Lab – 4

Objective:

- BN booksellers awards points to its customers based on the number of books purchased each month.

- The points are awarded as follows:

# of books	Points Earned
0	0
1	5
2	15
3	30
4 or more	60

Task:

- Write a Java program using a **switch** statement to do the following:

  - Prompt the user to enter the number of books purchased by the user during the current month and

  - Display the number of points earned by the user

- Only accept positive values for user input.

Sample Output - 1

How many books did you purchase at BN booksellers this month?

7

Congratulations!!! You have earned 60 points!

You may redeem these points on your next book purchase!

Sample Output - 2

How many books did you purchase at BN booksellers this month?

0

You have not earned any points yet. Make a book purchase to start earning points!

Sample Output - 3

How many books did you purchase at BN booksellers this month?

-12

Invalid value entered! Exiting the program!

Lab Submission:

- At the beginning of your program, insert your full name as a comment.

- Include comments in your program wherever necessary.

- Upload the .java file on Dropbox.

Lab Report Submission:

- First, download the Lab Report Template document on Dropbox.

- Use this template to complete your lab report.

- Proposed Solution:

  ○ In the proposed solution section of your lab report, draw a flow chart based on your lab solution.

    ▪ Make sure to put decisions in diamonds, actions/statements in boxes, and draw arrows showing the flow of the program.

    ▪ Arrows coming from decisions must have the "TRUE" and "FALSE" branches clearly labeled.

- Additional Questions:

  1. (2 pts) Why is the keyword "break" used in a switch statement? What happens when "break" is omitted?

  2. (7 pts) What is short-circuit evaluation? Explain using an example.

  3. (4 pts) Name the built-in methods that are used to test the equality of two strings?

4. Given the following code snippet,

```
int count = 25;

if(count < 0 && count > 10)

{

        System.out.println("The value of count is outside the range of 0-10");

}

else if(count > 3 && count < 7)

{

        System.out.println("The value of count is within the range of 3-7");

}

else

{

        System.out.println("Error");

}
```

(a) (4 pts) Eliminate the syntax error in the above code snippet and rewrite the code.

(b) (3 pts) What will the program print to the console?