
Programming Assignment 4 (30 points)
Due date: February 8th, 2017 at 11:59 PM

Assignment Overview

This assignment will give you practice with interactive programs and if/else statements.

Part 1: User name Generator [10 points]

Write a program that prompts for and reads the user's first and last name (separately). Then print a string composed of the first letter of the user's first name, followed by the first five characters of the user's last name, followed by a random number in the range 10 to 99.

Assume that the last name is at least five letters long. Similar algorithms are sometimes used to generate user-names for new computer accounts.

CLASS NAME. Your program class should be called *UserNameGenerator.java*.

Sample run:

```
Enter your first name: William
Enter your last name: Henry
Username: WHenry88
```

Part 2: Bank Charges [20 points]

A bank charges a base fee of \$10 per month, plus the following check fees for a commercial checking account:

- \$.10 each for less than 20 checks
- \$.08 each for 20–39 checks
- \$.06 each for 40–59 checks
- \$.04 each for 60 or more checks

Write a program that asks for the number of checks written for the month. The program should then calculate and display the bank's service fees for the month.

CLASS NAME. Your program class should be called *BankCharges.java*.

Sample run 1:

```
Enter the number of checks written this month: 30
The total fees are $12.40
```

Sample run 2:

```
Enter the number of checks written this month: 30
The total fees are $12.40
```

Sample run 3:

```
Enter the number of checks written this month: 45
The total fees are $12.70
```

Sample run 4:

```
Enter the number of checks written this month: 70
The total fees are $12.80
```

Rules:

- For this assignment you are limited to the language features in Chapters 1 through 4; you are not allowed to use more advanced features to solve the problem. Please do not use Java features that are not covered in lecture or the textbook.
- Use class constants as appropriate to represent important fixed data values in your program.
- You are required to properly indent your code and will lose points if you make significant indentation mistakes. You should also use whitespace properly to make your program more readable, such as between operators and their operands, between parameters, and blank lines between groups of statements or methods.
- Java's naming standards about the format of ClassNames, VariableNames, and CONSTANT_NAMES.
- Include a comment at the beginning of your program with basic information.
- You should use at least one switch statement or at least one multi-way if-statement (using "else if").
- Much of your code will involve conditional execution with if and if/else statements. Part of your grade will come from using these statements appropriately.
- Notice that all real numbers output by the program are printed with no more than 2 digits after the decimal point. To achieve this, you may use the System.out.printf method as follows.

```
// print exam score, rounded to 2 decimal places
System.out.printf("%.2f", ExamScore);
```

Submission Instructions

- Execute the program and copy/paste the output that is produced by your program into the bottom of the source code file, making it into a comment. I will run the programs myself to see the output.
- Make sure the run "matches" your source. If the run you submit could not have come from the source you submit, it will be graded as if you did not hand in a run.
- Use the Assignment Submission link to submit the source code file.
- Submit the following files:
 - UsernameGenerator.java
 - BankCharges.java.java
- Do not submit .class files.

Standard program header

Each programming assignment should have the following header, with italicized text, appropriately replaced.

```
/*
 * Class: CS1A
 * Description: (Give a brief description of Assignment 4)
 * Due date:
 * Name: (your name)
 * File name: UsernameGenerator.java
 */
```