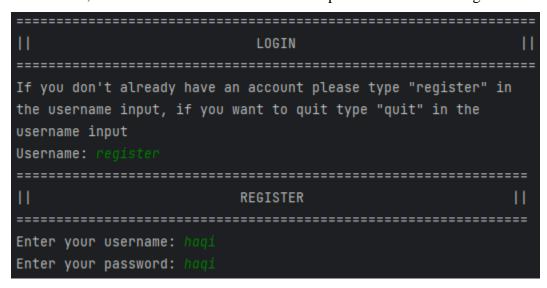**1.2 Steps to Run the Program**

//contains the steps for running the application starting from the first run until all menus are tried to run

The following are the steps for running the application

1. This application consists of various menus, mainly login, register, main, and account information. When the user login the first time the login menu will also ask for the user information, afterward the user doesn't need to input their information again.

```
========================================================================
||                            LOGIN                                   ||
========================================================================
If you don't already have an account please type "register" in
the username input, if you want to quit type "quit" in the
username input
Username: register

========================================================================
||                          REGISTER                                  ||
========================================================================
Enter your username: haqi
Enter your password: haqi
```

```
================================================================
||                        LOGIN                              ||
================================================================
If you don't already have an account please type "register" in
the username input, if you want to quit type "quit" in the
username input
Username: haqi
Password: haqi
Enter your name: Muhammad Baihaqi Aulia Asy'ari
Enter your phone number: 082336750134
Please enter your ID card number in this format
example: 3573052004691337
Enter your ID card number: 3573050101040001
Enter your salary: 8000000
Are you sure (y/n): y
Muhammad Baihaqi Aulia Asy'ari
082336750134
3573050101040001
8000000
```

```
================================================================
||                        MENU                               ||
================================================================
1. Credit card menu
2. Loan menu
3. Account information
4. Log out
5. Quit the program
menu: 3
```

```
================================================================================
||                              ACCOUNT INFO                                  ||
||============================================================================||
||                                                                            ||
||              Name            : Muhammad Baihaqi Aulia Asy'ari              ||
||                                                                            ||
||              Phone number    : 082336750134                               ||
||                                                                            ||
||              ID card number : 3573050101040001                            ||
||                                                                            ||
||              salary          : 8000000                                    ||
||                                                                            ||
||============================================================================||
Exit?
Are you sure (y/n): |
```

2. Some menus can be explored, unfortunately not all intended features are included. This is
   due to the time constraint and limitation on what's allowed to be used in Java for this
   project. The user will find out that any child directories of the "Credit card menu" will
   always result in "not found" and immediately redirected to the parent directory.

```
================================================================
||                         CREDIT CARD                        ||
================================================================
1. Apply for a credit card
2. Owned Credit card
3. Back to main menu
menu: 1
```

```
================================================================
||                   APPLY FOR A CREDIT CARD                  ||
================================================================
1. General purpose
2. Travel
3. Lifestyle
4. Priority
5. Back to credit card menu
menu: 1
```

```
=================================================================
||              GENERAL PURPOSE CREDIT CARD APPLICATION        ||
=================================================================

  _   _     ___   _   _
 | || |   / _ \ | || |
 | || |_| | | | | || |_
 |__   _| | | | |__   _|
    | | | |_| |   | |
    |_|  \___/    |_|


  _   _        _      __                         _
 | \ | |  ___ | |_   / _|  ___  _ _   _  _       _| |
 | .`| |/ _ \ | _| |  _| / _ \ \| \| | | |     / _` |
 |_|\_|\___/ \__| |_|   \___/ \_,_||_||_|\__,_|

=================================================================
||                   APPLY FOR A CREDIT CARD                   ||
=================================================================
1. General purpose
2. Travel
3. Lifestyle
4. Priority
5. Back to credit card menu
menu:
```

3. The flaw above is also exhibited by "Apply for a loan" in the "Loan menu" for all loans
   except for "Mortgage".

```
=================================================================
||                           LOAN                            ||
=================================================================
1. Apply for a loan
2. Current loan status
3. Back to main menu
menu: 1
```

```
================================================================
||                     APPLY FOR A LOAN                       ||
================================================================
1. Personal
2. Auto
3. Mortgage
4. Refinancing
5. Back to loan menu
menu: 1
```

```
================================================================
||                      PERSONAL LOAN                         ||
================================================================

   _    _      ___     _    _
 | || |  / _ \| || |
 | || |_| | | | | || |_
 |__     _| | | |__     _|
   | | | |_| |  | |
   |_|  \___/    |_|



  _    _        _        __                            _
 | \| |  ___  | |_    / _| ___    _    _    _ _     __| |
 | .` |/ _ \|  _|  _|/ _ \| || || ' \ / _` |
 |_|\_|\___/ \__| |_|  \___/ \_,_||_||_|\__,_|


================================================================
||                     APPLY FOR A LOAN                       ||
================================================================
1. Personal
2. Auto
3. Mortgage
4. Refinancing
5. Back to loan menu
menu:
```

4. Although, some features are not what they'd seem to be. One function is purposely made to print "not found" if another function has not been used. This is the "Current loan status" menu, where it only outputs something besides "not found" if the user has made a "mortgage simulation" from the "Mortgage" menu in "Apply for a loan".

```
===============================================================
||                         LOAN                             ||
===============================================================
1. Apply for a loan
2. Current loan status
3. Back to main menu
menu: 3
===============================================================
||                         MENU                             ||
===============================================================
1. Credit card menu
2. Loan menu
3. Account information
4. Log out
5. Quit the program
menu: 2
===============================================================
||                         LOAN                             ||
===============================================================
1. Apply for a loan
2. Current loan status
3. Back to main menu
menu: 2
===============================================================
||                      LOAN STATUS                         ||
===============================================================

  _   _    ___   _   _
 | | | |  / _ \ | | | |
 | | | |_| | | | | | |_
 |__   _| | | | |__   _|
    | | | |_| |   | |
    |_|  \___/    |_|



  _   _     _      __        _
 | \ | | ___ | |_    / _| ___  _   _  _ _   __| |
 | .` |/ _ \|  _ |  _|/ _ \| | | || ' \ / _` |
 |_|\_|\___/ \__| |_|  \___/ \_,_||_||_|\__,_|

Exit?Are you sure (y/n):
```

5. Like what has previously been said, the "Mortgage" menu is the only one in the "Apply for a loan" that is functional. To use the "Mortgage" menu or the "mortgage simulation" the user must input the purpose of the Mortgage.

```
================================================================
||                      MORTGAGE LOAN                         ||
================================================================
Purpose of Credit
1. Buying a house
2. Renovating
menu:
```

6. When entering the buying menu, the user will be prompted with collateral type that "Renovation" doesn't have. After entering the collateral type the user us again prompted with the building Area. Every decision here is adding a minimum down payment percentage in the background. The last consideration for the minimum down payment percentage is the credit facility which counts the overall credit you own. But for this case, we can enter anything. But entering 2 or 3+ will increase the minimum down payment percentage by up to 10%.

```
================================================================
||                      MORTGAGE LOAN                         ||
================================================================
Purpose of Credit
1. Buying a house
2. Renovating
menu: 1
Collateral Type
1. House
2. Apartment
3. Shop
menu: 1
Building Area (m2): 70
How many Credit Facilities do you have
Credit Facility: 1
```

7. After entering the value to be considered for the down payment percentage the user is asked for the length of tenor for the mortgage which will affect the calculated max proposed mortgage accounting for the minimum down payment percentage previously

considered in the background. Afterward, the user is asked for their proposed mortgage and down payment. If the down payment proposed by the user is higher than the minimum down payment amount, the user is allowed to readjust their proposed mortgage if needed.

```
Building Area (m2): 70
How many Credit Facilities do you have
Credit Facility: 1
Maximum 20 years tenor
Tenor: 15
Maximum proposed debt: 535,555,667
House price: 450000000
Minimum down payment amount: 45,000,000
Down payment: 50000000
Maximum proposed debt: 532,000,100
House price: 450000000
```

8. Next, a table will display the information the user has entered and will ask if the user is sure about the proposed mortgage, if they are, the data will be stored and the user will be directed to the parent menu, if they aren't so sure, the user will have the chance to re-enter the information again.

```
====================================================================
||                    Mortgage Application                        ||
||================================================================||
||                                                                ||
||        Credit facility      : 1st                              ||
||                                                                ||
||        House price          : IDR 450,000,000                  ||
||                                                                ||
||        Down payment 11.11% : IDR 50,000,000                    ||
||                                                                ||
||        Debt principal       : IDR 400,000,000                  ||
||                                                                ||
||        Tenor                : 15                               ||
||                                                                ||
||        Interest             : 7.25%                            ||
||                                                                ||
||        installment          : IDR 3,651,451.52                 ||
||                                                                ||
||        Minimum income       : IDR 6,639,002.77                 ||
||                                                                ||
||================================================================||
Are you sure (y/n):
```

9. After the user is assured of their own decision, the user could see the information about their loan in the "Current loan status" menu.

```
================================================================
||                    APPLY FOR A LOAN                        ||
================================================================
1. Personal
2. Auto
3. Mortgage
4. Refinancing
5. Back to loan menu
menu: 5
================================================================
||                            LOAN                            ||
================================================================
1. Apply for a loan
2. Current loan status
3. Back to main menu
menu: 2
================================================================
||                       LOAN STATUS                          ||
================================================================

================================================================
||                   Mortgage Application                     ||
||============================================================||
||                                                            ||
||         Credit facility     : 1st                          ||
||                                                            ||
||         House price         : IDR 450,000,000              ||
||                                                            ||
||         Down payment 11.11% : IDR 50,000,000               ||
||                                                            ||
||         Debt principal      : IDR 400,000,000              ||
||                                                            ||
||         Tenor               : 15                           ||
||                                                            ||
||         Interest            : 7.25%                        ||
||                                                            ||
||         installment         : IDR 3,651,451.52             ||
||                                                            ||
||         Minimum income      : IDR 6,639,002.77             ||
||                                                            ||
||============================================================||
Exit?Are you sure (y/n):
```

10. That is as far as the program goes, to quit the program the user could enter the quit menu in the main menu or log out and type quit.

```
================================================================
||                            LOAN                            ||
================================================================
1. Apply for a loan
2. Current loan status
3. Back to main menu
menu: 3
================================================================
||                            MENU                            ||
================================================================
1. Credit card menu
2. Loan menu
3. Account information
4. Log out
5. Quit the program
menu: 5
================================================================
||                    QUIT SUCCESSFULLY                       ||
================================================================


Process finished with exit code 0
```

```
================================================================
||                           LOGIN                            ||
================================================================
If you don't already have an account please type "register" in
the username input, if you want to quit type "quit" in the
username input
Username: quit
================================================================
||                    QUIT SUCCESSFULLY                       ||
================================================================


Process finished with exit code 0
```

1.3 Program Code

//contains the code of all the programs that have been created