Project11

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Project 11: Object-oriented Programming

Prob. 1

In OOP lab Q2, we created a class named "bankBalance" with the attribute "balance". Suppose the current interest rate is 2%. To attract more deposits, the bank decides to raise the interest rate. Create a method called "raise_rate()" in this class to set up a new interest rate for both accounts. Create two accounts with deposits of $1000 or $2000, respectively. Apply the method "raise_rate()" to set a new interest rate to 5%. Create another method called "cal_balance()" to calculate the final balance. You may need the following formula for calculation:

$A = P(1 + (\frac{r}{n}))^{n*t}$, in which:
A- Final account balance
P- Principle, the initial balance
r- Annual interest rate
n = 12 month
t- years over which the interest is accumulating.
Create a method called "display()" to print out the finial balance. After applying rising interest rate, print the new balance again.

```
The final balance for BankAccount "Jon Snow" with initial balance of $1000 at
the interest rate of 0.02 after 2 years is: $1040
The final balance for BankAccount "Sansa Stark" with initial balance of $2000
at the interest rate of 0.02 after 3 years is: $2123

The final balance for BankAccount "Jon Snow" with initial balance of $1000 at
the interest rate of 0.05 after 2 years is: $1104
```