GIRLS' HIGH SCHOOL AND COLLEGE, PRAYAGRAJ

ASSIGNMENT -01

SESSION 2020-2021

CLASS 10 C, D, E, F

SUBJECT: COMPUTER APPLICATIONS

Instructions:

1. The parents to ensure that their ward watches the video instructions for the assignment by clicking on the given link: https://youtu.be/cmnmf_3OeWU. She should revise the lesson given in the book and then work on the assignment. The completed assignment is to be downloaded and filed/pasted in the subject file/copy and kept ready for submission. The day date and procedure of submission shall be notified later.

Reference Book: Logix Class 9 or 10 (Kips Publications)

Website: w3schools.com

TOPIC – INPUT IN JAVA AND MATHEMATICAL LIBRARY METHODS

INPUT IN JAVA

Answer the following questions:

1. What is the use of Scanner class?
2. Name the package in which Scanner class is present?
3. Write the statement to create an object of Scanner class.
4. Write the return type of the following functions of Scanner class:
    a) next()
    b) nextLine()
    c) nextByte()
    d) nextFloat()
    e) nextDouble()
    f) nextInt()

g) nextShort()

h) nextLong()

5. Name the method of Scanner class that:
    a) is used to input an integer data from the standard input stream.
    b) is used to input a String data from the standard input stream.
6. Which statement is used to get the output on the screen?
7. What is the difference between error and bug?
8. What are the three major categories of programming errors?
9. Define:
    a) Syntax error
    b) Logical error
    c) Runtime error
10. Define debugging.
11. Mention the type of error in the following:
    a) Missing semicolon
    b) Dividing a number by zero
    c) Use of division instead of multiplication

MATHEMATICAL LIBRARY METHODS

Answer the following questions:

1. The Math class is part of which Java library package?
2. What is the use of Math class of Java library?
3. Write the argument and return type of the following Mathematical functions:
    a) sqrt()
    b) cbrt()
    c) pow()
    d) max()
    e) min()
    f) abs()
    g) ceil()

h) floor()

4. Write the following as Java expressions:
   a) $\sqrt{a^2 + b^2}$
   b) $\frac{4}{3}\pi r^3$
   c) $|z^4 - 1|$
   d) z=(5x^3 + 2y)/(x + y)
   e) $\sqrt{2as + u^2}$
5. Give the output of the following:
   a) Math.floor(−4.7);
   b) Math.ceil(3.4)+ Math.pow(2,3);
   c) double a= Math.rint(Math.abs(-15.6));
   d) x=Math.pow(3,3);
   e) y=Math.sqrt(9 + 16);
   f) System.out.println(Math.min(Math.floor(2.9),2.5));
   g) System.out.println(Math.min(Math.ceil(2.9),2.5));
6. Predict the output:

```
class Test
{
        public static void main(String args[])
        {
                double x, y, z;
                x=3;
                y=4;
                z= Math.sqrt(x*x + y*y);
                System.out.println("z="  + z);
        }
}
```

7. Write a program to calculate and display simple interest where principle, rate and time will be entered by the user.

   SI = (P x R x T) / 100
8. Write a program that will accept salary of an employee and add 15% to it.

9. Write a program to accept name, class, roll no and marks in 5 subjects. Calculate the total marks and percentage and display the same.

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