**IC7**

**Programming Fundamentals**

**Fall 2021**

IC7 has two programs. First, we will create the pseudoCode and flow chart for the CreditCheck program and then write the code for this program. In the second part, we will complete methods in a program which simulates Codingbat.

Program one - CreditCheck

1. In the CreditCheck program, only one method may be static, main. This means we will have to instantiate a copy of our own class to call these methods.
2. We are also introducing instance variables in this program. An instance variable belongs to the object created rather than to a particular method or class. These are created in the class but outside the method. They will exist throughout the entire class. We should modify these with an access modifier, private. Do not include the static keyword. We need variables to hold the salary, credit rating and name of the account holder.
3. In the getInfo method, we need to ask the user for their name, annual salary and credit rating. This method takes no parameters and does not return any value.
4. We will create a method, getApproval which takes two parameters, salary and credit rating. If the user’s salary exceeds 20,000 and their credit rating is 600 or higher, they will be approved. getApproval will return true if the user is approved, false if not.
5. The printApproval method will only be called if the user is approved. In the printApproval method, we print the user’s name and Approved.
6. The printDisapproval method will only be called if the user does not qualify for the loan. The printDisapproval method will print the user name and Disapproved.
7. We will be creating three instances of the CreditCheck class, I called mine cc, cc2, and cc3. You will use these to call the methods and store the information gathered from the getInfo method. You will then call the methods for processing from these objects.
8. You should collect the data for each object before determining whether that person is approved or not.

Example output:

Please enter your name

Fred Flintstone

Please enter the salary for Fred Flintstone

150000

Please enter the credit rating for Fred Flintstone

500

Please enter your name

Barney Rubble

Please enter the salary for Barney Rubble

25000

Please enter the credit rating for Barney Rubble

700

Please enter your name

Sally Smith

Please enter the salary for Sally Smith

25000

Please enter the credit rating for Sally Smith

590

Fred Flintstone - Disapproved.

Barney Rubble - Approved.

Sally Smith - Disapproved.

Program Two - Method Tester

Please complete the methods in the attached file.  This simulates CodingBat and will allow you to see what is happening in CodingBat.

1. add
2. subtract
3. firstWord
4. lastWord
5. buildString
6. repeatString

**Do not modify the MethodTester.java file**.  This file has been setup to create an instance of the MethodContainer class and call the methods on this class.  This will help you see how methods are called and how classes can use the methods in other classes.

Rubric:

Coding Standards – 5

CreditCheck

Instance variables– 10

getInfo – 10

getApproval – 5

printApproval – 5

printDisapproval – 5

main – 10

MethodContainer

subtract – 10

firstWord – 10

lastWord – 10

buildString – 10

repeatString – 10