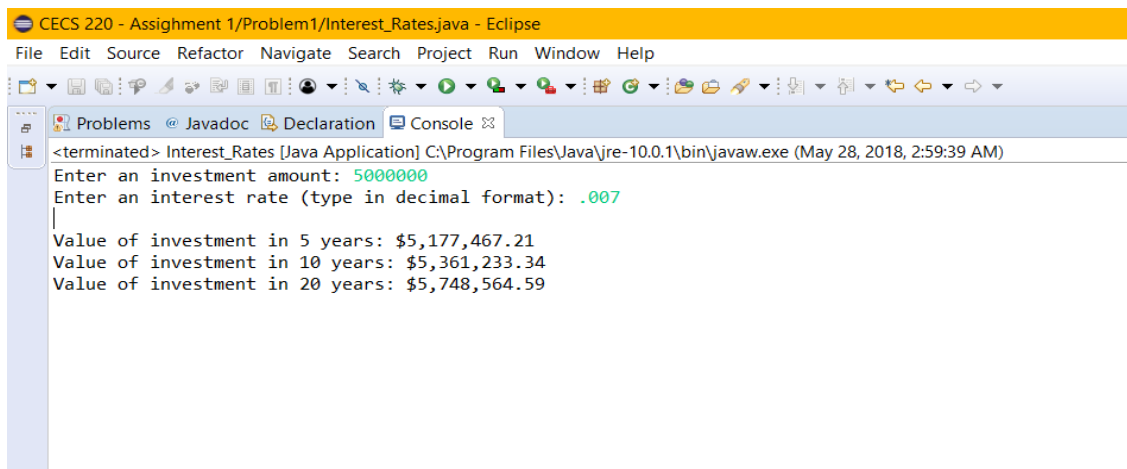


**Jeremy Boyd**  
**Assignment 01**  
**5/29/2018**

## Problem 1

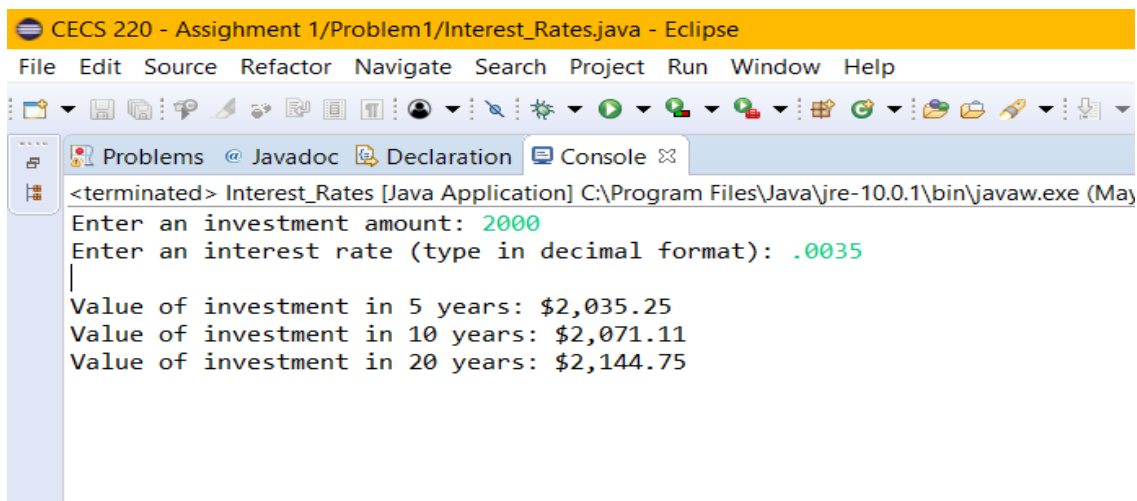
Solving this first problem was pretty simple but getting back to coding after not doing it for a while reminded me of why I love it so much. I really enjoyed completing this assignment regardless of how simple it was. Now to my solution, I started out by importing *java.text.NumberFormat* and *java.util.Scanner*. These two classes allowed me to format the final outputs properly and to read in input from the user respectively. I then created variables, *investment* and *interest\_rate*, one that would hold the investment amount and one that would hold the interest rate value. Next, I prompted the compiler to create two output statements that would tell the user to enter a value for the investment and one for the interest rate, both were accompanied by scanner statements that would read in the user's numbers. After that I created three variables, *Future\_value1*, *Future\_value2*, and *Future\_value3*, based off the formula we were given by using the math class to raise numbers to a certain power. The three variables were raised to the power of 5, 10, and 20 to represent the years we were given to calculate the future value of the investment. And lastly, I created three output statements that would display the calculated values from my three variables to show the value of the user's investment in 5, 10, and 20 years. Within the output statements the variables were accompanied by the *getCurrencyInstance* function of the Number Format class. So, the values would be displayed with a dollar sign and rounded to two decimal points.



```
CECS 220 - Assignment 1/Problem1/Interest_Rates.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help

<terminated> Interest_Rates [Java Application] C:\Program Files\Java\jre-10.0.1\bin\javaw.exe (May 28, 2018, 2:59:39 AM)
Enter an investment amount: 5000000
Enter an interest rate (type in decimal format): .007

Value of investment in 5 years: $5,177,467.21
Value of investment in 10 years: $5,361,233.34
Value of investment in 20 years: $5,748,564.59
```



```
CECS 220 - Assignment 1/Problem1/Interest_Rates.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help

<terminated> Interest_Rates [Java Application] C:\Program Files\Java\jre-10.0.1\bin\javaw.exe (May 28, 2018, 2:59:39 AM)
Enter an investment amount: 2000
Enter an interest rate (type in decimal format): .0035

Value of investment in 5 years: $2,035.25
Value of investment in 10 years: $2,071.11
Value of investment in 20 years: $2,144.75
```

## Problem 2

This is my first time using a GUI environment, so this problem was pretty cool to solve and I'm excited to learn how to do more things with it. To start out I imported all the necessary classes so I would be able to use scene, group, color, etc. I built my code from the bottom up, so I started by creating the final group named, *cents*, and naming all my variables within it as well as creating my scene how I wanted it. Then based off of the variable names in my group I created the shapes for my quarter, dime, and penny. Doing the sizing was a feeling out process until I was comfortable with how they looked and then I set the colors for each circle. I made all the circles silver except the penny which was brown. After this I created four text messages to be displayed for each coin and named them based off of the number they would represent, a twenty-five, ten, five, and one cent variable to match the value of each coin. Next, I created four font variables and set them to a respectable size based off how big each one's respective coin was. And after that I set the text variables to the size that matched the coin it would be displayed on. Then for some added flair I put a black stroke around each coin so they'd stand out a little more.

