

## Homework-02

1. Write a Java program that takes **Five** numbers as input to calculate and print the average of the numbers.

$$\text{Average} = \frac{\text{Sum of the Numbers}}{\text{Numbers of number}}$$

### The concept of Output :

- If you use your data type **int**(integer) such as: 1 2 3 4 5 So you have to look at your output as average: 1 2 3 4 5 is 3 Average number is 3
  - But if you use your data type **Double** (number having decimal) Then you have to look at your output as average : 1.0 2.0 3.0 4.0 5.0 is 3.0
  - There are different types of data types in java. You have to work with a suitable data type which will depend on you
2. Write a program that displays the current time in GMT. Revise the program so that it prompts the user to enter the time zone offset to GMT and displays the line in the specified time zone.

Samples	Output Samples
Enter the time zone offset to GMT : -5	The current time is 4:50:34

3. Write a program that read the radius and length of cylinder and computes the area and volume using the following formulas :

Area = radius \* radius \*  $\pi$  [ This  $\pi$  value : 3.14159 ]

Volume = area \* length

**Output**

Enter the radius and length of a cylinder : 5.5 12

The area is 95.0331

The volume is 1140.4

4. Write a program that prompts the user to enter Three points (x1, y1) ,(x2, y2) ,(x3, y3) of a triangle and display its area. The Formula for computing the area of a triangle is

$$S = (\text{side1} + \text{side2} + \text{side3}) / 2;$$

$$\text{Area} = \sqrt{s(s - \text{side1})(s - \text{side2})(s - \text{side3})}$$

**Output**

Enter Three points for a triangle: 1.5 - 3.4 4.6 5 9.5 -3.4

The area of the triangle is 33.6

5. Write a program by read an integer to calculate the how much days ,months and years include the inputted integer. Solve the problem by seeing the given problem description.

**Input**

The input contains a value of integer number that is the variable NUM. and show you a message "Please Enter The Number(NUM) : " for input the value NUM.

**Output**

Present the message "\_\_days \_\_months\_\_years " followed by the value of the variable, as in the example bellow, don't forget to print the end of line after the result.

Input Samples	Output Samples
Please Enter The Number(NUM) : 2860	5 days 10 months 7 years
Please Enter The Number(NUM) : 4312	27 days 9 months 11 years
Please Enter The Number(NUM) : 447	22 days 2 months 1 years

6. Write a program that prompts the use v in meters/second(m/s) and the acceleration a in meters/second squared ( $m/s^2$ ), and display the minimum run-way length.

### Concept

Given an airplane's acceleration a and take off speed v, you can compute the minimum runway length needed for an airplane to take off using the following formula :

$$\text{Length} = v^2 / 2a$$

#### Sample output

Enter speed and acceleration : 60 3.5

The minimum runway length for this airplane is 514.286

### **\*\* NOTICE\*\***

- test your code by sample input.
- your code won't be same of others if it is then both of your assignment will be declined.
- use comment almost every line of code.
- submit it on time .
- your code will have in one project named Assignment\_2,make it **zip** and send it to [akabillah4420@gmail.com](mailto:akabillah4420@gmail.com) don't forget to write the Student ID and subject name "Assignment\_2" in the mail.
- Be sincere to obey all of the rules otherwise may be you will get (LOW SCORE.)

**Deadline: 18 March 12:00 am BD time and 2:00 pm china time.**

Happy Coding