LESSON PLAN WEEK 18th – 22nd SEPTEMBER

Because last week they just took a test, this section will provide a little fun. I would like to try out the game technique this week.

1. Divide them into 3-4 groups (there are 17 of them totally) 2-5 minutes
2. There are four-five questions about relational operators. Each member of the group will be in charge of one problem. I will present each problem at one time and pick the person in the group who will present the decision of the group for that question randomly but no repeated. Give each question 30 seconds to process, the presenters have to come on the board after 30s and write down the answer (2-3 minutes). Each point will be given to every right answer. Chocolate will be the prize for the winning group.

a. What is the output for this code?
   ```java
double b = 3.0/7.0 + 2.0/7.0 + 2.0/7.0;
if (b == 1.0)
    System.out.println("Value of a equals 1.0");
else
    System.out.println("Value of a does not equal 1.0");
```
Answer: Value of a does not equal 1.0 (reference page 171)

b. Given x and y are floating-point numbers, what does `Math.abs(x-y)` method do? What is the practical purpose of this method (clue: What is the purpose of this expression `Math.abs(x-y) < 0.000001`)?
Answer: This method will determine whether x equals to y.

c. What is the result of these two expressions? Explain your answers
   a. 8 < '5'
   b. 8 < 5
Answer: a. true (integer compare with char, using Unicode character set)
   b. false

d. What is the difference between `equals()` and `compareTo()`?
Answer: equals() returns Boolean type
compareTo() returns Integer type

e. Put these operators in precedence order:

- && \hspace{2cm} (6)
- = \hspace{2cm} (8)
- !, +, - (unary operators) \hspace{2cm} (1)
- +, - \hspace{2cm} (3)
- ==, != \hspace{2cm} (5)
- || \hspace{2cm} (7)
- *, /, % \hspace{2cm} (2)
- <, <=, >=, > \hspace{2cm} (4)