Program 1 - **Credit Card**
Comp 150/170
50 Points

Write a flowchart and C++ program which will calculate the monthly finance charge and monthly balance of a credit card given the initial balance, the credit card's APR, the monthly amount charged to the card, and the monthly payment made on the card. The program will produce a table like the one below, stopping once the credit card has been paid off (balance less than or equal to 0). The total of all the finance charges will be displayed after the table.

The finance charge (F/C) is computed as the account balance times the MPR before the month's charges or payments are made.

Your program should produce output **in the exact same format** as the example below (same spacing, spelling, capitalization, etc.).

```
Initial balance? 1000
Interest rate?   12.5
Monthly charge?  50
Monthly payment? 250

Month       F/C     Balance
    1     10.42      810.42
    2      8.44      618.86
    3      6.45      425.30
    4      4.43      229.74
    5      2.39       32.13
    6      0.33     -167.54

Total finance charges: 32.46
```

The user may enter *any* positive dollar amount, interest rate, monthly charge, or monthly payment. Make sure your program works with all acceptable input; there shouldn't be any infinite loops. Don't worry about negative values being entered.

To create the aligned columns, you will need to use the setw function in the iomanip.h library. There are 7 spaces between "Month" and "F/C" and 5 spaces between "F/C" and "Balance".

* If for some reason the credit card balance cannot be paid off, your program should report this and not produce a table.

Turn in:
1. flowchart matching your program
2. print out of your documented program

Submit your program to Easel (http://cs.harding.edu/easel/) *before* class on the due date.

Make sure your flowchart and program match-up exactly! Half of the points will be based on how well the program runs and how the program is written (good variable names, proper indentation, etc.). The other half will be based on how correctly the flow chart and code match-up.