

**INF 2105: SOFTWARE APPLICATION DEVELOPMENT**  
**PRACTICAL SESSION 5**

1. Write a Java program to find the average of the students grades knowing that the number of the students and the student score shall be given by the user.

Notes: The Number of students should be more than zero, and the student score should be between 0 - 100

Assign letter grades for the student average based on the distribution below:

A : 90 – 100

B : 80 – 89

C : 70 – 79

D : 60 – 69

F : 0 – 59

Count and print the number of the students who got an A.

2. Write a program which repeatedly reads numbers until the user enters “done”. Once “done” is entered, print out the total, count, and average of the numbers. If the user enters anything other than a number, detect their mistake and print an error message and skip to the next number.

Sample output:

Enter a number: 4

Enter a number: 5

Enter a number: bad data

Invalid input

Enter a number: 7

Enter a number: done

Total is: 16, count is 3 and average is 5.333333333333333

3. Write a Python program that allows the user to enter exactly twenty floating-point values. The program then prints the sum, average (arithmetic mean), maximum, and minimum of the values entered
4. Write an application that inputs one number consisting of five digits from the user, separates the number into its individual digits and prints the digits separated from one another by three spaces each. For example, if the use types in the number 42339, the program should print 4 2 3 3 9
5. write a program to accept a number from user and print the following: -
  - sum of the digits
  - number of digits
  - reverse of the digits
  - largest digit

6. Write a program to find GCD of two numbers.  
 Test Data:  
 Input 1st number: 10  
 Input 2nd number: 50  
 Expected Output:  
 The GCD of 10 and 50 is: 10
7. Write a program to convert a decimal number to binary  
 Test Data:  
 Input any decimal number: 66  
 Expected Output:  
 The Binary value of decimal no. 66 is: 1000010
8. Write a program to check a number is a prime number or not  
 Test Data:  
 Input any positive number: 7  
 Expected Output:  
 The number 7 is a prime number.
9. Write a program to find the LCM of two numbers.  
 Test Data:  
 Input 1st number for LCM: 4  
 Input 2nd number for LCM: 6  
 Expected Output:  
 The LCM of 4 and 6: 12
10. Write a program to print even or odd numbers in given range.  
 Test Data:  
 Input the range to print starting from 1: 10  
 Expected Output:  
 All even numbers from 1 to 10 are: 2 4 6 8 10  
 All odd numbers from 1 to 10 are: 1 3 5 7 9
11. Write a program that uses for statements to print the following patterns separately, one below the other. Use for loops to generate the patterns. All asterisks (\*) should be printed by a single statement of the form print ("\*").

A)	B)	C)	D)
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