

Homework #7 – Savings in COBOL

CSCI 450

Preparation

You will need to finish a program using the programming language Cobol.
Check Course Information on Bb for the link of the Online Cobol Compiler.

Problem Statement

Suppose you save \$100 **each** month into a savings account with the annual interest rate 5%, so the monthly interest rate is $0.05 / 12 = 0.0041$.

After the first month, the value in the account becomes $100 * (1 + 0.0041) = 100.41$

After the second month, the value in the account becomes $(100 + 100.41) * (1 + 0.0041) = 201.24$

After the third month, the value in the account becomes $(100 + 201.24) * (1 + 0.0041) = 302.49$
and so on.

Write a program that prompts the user to enter an amount (e.g. 100) that s/he likes to save each month, the annual interest rate (e.g. 5 for 5%), and the number of months (e.g. 6) and displays the amount in the savings account after the given month.

Check sample output on next page

Requirements & Considerations

1. Name your program **savings_yourLastName.cbl**
2. Include **header** comments (at the beginning of your program, I used Java comments below, what is the comment symbol for Cobol?) formatted as shown below, using your name and student ID, etc. instead. Be sure to include the Honor Code statement and program description. Your electronic submission of the program file will represent your endorsement of the Honor Code Statement.

```
/* Course: CSCI 450, Section 1
   Student Name: Jane Doe
   Student ID: 12345678
   Homework #7
   Due Date:

   In keeping with the Honor Code of UM, I have neither given nor received any
   Inappropriate assistance from anyone other than the TA or the instructor.

   Program Description: .....
*/
```

3. Before each significant step, provide a comment explaining the step (do not comment every line of code).
4. Submit your finished program (**savings_yourLastName.cbl**) on Blackboard using the **Homework #7** link under Homework Assignments button.

Check Sample Output on next page →

Sample Output

```
Enter amount to be saved each month:  
100  
Enter annual interest rate (enter 5 for 5%):  
5  
Enter number of months:  
6  
The amount in the account is: 608.77
```