1. **Interest earned**

Assuming there are no deposits other than the original instruments, the balance in a saving account after one year may be calculated as

Principal is the balance in the saving account, Rate is the interest rate, and T is the number of times the interest is compounded during a year (T is 4 if the interest is compounded quarterly).

Write a program that asks for the principal, the interest rate, and the number of times the interest is compounded. It should display a report similar to:

Interest rate: 4.25%

Times Compounded: 12

Principal: $ 1000.00

Interest: $ 43.34

Amount in Savings: $ 1043.34

1. **Monthly Payments**

The monthly payment on a loan may be calculated by the following formula:

Rate is the monthly interest rate, which is annual interest rate divided by 12. (12% annual interest would be 1 percent monthly interest) N is the number of payments, and L is the amount of the loan. Write a program that asks for these values and displays a report similar to:

Loan Amount: $ 10000.00

Monthly Interest Rate: 1%

Number of Payments: 36

Monthly Payment: $ 332.14

Amount Paid Back: $ 11957.15

Interest Paid: $ 1957.15

1. **Word Game**

Write a program that plays game with the user. The program should display the following story, inserting the user’s input into the appropriate locations:

* His or her name
* His or her age
* The name of the city
* The name of the college
* A profession
* A type of animal
* A pet’s name

After the user has entered these items, the program should display the following story, inserting the user’s input into the appropriate locations:

There once was a person named NAME who lived in CITY. At the age of AGE, NAME went to college at COLLEGE. NAME graduated and went to work as a PROFESSOR. Then, NAME adopted a(n) ANIMAL named PETNAME. They both lived happily ever after!