Lab Tutorial 4

To pass this exercise you must:

- Complete the exercise below
- After completing the task, zip your java source files and submit it to canvas for assessment
- Discuss your work with your tutor for feedback
- Submit by the end of the tutorial or submit it by due date Sunday of this tutorial week

Exercise

Task 1:

Download the file the Student class "Student.java", and write a program StudentCreater class with a main method that creates at least two student objects with different values and call getLoginName() to display login name for each student

Task 2:
One way to estimate the adult height of a child is to use the following formula, which uses the height of the parents:

$H_{male\_child} = ((H_{mother} \times 13/12) + H_{father})/2$
$H_{female\_child} = ((H_{father} \times 12/13) + H_{mother})/2$

All heights are in inches. Your task is to write a program with a main method that takes as input the gender of the child, the height of the mother in inches, and the height of the father in inches, and outputs the estimated adult height of the child in inches. The program should allow the user to enter a new set of values and output the predicted height until the user decides to exit.

Below shows a sample output of the program:

```
Enter the gender of your future child. Use 1 for female, 0 for male.
1
Enter the height in inches of the mom.
60
Enter the height in inches of the dad.
70
Your future child is estimated to grow to 62 inches.

Enter 'Y' to run again, anything else to exit.
Y
Enter the gender of your future child. Use 1 for female, 0 for male.
0
Enter the height in inches of the mom.
65
Enter the height in inches of the dad.
75
Your future child is estimated to grow to 72 inches.

Enter 'Y' to run again, anything else to exit.
N
Program ends.
```

Submission

Submit your zipped java source files to canvas for assessment.

Marking scheme

Task 1: **4 marks** & Task 2: **6 marks**.

The programs should meet the following requirements:

1. A proper class header comment, which has the following information
   a) javadoc comment beginning with /** and end with */
   b) purpose of the class, for example: Converts Australian dollars to South African rand.
   c) @author your name and id information
   d) @version version number and/or date
2. The program works as required
3. Readability: name conventions (variable name, constant name, class name), meaningful names, indentation, comments for each variable
4. Keep the user well informed with proper messages