Due: August 30, Thursday, **5:00 pm** (zero credit if late turn-in)

Write two Java programs as follows:

- Use "default" package: i.e., Your program should not have "package ...." on the top of the program.
- Define a public class named **MyCD** as follows: (Note: Java is a case-sensitive language)
  - instance variables: **principal, annualRate, numberOfMonth**
  - commands: set values in instance variables
  - queries: read direct or calculated values from instance variables.
- Define a public class named **Quiz02** as follows for the purpose of testing **MyCD** and displaying a table as shown in the sample run below:
  - Read the amount of principal, annual percentage rate, and the number of months. (Use **Scanner** to read numbers from keyboard)
    - If the number entered is 0 or negative, re-prompt to enter.
    - You may assume that a number is always entered.
  - Display a table based on the numbers entered
    - You must create an object of **MyCD** and use commands and queries to display the pattern.
    - Methods in MyCD class do not use any side effects. (an example of side effects: directly printing something on the screen)

Turn-in: Submit **Quiz02.java** and **MyCD.java** (source files only) via D2L (Dropbox -> Quiz02 link). Submit two files individually – do not zip or compress them.

Grading Policy:

- Follow each instruction above very carefully and precisely. Each violation is subject to deduction. These are some of possible violations, but is not limited to:
  - class and file names (including case sensitivity)
  - use of 'package'
  - use of commands and queries
  - input validation
  - submission: uncompressed two individual source files only

Problem descriptions:

4.31* (*Financial application: computing CD value*) Suppose you put $10,000 into a CD with an annual percentage yield of 5.75%. After one month, the CD is worth

```
10000 + 10000 * 5.75 / 1200 = 10047.91
```

After two months, the CD is worth

```
10047.91 + 10047.91 * 5.75 / 1200 = 10096.06
```

After three months, the CD is worth

```
10096.06 + 10096.06 * 5.75 / 1200 = 10144.43
```

and so on.

Write a program that prompts the user to enter an amount (e.g., 10000), the annual percentage yield (e.g., 5.75), and the number of months (e.g., 18) and displays a table as shown in the sample run.

Sample Run

```
bash-3.2$ java Quiz02

Enter the initial deposit amount: 10000

Enter the annual percentage yield: 5.75

Enter maturity period (number of months): 18

Month       CD Value
1           10047.92
2           10096.06
3           10144.44
4           10193.05
5           10241.89
6           10290.97
7           10340.28
8           10389.82
9           10439.61
10          10489.63
11          10539.89
12          10590.40
13          10641.14
14          10692.13
15          10743.37
16          10794.84
17          10846.57
18          10898.54
```

Use **System.out.printf( )** for formatted output.