GIRLS' HIGH SCHOOL AND COLLEGE, PRAYAGRAJ

WORKSHEET - 02

SESSION 2020-2021

CLASS 10 C, D, E, F

SUBJECT: COMPUTER APPLICATIONS

Instructions: Parents are expected to ensure that the student spends two days to read and understand the chapter according to the book and thereafter answer the given questions.

Reference Book: Logix Class 10 (Kips Publications)

TOPIC – USER-DEFINED METHODS AND CONSTRUCTORS

USER-DEFINED METHODS

Answer the following questions:

1. Define function.
2. What are the advantages of defining methods/functions in a program?
3. What is method prototype?
4. Give the prototype of a method check that receives a character ch and an integer n and return true or false.
5. Name the keyword that causes the control to transfer back to the method call.
6. Name the java keyword that indicates that method has no return type.
7. Why do we use the return statement in java programming?
8. Differentiate between Formal and Actual Parameters.
9. What are the two ways of invoking a method?
10. What is function overloading?
11. Which OOP principle implements function overloading? Explain with the help of an example.
12. What is the difference between static and non-static methods?
13. What are pure and impure methods?
14. Design a class to overload a function area() as follows:

i. double area(double a, double b, double c) with three double arguments and return the area of a scalene triangle using the formula:
area = √s(s-a)(s-b)(s-c) where s = (a+b+c)/2

ii. double area(int a, int b, int height) with three integer arguments and returns the area of a trapezium using the formula:
area = 1/2*height*(a+b)

iii. double area(double d1,double d2) with two double arguments and returns the area of a rhombus using the formula:
area = ½*(d1*d2)

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CONSTRUCTORS

Answer the following questions:

1. Define Constructor.
2. Write the main features of constructors.
3. Differentiate between constructor and method.
4. What are the two major types of constructors?
5. Create a class with one integer instance variable. Initialize the variable using:
   a) default constructor
   b) parameterized constructor
6. What is the significance of *this* keyword?
7. Write a program with the following specifications:

   Class name: Prime

   Data members/instance variables:

   int x

   Member methods:

   Prime() : constructor to initialize x

   void input(int n): to assign x to n

   void display() : to check and print whether number x is prime or not

   (A number is said to be prime if it has only two factors 1 and itself.)

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