Week-1

Objective: To understand the basic concepts of Object Oriented Programming System and to get familiar with object and class.

Assignments:

1. Write a Java program to print your name.

```
public class PrintName {

      public static void main(String args[]){

      System.out.println("Btech");

      }

}
```

Output: Btech

2. Write a Java program to add two numbers.

```
public class Sum {

      public static void main(String args[]){

            int a=40;
            int b=50;
            int sum=a+b;
            System.out.println("Sum is = "+sum);

      }

}
```

Output: Sum is 100

3. Write a Java program to change temperature from Celsius to Fahrenheit.

```
public class Celsius_to_Fahrenheit {

     public static void main(String args[]){

          float temperature=(float) 37.7;


          System.out.println("Temperature in Fahrenheit = " +
temperature);

          temperature = temperature * 9/5 + 32;

          System.out.println("Temperature in Celsius = " +
temperature);
     }
}
Temperature in Fahrenheit = 37.7
Temperature in = 99.86
```

4. Write a Java program to change temperature from Fahrenheit to Celsius.

```
public class Fahrenheit_to_Celsius {

     public static void main(String args[]){

          float temperature=100;


          System.out.println("Temperature in Fahrenheit = " +
temperature);

          temperature = ((temperature - 32)*5)/9;

          System.out.println("Temperature in Celsius = " +
temperature);
     }
}
Output:
Temperature in Fahrenheit = 100.0
Temperature in Celsius = 37.77778
```

5. Write a Java program to find area and perimeter of a rectangle.

```
public class Celsius_to_Fahrenheit {

            public static void main(String[] args) {

                  float length=10, width=10, area, perimeter;


                  perimeter = 2 * (length + width);

                  area = length * width;

                  System.out.println("Perimeter of rectangle is " +
perimeter + " units.");
                  System.out.println("Area of rectangle is " + area +
" sq. units.");
                }
          }
Output:
Perimeter of rectangle is 40.0 units.
Area of rectangle is 100.0 sq. units.
```

6. Write a Java program to find area and perimeter of a circle.

```
public class Area_Circle {

     public static void main(String args[]){

              double radius=7.5;

              double perimeter = 2 * Math.PI * radius;
             double area = Math.PI * radius * radius;

              System.out.println("Perimeter is = " + perimeter);
              System.out.println("Area is = " + area);
    }

     }
Perimeter is = 47.12388980384689
Area is = 176.71458676442586
```

7. Write a Java Program to display whether a number is odd or even.

```
import java.util.Scanner;

public class Odd_Even {
```

```
    public static void main(String args[]){

            Scanner reader = new Scanner(System.in);
             System.out.print("Enter a number: ");
             int num = reader.nextInt();
             if(num % 2 == 0)
                 System.out.println(num + " is even");
             else
                 System.out.println(num + " is odd");

    }

}
Output:
Enter a number: 10
10 is even
```

8. Write a Java Program to check if a number is Positive or Negative.

```
import java.util.Scanner;
public class Pos_Neg {

    public static void main(String args[]){

            Scanner reader = new Scanner(System.in);
             System.out.print("Enter a number: ");
             int num = reader.nextInt();
             if(num < 0)
                 System.out.println(num + " is a negetive no.");
             else
                 System.out.println(num + " is positive no.");
         }
}
Output:
Enter a number: -999
-999 is a negetive no.
```

9. Write a Java program to find maximum of three numbers.

```
import java.util.Scanner;

public class Third_Max {

    public static void main(String args[]){

            int a=50;
```

```
            int b=30;
            int c=10;

            if(a<b & a<c)
            {
                 System.out.println("A is the third max");
            }
            else if(b<a & b<c)
            {
                 System.out.println("B is the third max");
            }
            else
            {
                 System.out.println("C is the third max");
            }

      }

}
Output: C is the third max
```

10. Write a Java program to swap two numbers.

```
import java.util.Scanner;

public class Swap {

      public static void main(String args[]){

            int a=50;
            int b=30;
            int temp=a;
            a=b;
            b=temp;
            System.out.println("A is "+a+"  B is "+b);


      }

}
Output: A is 30  B is 50
```

11. Write a Java program to convert miles to kilometers.

```
import java.util.Scanner;

public class Mile_to_Kilo {
```

```
    public static void main(String args[]){

            double miles;

             Scanner in = new Scanner(System.in);

             System.out.println("Please enter miles:");
             miles = in.nextDouble();

             double kilometers = miles * 1.6;

             System.out.println(kilometers + " Kilometers");


    }

}
Output: Please enter miles:
10
16.0 Kilometers
```

12. Write a Java program to check whether a year is leap year or not.

```
import java.util.Scanner;

public class LeapYear {

    public static void main(String args[]){

          int year = 1900;
            boolean leap = false;
            if(year % 4 == 0)
            {
                if( year % 100 == 0)
                {
                  if ( year % 400 == 0)
                        leap = true;
                    else
                        leap = false;
                }
                else
                    leap = true;
            }
            else
                leap = false;
            if(leap)
                System.out.println(year + " is a leap year.");
```

```
            else
                System.out.println(year + " is not a leap year.");

    }

}
Output: 1900 is not a leap year.
```

13. Write a Java program for following grading system.

Note: Percentage>=90% : Grade A Percentage>=80% : Grade B Percentage>=70% : Grade C Percentage>=60% : Grade D Percentage>=40% : Grade E Percentage<40% : Grade F

```
import java.util.Scanner;

public class Grade {

    public static void main(String args[]){

           float  avg;
            Scanner scanner = new Scanner(System.in);
            System.out.print("Enter the %: ");
            avg=scanner.nextFloat();
            System.out.print("The student Grade is: ");
            if(avg>=90)
            {
                System.out.print("A");
            }
            else if(avg>=80 && avg<90)
            {
               System.out.print("B");
            }
            else if(avg>=60 && avg<80)
            {
                System.out.print("C");
            }
            else if(avg>=40 && avg<60)
            {
                System.out.print("D");
            }
            else
            {
              System.out.print("E");
            }
    }
```

```
}
Output: Enter the %: 90
The student Grade is: A
```

14. Write a Java program to check whether a number is divisible by 5 or not.

```
import java.util.Scanner;

public class Mod_Five {

     public static void main(String args[]){

               int avg;
               Scanner scanner = new Scanner(System.in);

               System.out.print("Enter the no.: ");
               avg=scanner.nextInt();

               if(avg%5==0)
               {
                 System.out.print("No. is divisible by 5 ");
               }
               else
               {
                 System.out.print("No. is not divisible by 5 ");
               }
     }

}
Enter the no.: 50
No. is divisible by 5
Enter the no.: 5000
No. is divisible by 5
Enter the no.: 21
No. is not divisible by 5
```

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