CSE110 Homework 3

Task 1:
Write **javacode** of a program that reads a student's mark for a single subject, and prints out "Pass" if the student got more than 50, and "You shall not pass" otherwise.

Task 2:
Write **javacode** of a program that reads a student's mark for a single subject, and prints out the corresponding grade for that mark. The mark ranges and corresponding grades are shown in the table below. Valid range of marks is 0 to 100. Print "Wrong Input" otherwise.

Marks	Grade
90 and above	A
80-89	B
70-79	C
60-69	D
50-59	E
Below 50	F

Task 3:
Write **javacode** of a program for finding area of a rectangle given height and width by the user.

Task 4:
Write **javacode** of a program that calculates the tax as follows:

a) No tax if you get paid less than 10,000
b) 5% tax if you get paid between 10K and 20K
c) 10% tax if you get paid more than 20K
d) NO TAX IF YOU ARE LESS THAN 18 YEARS OLD.

Hint: Take payment and age from user as inputs; then calculate tax and prints it.

Task 5:
Write **javacode** of a program that finds the number of hours, minutes, and seconds in a given number of seconds. For example, how many hours, minutes, and seconds are there in 10,000 seconds?

Task 6:
Suppose the following expressions are used to calculate the values of L for different values of S:

L = $3000-125S^2$ $\quad if\ S<100$

L = $\dfrac{12000}{4+\left(S^2/14900\right)}$ $\quad if\ S\geq 100$

Write **javacode** of a program that reads a value of S and then calculates the value of L.

Task 7:
Write **javacode** of a program that reads the values for the three sides x, *y*, and z of a triangle, and then calculates its area. The area is calculated as follows: $area=\sqrt{s(s-x)(s-y)(s-z)}$

where s is $\dfrac{x+y+z}{2}$

Task 8:
A leading newspaper pays all their freelance writers at a rate of Tk. 500 per published article. Write **javacode** of a program that will read the number of published articles for one writer, and print the total monthly fees for that writer.

Task 9:
Write **javacode** of a program to find the largest among three different numbers entered by user.

Task 10:
Write **javacode** for the following:

1) Ask the user to enter the name of his favorite car.

2) Display the name of the user's favorite car 4 times.

Example: If the user enters "Toyota", your program should print the name Toyota 4 times.

Task 11:
Write **javacode** for the following:
Ask user for mark, currentScale, targetScale and then convert the mark from currentScale to targetScale. If user gives 5, 10, 30, that means quiz mark 5 is out of 10 (currentScale), convert it to 30 and print 15.

Task 12:
Write **javacode** for the following:
Assume all first semester students have 4 courses: CSE110, ENG091, MAT110, PHY111. Credits for these courses are 3, 0, 3, 3 respectively. Take the grades of four courses from the user (out of 4.0 scale) and then print the GPA.
Formula:
GPA = summation of (multiplication of grade and credit of each course) divided by sum of credits
= (grade1xcredit1 + grade2xcredit2 + grade3xcredit3 ....) / (credit1 + credit 2+credit 3 ....)