BISHOP GEORGE SCHOOL & COLLEGE
Worksheet No.13 (2021-2022)
Class – 10th
Subject – Computer Applications
Chapter 5A – Introduction to Methods (cont…...)

A program as example of method:-

Que. Define a class called **factorial** with the following description:

Instance variables/data members:

int num – to store the number
int fact – to store the factorial of the number
int i – to store the start value of loop

Member methods:

void input( ) – to input a number.
void calculate( ) – to calculate the factorial.
void display( ) – to print the factorial of the number.

Program:-

```
 import java.util.*;
class factorial
{
  int num,fact,i;
  void input()
  {
     Scanner sc=new Scanner(System.in);
     System.out.println("Enter a number");
     num=sc.nextInt();
   }//closing input()method
   void calculate()
   {
      fact=1;
      for(i=1;i<=num;i++)
      {
         fact=fact*i;
      }
   } //closing calculate()method
   void display()
   {
      System.out.println("Factorial of the number"+fact);
   } //closing display()method
   public static void main(String arg[])
```

```
    {
      factorial fac=new factorial();
      fac.input(); //call input()method
      fac.calculate();//call calculate()method
      fac.display();//call display()method
    } //closing main()method
} // closing class
```

EXERCISE

Write a program of the following:

1. Define a class called **mobike** with the following description:
   Instance variables/data members:
   int bno – to store the bike's number
   int phno – to store the phone number of the customer
   String name – to store the name of the customer
   int days – to store the number of days the bike is taken on rent
   int charge – to calculate and store the rental charge
   Member methods:
   void input( ) – to input and store the detail of the customer.
   void computer( ) – to compute the rental charge.
   The rent for a mobike is charged on the following basis:
   First five days ` 500 per day.
   Next five days ` 400 per day.
   Rest of the days ` 200 per day.
   void display( ) – to display the details in the following format:
   Bike No. PhoneNo. Name No. of days Charge
   --- --- --- --- ---
2. Define a class named **FruitJuice** with the following description:
   Instance variables/data members:
   int product_code - stores the product code number
   String flavour - stores the flavor of the juice (E.g. orange, apple, etc)
   String pack_type - stores the type of packaging (E.g. tetra-pack, PET bottle, etc)
   int pack_size - stores package size (E.g. 200ml, 400ml, etc)
   int product_price - stores the price of the product
   Member Methods:
   (i) void input() - To input and store the product code, flavor, pack type, pack size
   and product price.
   (ii) void discount() - To reduce the product price by 10.
   (iii) void display() - To display the product code, flavor, pack type, pack size and

product price.

3. Define a class named **movieMagic** with the following description:
   Instance variables/data members:
   int year - to store the year of release of a movie
   String title - to store the title of the movie.
   float rating - to store the popularity rating of the movie.
   (minimum rating = 0.0 and maximum rating = 5.0)
   Member Methods:
   (i) void accept() To input and store year, title and rating.
   (ii) void display() To display the title of a movie and a message based on the rating as
   per the table below.
   Rating Message to be displayed
   0.0 to 2.0 Flop
   2.1 to 3.4 Semi-hit
   3.5 to 4.5 Hit
   4.6 to 5.0 Super Hit
   Write a main method to create an object of the class and call the above member methods.
4. Define a class called **Library** with the following description:
   Instance variables/data members:
   Int acc_num - stores the accession number of the book
   String title - stores the title of the book
   String author - stores the name of the author
   Member methods:
   (i) void input() To input and store the accession number, title and author.
   (ii) void compute() To accept the number of days late, calculate and display the fine charged at the rate of ` 2 per day.
   (iii) void display() To display the details in the following format:
   Accession Number Title Author
   Write a main method to create an object of the class and call the above member methods.