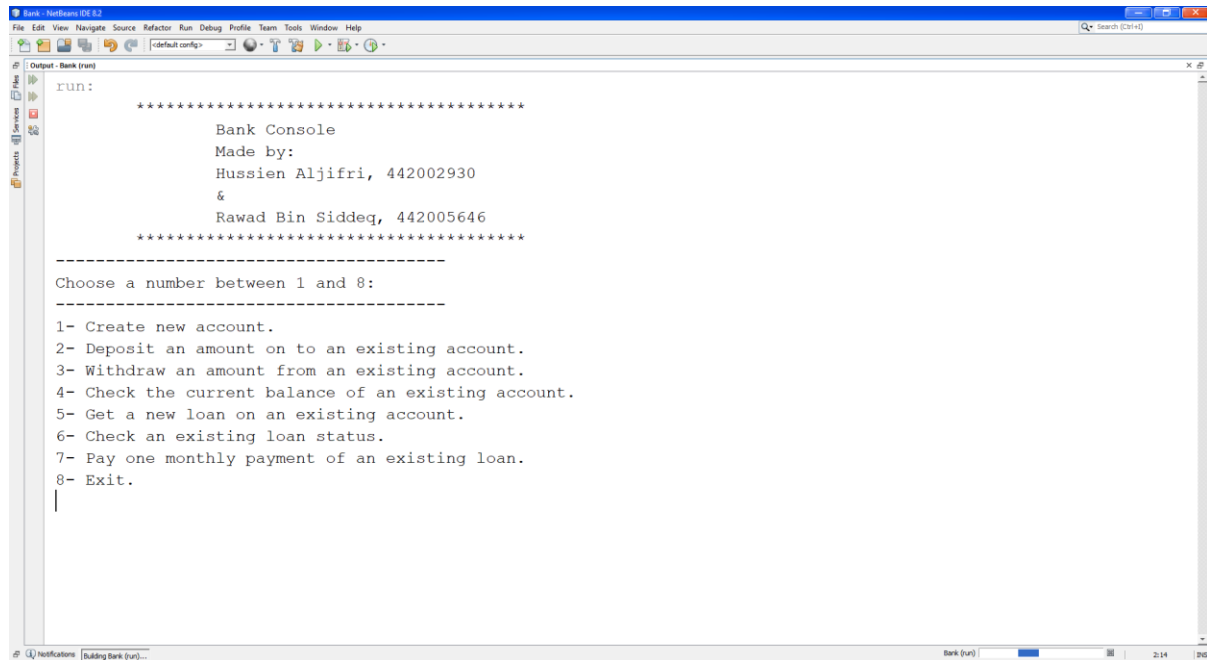
File size: ~150KB on disk

Image of IDE:



## Results in IDE:

### Selection screen:



The screenshot shows the Eclipse IDE with the 'Bank (run)' output window. The application has started and displays a menu of options. The user has not yet made a selection.

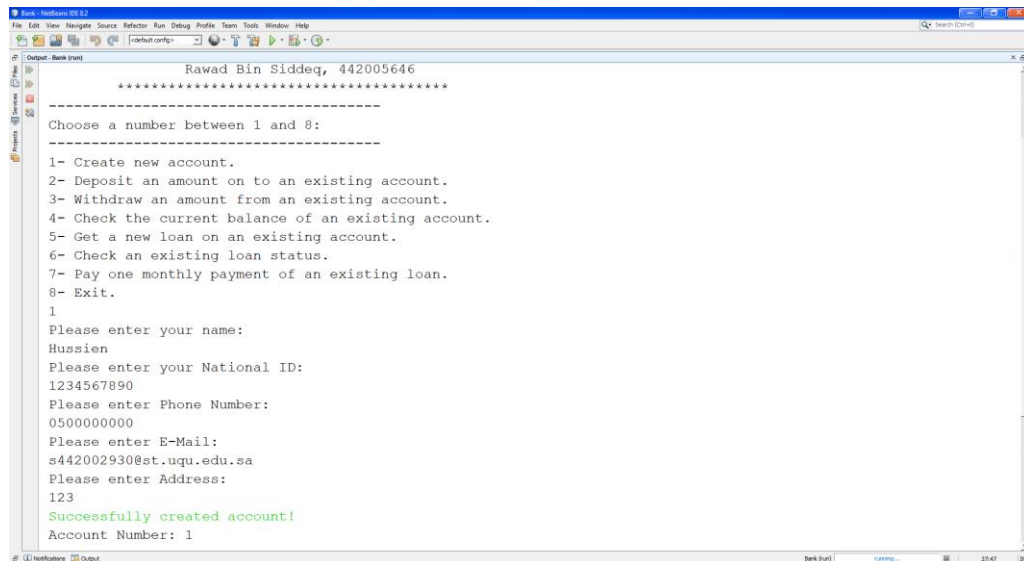
```
run:

*****

      Bank Console
      Made by:
      Hussien Aljifri, 442002930
      &
      Rawad Bin Siddeq, 442005646
*****

-----
Choose a number between 1 and 8:
-----
1- Create new account.
2- Deposit an amount on to an existing account.
3- Withdraw an amount from an existing account.
4- Check the current balance of an existing account.
5- Get a new loan on an existing account.
6- Check an existing loan status.
7- Pay one monthly payment of an existing loan.
8- Exit.
|
```

### Creating an account:

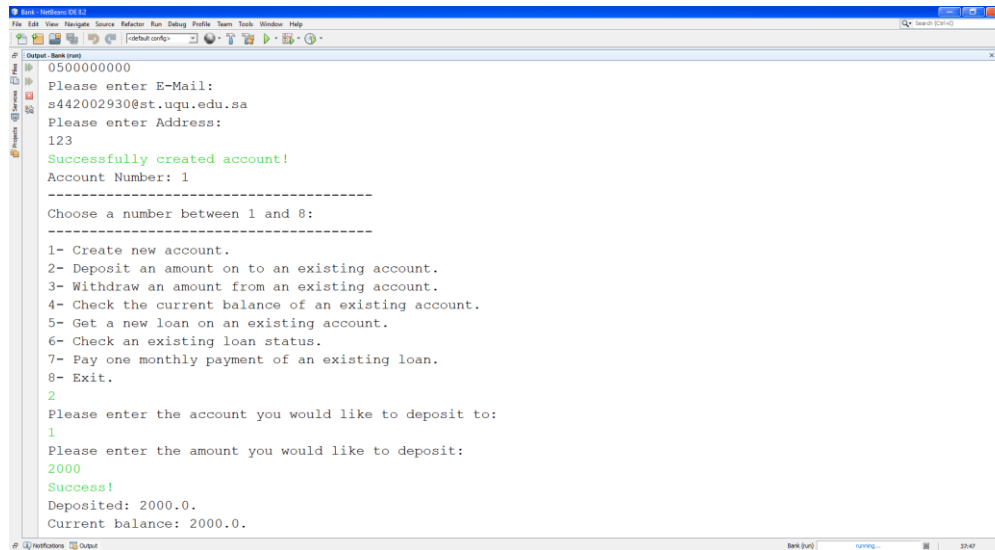


The screenshot shows the 'Bank (run)' output window where the user has selected option 1 to create a new account. The application prompts for user details, which have been entered. The account has been successfully created.

```
Rawad Bin Siddeq, 442005646
*****

-----
Choose a number between 1 and 8:
-----
1- Create new account.
2- Deposit an amount on to an existing account.
3- Withdraw an amount from an existing account.
4- Check the current balance of an existing account.
5- Get a new loan on an existing account.
6- Check an existing loan status.
7- Pay one monthly payment of an existing loan.
8- Exit.
1
Please enter your name:
Hussien
Please enter your National ID:
1234567890
Please enter Phone Number:
0500000000
Please enter E-Mail:
s442002930@st.uqu.edu.sa
Please enter Address:
123
Successfully created account!
Account Number: 1
```

## Depositing to an existing account:



```
0500000000
Please enter E-Mail:
s442002930@st.uqu.edu.sa
Please enter Address:
123
Successfully created account!
Account Number: 1
-----
Choose a number between 1 and 8:
-----
1- Create new account.
2- Deposit an amount on to an existing account.
3- Withdraw an amount from an existing account.
4- Check the current balance of an existing account.
5- Get a new loan on an existing account.
6- Check an existing loan status.
7- Pay one monthly payment of an existing loan.
8- Exit.
2
Please enter the account you would like to deposit to:
1
Please enter the amount you would like to deposit:
2000
Success!
Deposited: 2000.0.
Current balance: 2000.0.
```

Please enter the account you would like to deposit to:

1

Please enter the amount you would like to deposit:

0

Error: Invalid Amount!

## Withdrawing from an existing account:

-----  
Choose a number between 1 and 8:  
-----

- 1- Create new account.
- 2- Deposit an amount on to an existing account.
- 3- Withdraw an amount from an existing account.
- 4- Check the current balance of an existing account.
- 5- Get a new loan on an existing account.
- 6- Check an existing loan status.
- 7- Pay one monthly payment of an existing loan.
- 8- Exit.

3

Please enter the account you would like to withdraw from:

1

Please enter the amount you would like to withdraw:

4000

Error: Invalid Amount!

-----  
Choose a number between 1 and 8:  
-----

- 1- Create new account.
- 2- Deposit an amount on to an existing account.
- 3- Withdraw an amount from an existing account.
- 4- Check the current balance of an existing account.
- 5- Get a new loan on an existing account.
- 6- Check an existing loan status.
- 7- Pay one monthly payment of an existing loan.
- 8- Exit.

3

Please enter the account you would like to withdraw from:

1

Please enter the amount you would like to withdraw:

1000

Success!

Withdrawn: 1000.0.

Current balance: 1000.0.

## Checking balance on an existing account:

-----  
Choose a number between 1 and 8:  
-----

- 1- Create new account.
- 2- Deposit an amount on to an existing account.
- 3- Withdraw an amount from an existing account.
- 4- Check the current balance of an existing account.
- 5- Get a new loan on an existing account.
- 6- Check an existing loan status.
- 7- Pay one monthly payment of an existing loan.
- 8- Exit.

4

Please enter the account you would like to check the balance of:

5

Error: There is no account with that number.

-----  
Choose a number between 1 and 8:  
-----

- 1- Create new account.
- 2- Deposit an amount on to an existing account.
- 3- Withdraw an amount from an existing account.
- 4- Check the current balance of an existing account.
- 5- Get a new loan on an existing account.
- 6- Check an existing loan status.
- 7- Pay one monthly payment of an existing loan.
- 8- Exit.

4

Please enter the account you would like to check the balance of:

1

The remaining balance of the account is: 1000.0

## Creating a loan on an existing account:

-----  
Choose a number between 1 and 8:  
-----

- 1- Create new account.
- 2- Deposit an amount on to an existing account.
- 3- Withdraw an amount from an existing account.
- 4- Check the current balance of an existing account.
- 5- Get a new loan on an existing account.
- 6- Check an existing loan status.
- 7- Pay one monthly payment of an existing loan.
- 8- Exit.

5

Please enter the account you would like to create a loan on:

1

Please enter the amount of the loan:

500

Please enter the number of months the loan will last:

2

Please enter the deserved rate of the loan in percentage:

10

Successfully created loan!

Please enter the account you would like to check the balance of:

1

The remaining balance of the account is: 1500.0

## Checking the status of an existing loan:

```
-----
Choose a number between 1 and 8:
-----
1- Create new account.
2- Deposit an amount on to an existing account.
3- Withdraw an amount from an existing account.
4- Check the current balance of an existing account.
5- Get a new loan on an existing account.
6- Check an existing loan status.
7- Pay one monthly payment of an existing loan.
8- Exit.
6
Please enter the account number you would like to check the loan status of:
1
Original amount: 500.0.
Intrest rate: 10.0%.
Number of months: 2.
Total amount: 550.0.
Monthly amount: 275.0.
Remaining amount: 550.0..
Remaining months amount: 2.
```

## Paying one month of an existing loan:

```
-----
Choose a number between 1 and 8:
-----
1- Create new account.
2- Deposit an amount on to an existing account.
3- Withdraw an amount from an existing account.
4- Check the current balance of an existing account.
5- Get a new loan on an existing account.
6- Check an existing loan status.
7- Pay one monthly payment of an existing loan.
8- Exit.
7
Please enter the account number you would like to pay the loan on:
1
Success!
Amount paid: 275.0.
Balance: 1225.0.
Remaining Months: 1
```

-----  
Choose a number between 1 and 8:  
-----

- 1- Create new account.
- 2- Deposit an amount on to an existing account.
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- 4- Check the current balance of an existing account.
- 5- Get a new loan on an existing account.
- 6- Check an existing loan status.
- 7- Pay one monthly payment of an existing loan.
- 8- Exit.

7

Please enter the account number you would like to pay the loan on:

1

Success!

Amount paid: 275.0.

Balance: 950.0.

Remaining Months: 0

Loan payment complete!

Now the loan has been removed

-----  
Choose a number between 1 and 8:  
-----

- 1- Create new account.
- 2- Deposit an amount on to an existing account.
- 3- Withdraw an amount from an existing account.
- 4- Check the current balance of an existing account.
- 5- Get a new loan on an existing account.
- 6- Check an existing loan status.
- 7- Pay one monthly payment of an existing loan.
- 8- Exit.

6

Please enter the account number you would like to check the loan status of:

1

Error: There is no loan associated with that account.

Exit:

-----  
Choose a number between 1 and 8:  
-----

- 1- Create new account.
- 2- Deposit an amount on to an existing account.
- 3- Withdraw an amount from an existing account.
- 4- Check the current balance of an existing account.
- 5- Get a new loan on an existing account.
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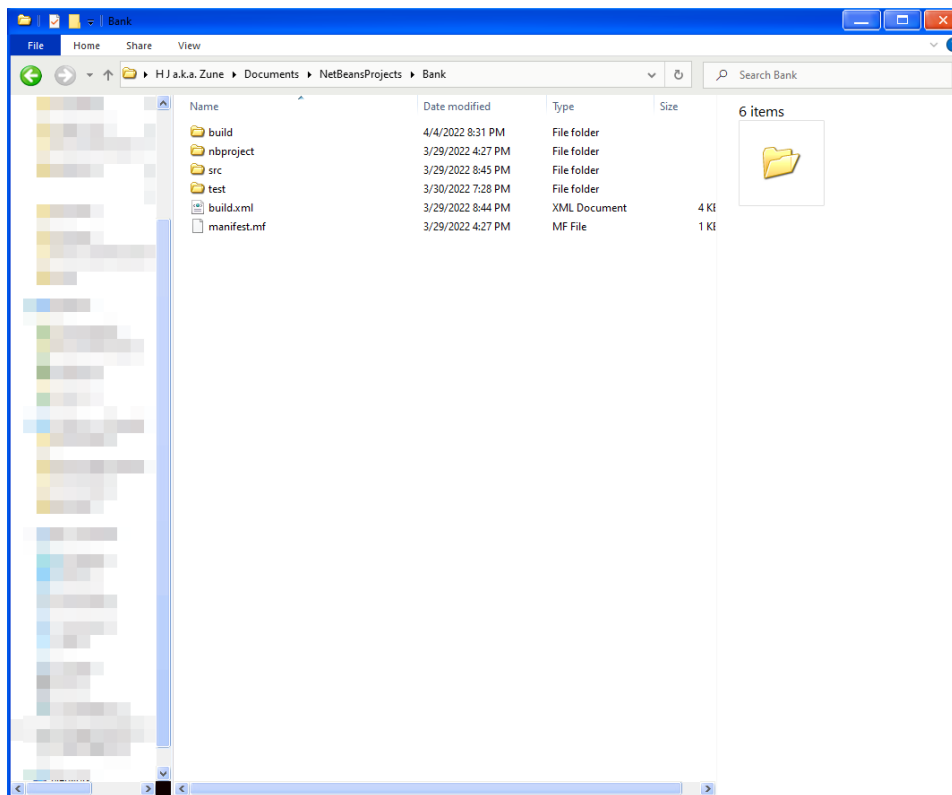
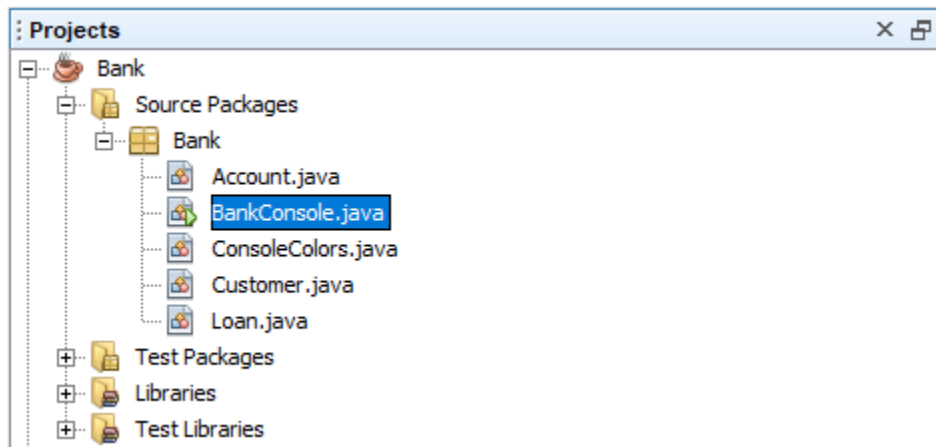
8

Goodbye!

BUILD SUCCESSFUL (total time: 10 minutes 46 seconds)

|

Files:



In case you are curious I do not use Windows XP it's only a theme.



## Assumptions:

I did not use try{} or catch() for InputMismatchExceptions because I was told not to use them in this project.

I created 2 Vectors for accounts and loans so I can use the index features of it.

I did nothing with the customer object after creating them since I wasn't asked to do so.

I created all toString() methods as requested.

I made sure the Starting page only shows up at the start of the program and it only loops the selection screen.

I checked a boolean value on the Account to see if it has an active loan or not.

I didn't make any real connection between the Account and Customer objects since there was no use for it.

I added as many comments as possible as per your request.

I learned about the ConsoleColors class from my Lab Instructor.

I used a while loop to keep showing the selection screen after finishing an operation and I used switch() and case: for the operations.

I'm sure it's not perfect but we did try our best and I hope you take that into consideration.