

CSL222-18 Object Oriented Programming

# LAB ASSIGNMENT 3 – EXCEPTIONS

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2BSCS-1

OUTPUT

```
Run: Main
"C:\Program Files\Java\jdk-19\bin\java.exe" "-javaagent:D:\F
Login Trials {OOP Laboratory Assignment 3}
-Vem AienSi A. Marasigan [2 BSCS 1]
=====
[1] Create an Account
[2] Login to an Existing Account
[3] Exit
CHOOSE: 1

Please enter your desired User Name: Vem
Please enter your password: Password

Account Created!
Please be informed that you only have 3 attempts
to log to your account. Failure to do so will
deactivate your account.
Thank you!

=====
You are now Logged in. Please choose an operation
[1] Log out [2] Exit Program
1

[1] Create an Account
[2] Login to an Existing Account
[3] Exit
CHOOSE: 1

Please enter your desired User Name: Sir
Please enter your password: LooksGoodToMe

Account Created!
Please be informed that you only have 3 attempts
to log to your account. Failure to do so will
deactivate your account.
Thank you!

=====
You are now Logged in. Please choose an operation
[1] Log out [2] Exit Program
1

[1] Create an Account
[2] Login to an Existing Account
[3] Exit
CHOOSE: 2

Please indicate your User Name: Vem
Please enter your password: 2BSCS1
*****
Invalid Password. 2 attempt/s remaining.

[1] Create an Account
[2] Login to an Existing Account
[3] Exit
CHOOSE: 2

Please indicate your User Name: VEM
Please enter your password: Password
*****
Account does not exist. Please try again.

[1] Create an Account
[2] Login to an Existing Account
[3] Exit
CHOOSE: 2

Please indicate your User Name: Vem
Please enter your password: Passweird
*****
Invalid Password. 1 attempt/s remaining.

[1] Create an Account
[2] Login to an Existing Account
[3] Exit
CHOOSE: 2

Please indicate your User Name: Vem
Please enter your password: Passande
*****
Login Failed. There are no more attempts left.

[1] Create an Account
[2] Login to an Existing Account
[3] Exit
CHOOSE: 2

Please indicate your User Name: Vem
Please enter your password: Password
*****
Login Failed. Account is was already terminated.
```

```
Run: Main
Please indicate your User Name: Vem
Please enter your password: Password
*****
Login Failed. There are no more attempts left.

[1] Create an Account
[2] Login to an Existing Account
[3] Exit
CHOOSE: 2

Please indicate your User Name: Vem
Please enter your password: Password
*****
Login Failed. Account is was already terminated.

[1] Create an Account
[2] Login to an Existing Account
[3] Exit
CHOOSE: 2

Please indicate your User Name: Sir
Please enter your password: Password
*****
Invalid Password. 2 attempt/s remaining.

[1] Create an Account
[2] Login to an Existing Account
[3] Exit
CHOOSE: 2

Please indicate your User Name: Sir
Please enter your password: LooksGoodToMe!
*****
Invalid Password. 1 attempt/s remaining.

[1] Create an Account
[2] Login to an Existing Account
[3] Exit
CHOOSE: 2

Please indicate your User Name: Sir
Please enter your password: LooksGoodToMe
=====
You are now Logged in. Please choose an operation
[1] Log out [2] Exit Program
1

[1] Create an Account
[2] Login to an Existing Account
[3] Exit
CHOOSE: 1

Please enter your desired User Name: AienSi
Please enter your password: 091200

Account Created!
Please be informed that you only have 3 attempts
to log to your account. Failure to do so will
deactivate your account.
Thank you!

=====
You are now Logged in. Please choose an operation
[1] Log out [2] Exit Program
1

[1] Create an Account
[2] Login to an Existing Account
[3] Exit
CHOOSE: 2

Please indicate your User Name: Aien
Please enter your password: 091200
*****
Account does not exist. Please try again.

[1] Create an Account
[2] Login to an Existing Account
[3] Exit
CHOOSE: 2

Please indicate your User Name: AienSi
Please enter your password: 091200
=====
You are now Logged in. Please choose an operation
[1] Log out [2] Exit Program
2
The System Terminated.
Process finished with exit code 0
```

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SOURCE CODE - Main

```
1 import exceptions.*;
2
3 import java.util.*;
4
5 public class Main
6 {
7
8     static List<Account> accountList;
9
10    public static void main(String[] args)
11    {
12        Scanner scan = new Scanner(System.in);
13        accountList = new ArrayList<>();
14        int loopback = 1;
15        String logSuccessful = "===== " +
16            "You are now Logged in. Please choose an operation\n[1] Log out [2] Exit Program";
17
18        System.out.println("Login Trials {OOP Laboratory Assignment 3}\n" +
19            "-Vem AienSi A. Marasigan (2 BSCS 1)\n" +
20            "=====");
21
22        while(true)
23        {
24            System.out.print("\n[1] Create an Account\n[2] Login to an Existing Account\n" +
25                "[3] Exit\nCHOOSE: ");
26            int choice = scan.nextInt();
27
28            switch(choice)
29            {
30                case 1: System.out.print("\nPlease enter your desired User Name: ");
31                    String userID = scan.next();
32                    System.out.print("Please enter your password: ");
33                    String password = scan.next();
34
35                    Account acc = new Account(userID, password);
36                    acc.setUserID(userID);
37                    acc.setPassword(password);
38                    accountList.add(acc);
39                    System.out.println("\n\t\t\t Account Created!\nPlease be informed that you only have 3 attempts" +
40                        "\n\t\t\t to log to your account. Failure to do so will" +
41                        "\n\t\t\t deactivate your account.\n\t\t\t\t\tThank you!\n\n" +
42                        logSuccessful);
43
44                    if(scan.nextInt() == 2)
45                    {
46                        System.out.print("The System Terminated.");
47                        System.exit( status: 0);
48                    }
49                    break; //This account creation is just an extra mechanic
50
51                case 2: System.out.print("\nPlease indicate your User Name: ");
52                    String userIDInput = scan.next();
53                    System.out.print("Please enter your password: ");
54                    String passwordInput = scan.next();
55
56                    Account account = findAccount(userIDInput);
57
58                    try
59                    {
60                        if (account == null)
61                        {
62                            throw new NotExistingAccountException("Account does not exist.");
63                        }
64
65                        if(account.getAttempts() == 0)
66                        {
67                            throw new NoMoreAttemptsException("Account is was already terminated.");
68                        }
69                        else
70                        {
71                            if (account.getPassword().equals(passwordInput))
72                            {
73                                account.attemptReset();
74                                System.out.println(logSuccessful);
75
76                                if(scan.nextInt() == 2)
77                                {
78                                    System.out.print("The System Terminated.");
79                                    System.exit( status: 0);
80                                }
81                            }
82                            else
83                            {
84                                account.setAttempts(account.getAttempts() - 1);
85                                if(account.getAttempts() == 0)
86                                {
87                                    throw new NoMoreAttemptsException("There are no more attempts left.");
88                                }
89                                else
90                                {
91                                    throw new PasswordMismatchException(account.getAttempts() + " attempt/s remaining.");
92                                }
93                            }
94                        }
95                    }
96                }
97            }
98        }
99    }
100}
```

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2BSCS-1

Project

LoginTrials

src

exceptions

NoMoreAttemptsException

NotExistingAccountException

PasswordMismatchException

Account

Main

LoginTrials.iml

External Libraries

Scratches and Consoles

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accountList.add(acc);

System.out.println("\n\t\t\t Account Created!\nPlease be informed that you only have 3 attempts" +

"\n to log to your account. Failure to do so will" +

"\n\t\t deactivate your account.\n\t\t\t\tThank you!\n\n" +

logSuccessful);

if(scan.nextInt() == 2)

{

System.out.print("The System Terminated.");

System.exit( status: 0);

}

break; //This account creation is just an extra mechanic

case 2: System.out.print("\nPlease indicate your User Name: ");

String userIDInput = scan.next();

System.out.print("Please enter your password: ");

String passwordInput = scan.next();

Account account = findAccount(userIDInput);

try

{

if (account == null)

{

throw new NotExistingAccountException("Account does not exist.");

}

if(account.getAttempts() == 0)

{

throw new NoMoreAttemptsException("Account is was already terminated.");

}

else

{

if (account.getPassword().equals(passwordInput))

{

account.attemptReset();

System.out.println(logSuccessful);

if(scan.nextInt() == 2)

{

System.out.print("The System Terminated.");

System.exit( status: 0);

}

}

}

account.setAttempts(account.getAttempts() - 1);

if(account.getAttempts() == 0)

{

throw new NoMoreAttemptsException("There are no more attempts left.");

}

else

{

throw new PasswordMismatchException(account.getAttempts() + " attempt/s remaining.");

}

}

}

catch (PasswordMismatchException e)

{

System.out.println("\*\*\*\*\*" +

"\nInvalid Password. " + e.getMessage());

}

catch (NoMoreAttemptsException e)

{

System.out.println("\*\*\*\*\*" +

"\nLogin Failed. " + e.getMessage());

}

catch (NotExistingAccountException e)

{

System.out.println("\*\*\*\*\*\n" +

e.getMessage() + " Please try again.");

}

break;

case 3: System.out.print("The System Terminated.");

System.exit( status: 0);

}

}

}

usage

static Account findAccount( String userID)

{

Account acc = null;

for (int count = 0; count < accountList.size(); count++)

{

if (accountList.get(count).getUserID().equals(userID))

{

acc = accountList.get(count);

}

}

return acc;

}

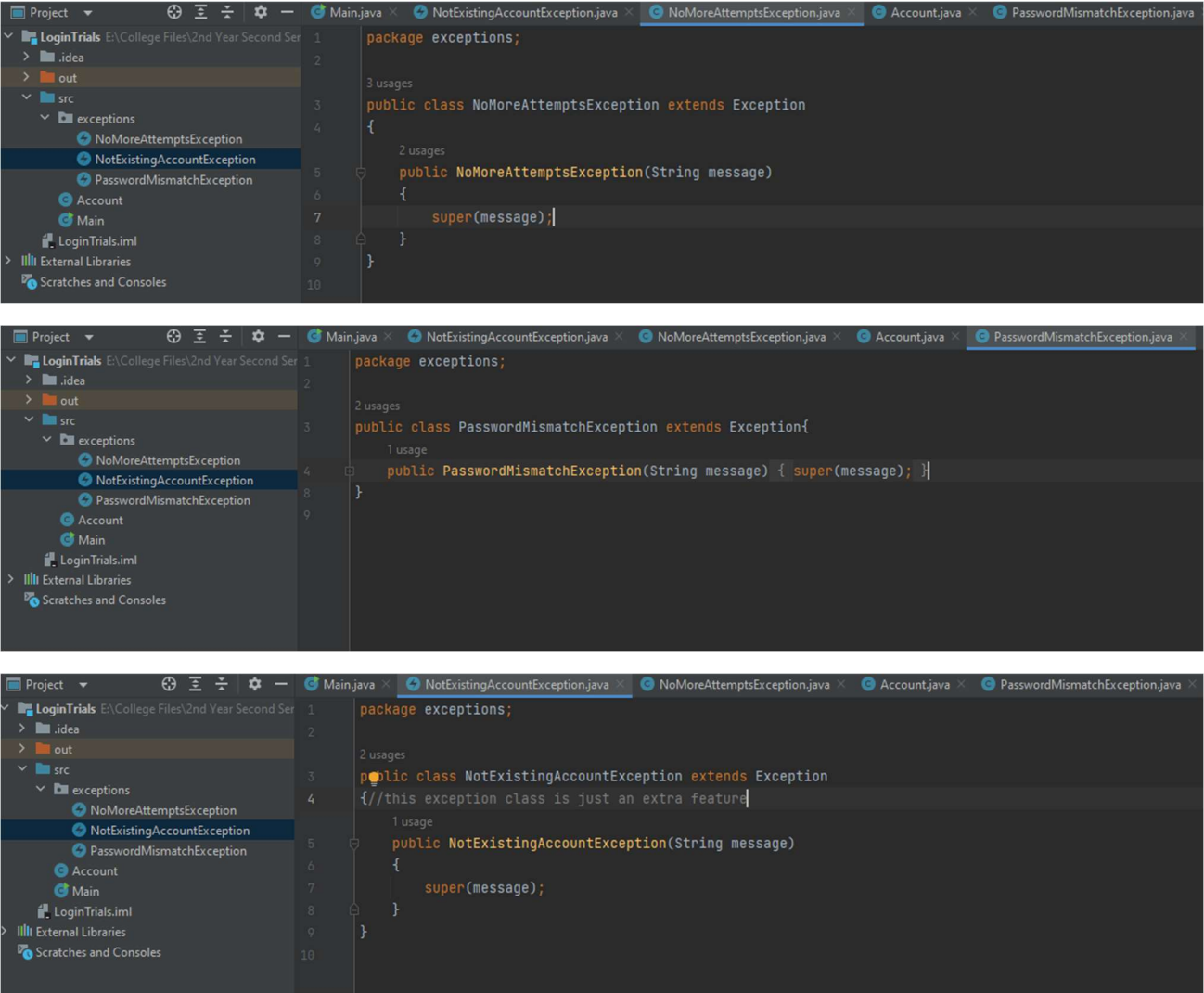
}

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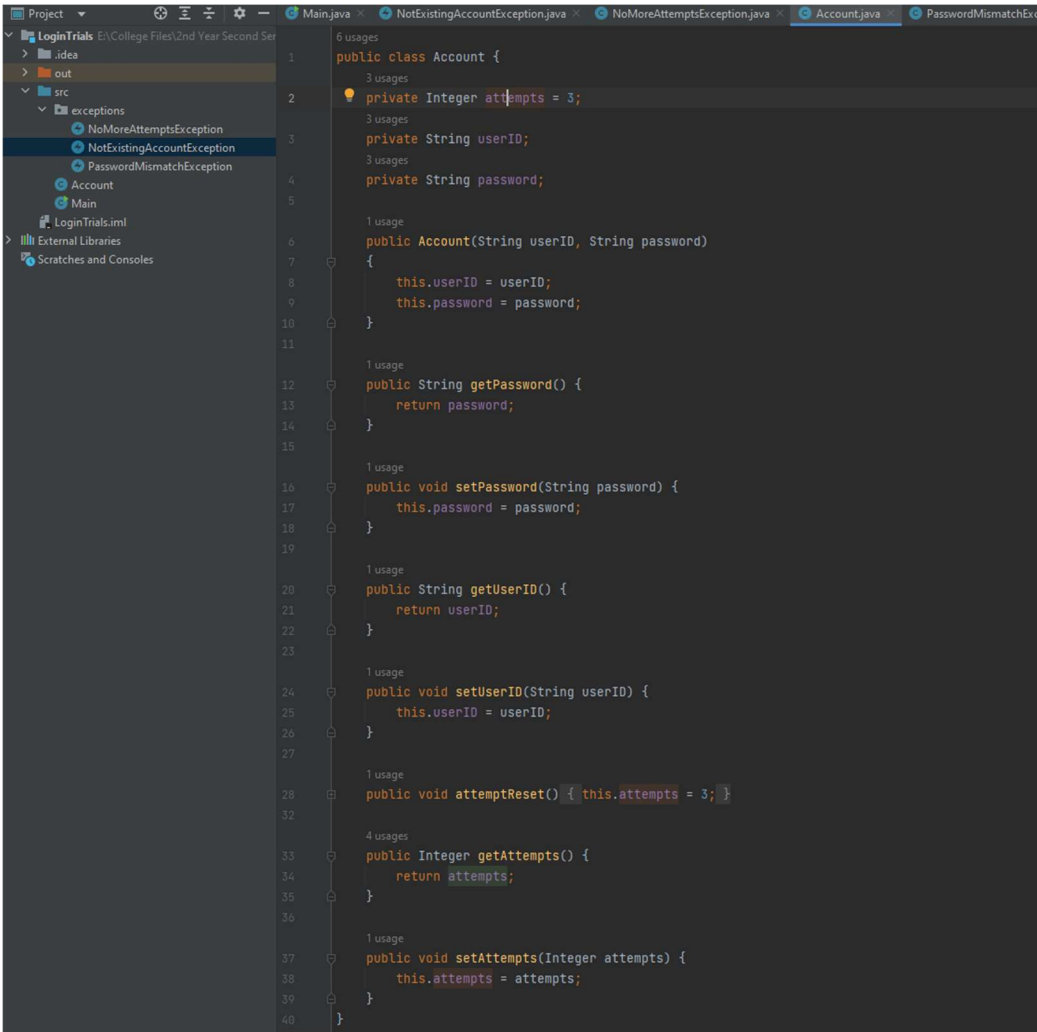
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SOURCE CODE – User-defined Exceptions



SOURCE CODE – Account Object



Source files:  
[https://drive.google.com/drive/folders/1dD4PgLIly2BzvCLN4qARwHoPMFL4jbRS?usp=share\\_link](https://drive.google.com/drive/folders/1dD4PgLIly2BzvCLN4qARwHoPMFL4jbRS?usp=share_link)