CSN-103: Fundamentals of Object Oriented Programming Assignment 02

General Instructions:

- a) Use **Scanner** class whenever required to accept inputs for the user at the runtime.
- b) To submit this assignment: Create a single .zip file containing all the source code (.java) files. Rename the zip as 02_xxxxxxx where xxxxxxx is your enrollment number.
- c) Send the zip file to TA in-charge of assignment (will be informed later) via email.
- d) Follow indentation while writing programs.
- e) All submissions will be checked for Plagiarism. DO NOT ATTEMPT TO CHEAT. YOU WILL BE SEVERELY PENALIZED.

Programming Problems

- 1) Write a JAVA program to reverse a 5 digit decimal number. Example 23456 \rightarrow 65432.
- 2) Write a JAVA program to convert a decimal number to binary number by calculating the quotient and remainder [Example Link: <u>Decimal-Binary</u>].
- 3) Write a JAVA program to convert a 6-bit binary number to decimal number [Example Link: <u>Binary-Decimal</u>].
- 4) Write a JAVA program which asks the user to enter a word in the UPPER case from the keyboard and display the same word in the lowercase.
- 5) Write a JAVA program to check whether a number or a string is a palindrome or not.
- 6) Write a JAVA program to find the factorial of a number using (i) for (ii) while (iii) do-while loop statements.
- 7) Write a JAVA program to find the maximum of three numbers using the ternary operator.
- 8) Write a JAVA to reverse the content of an array. Example

- 9) Write a JAVA program to check whether a given matrix is Upper Triangular matrix or not.
- 10) Run the following JAVA program and anlyze the value of variables i, j, and sum.

```
class test
{
  public static void main(String[] args)
     {
     int i=5, j=5;
     int sum= ++i + j++;
     System.out.println("Sum: "+sum);
     System.out.println("i: "+i+" j: "+j);
     }
}
```

Is the value of the variable *sum* is calculated correctly? Justify your answer.