Project 4 Instructions

1. Due Date & Time: **October 28th, 2022 at 11:59 pm (Pacific Time)**

WHAT TO SUBMIT

Submit 1 zip file containing 2 files below to iLearn by the deadline. [10 points total]

- 2 JAVA Files: **Order.java, BankAccount.java**
- 1 File: Make a document that shows the screen captures of execution of your programs and learning points in Word or PDF. Please make sure you capture at least 3 executions for Order.java program, so 6 screen captures for BankAccount program and one paragraph learning reflection for each.

- **Part 1: Order [4 points]**
  - Let's make our own restaurant where clients can order a few items and then you calculate the total, total after tax and then ask tip % and then add them all.
  - Document your code carefully. Your program output must be **very similar** to the sample output.
  - You need to make **at least the following two methods** to implement this.
    - public static double tip_calculator(int total)
    - public static int menu_received()

OUTPUT OF SAMPLE RUN (PURPLE DENOTES USER INPUT)

Welcome to <YourResturantName>

Here is our menu:
1. Bulgogi -- $15.00
2. Kalbi -- $18.00
3. Kimchi Fried Rice -- $16.00
Please choose one option at one time using the number (0 to end the order): 1

Thank you for ordering Bulgogi
Your total is $15

Here is our menu!
1. Bulgogi -- $15.00
2. Kalbi -- $18.00
3. Kimchi Fried Rice -- $16.00
Please choose one option at one time using the number (0 to end the order): 1

Thank you for ordering Bulgogi
Your total is $30

Here is our menu!
1. Bulgogi -- $15.00
2. Kalbi -- $18.00
3. Kimchi Fried Rice -- $16.00

Please choose one option at one time using the number (0 to end the order): 0

Your total after tax is $ 32.55

1. tip 10%: 3.00
2. tip 15%: 4.50
3. tip 20%: 6.00

Please choose one option: (0 for no tip): 2

Your total after tax and tip is $37.05

Thank you and enjoy the food and come again!

- **Part 2: BankAccount [4 points]**

Problem Description:

Write a program to perform the following Bank Operations:
1. Check Balance: This operation should display the available bank balance
2. Deposit Money: This operation should add the amount to the available bank balance
3. Withdraw Money: This operation should subtract the amount from the available bank balance
4. Change Answer of Security Question: This operation should change the answer of security question
5. Exit: Terminate the program execution

Use Inputs:

Capture the input from the user (use Scanner class) for following:
1. Operation to perform
2. Amount to deposit
3. Amount to withdraw
4. New answer for the security question

Guidelines:

1. Use switch case to call a method that performs the operation.
    - E.g. If the user enters 1 to check balance then call checkBalance method
2. Use while loop to display the bank operations and terminate the loop on Exit (i.e. operation 5)
3. Variables to declare in the main method: balance, answer, accountNo (assign default values)
4. Your code should contain the following methods.

```
public static void checkBalance(double balance, String answer, int accountNo){

}

public static double depositMoney(double balance){

}

public static double withdrawMoney(double balance){

}

public static String changeAnsSecutityQuestion(){

}
```

Steps to follow:

1. Display bank operations
2. Input user choice
3. Use a switch to call the appropriate method
4. Implement the above methods in your program
5. Loop again to display all bank operations.
6. Terminate the loop to end the bank operations (hint: You can use return statement)

Constraints:

1. Ask the user to enter the answer of the security question and display the available balance only when the answer is correct.
   use equals method to compare String:
   Syntax: s1.equals(s2) *here s1 and s2 are String variables*
2. Withdraw balance only when the withdrawal amount is less than or equal to balance.

Sample Output:

Operations
1. Check Balance
2. Deposit Money
3. Withdraw Money
4. Change Answer of Security Question
5. Exit

Enter your choice: 2
Enter the amount to deposit: 50

Operations
1. Check Balance
2. Deposit Money
3. Withdraw Money
4. Change Answer of Security Question
5. Exit

Enter your choice: 1
In which city was your first job? SF
Account Number: 1234567890

Operations
1. Check Balance
2. Deposit Money
3. Withdraw Money
4. Change Answer of Security Question
5. Exit

Enter your choice: 3
Enter amount to withdraw: 100
Transaction failed. Not enough balance
Operations
1. Check Balance
2. Deposit Money
3. Withdraw Money
4. Change Answer of Security Question
5. Exit

Enter your choice: 4
In what city was your first job? LA

Operations
1. Check Balance
2. Deposit Money
3. Withdraw Money
4. Change Answer of Security Question
5. Exit

Enter your choice: 1
In what city was your first job? SF
Incorrect Answer

Operations
1. Check Balance
2. Deposit Money
3. Withdraw Money
4. Change Answer of Security Question
5. Exit

Enter your choice: 1
In what city was your first job? LA
Account Number: 1234567890

Balance: 50.0

Operations
1. Check Balance
2. Deposit Money
3. Withdraw Money
4. Change Answer of Security Question
5. Exit

Enter your choice: 5
Thank you for visiting us!

- **Part 3: Reflection 500 words + screen capture of executions [2 points] (a Word or PDF file)**
  - Add screenshots of your program executions
  - Share what was helpful and what was not helpful in working on the programs
  - Suggestion: Additionally, try answering some of these questions:
    - What new thing did you learn from this project?
    - What did you wish you knew better before beginning this project?
    - Was there something that you had misunderstood before that now feels clearer?
    - Is there something that you wish your instructor and mentor could have taught you that could have helped you to do better on the project?