TUTORIAL / PRACTICAL No.

S.No	Program	Date	Sign	Remark
1.	WAP in Java to print Hello World	26/8/19		
2.	WAP to print your name and average of marks of 5 subject	26/8/19		
3.	WAP to check a number whether it is prime or not	26/8/19		
4.	WAP to print sum of even and odd number B/w 1 to 100	9/9/19		
5.	WAP to take input of two matrices and print their sum in 3rd matrices	9/9/19		
6.	WAP to use the with statement	9/9/19		
7.	WAP to insert an array and perform insertion in a sorted array	16/9/19		
8.	WAP to insert an array and perform deolochic in a sorted array	16/9/19		
9.	WAP to implement any 5 string functions	14/10/19		
10.	WAP in Java to implement concept of inheritance	14/10/19		

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11.	WAP in Java to implement an interface	14/10/19		
12.	WAP to implement exception handling using try-catch	21/10/19		
13.	WAP to create JAVA applet	21/10/19		
14.	WAP to use Servelet and print Hello World	4/11/19		
15.	WAP to implement event handling using action listener.	4/11/19		

TUTORIAL / PRACTICAL No. 1

1) Write a program to print "Hello World".

```
class Name
{
   Public static void main (String [] Jara)
   {
      System.out.println ("Hello World");
   }
}
```

Output

Hello World

Output:-

Mohit
Enter the subject marks.
a=50
b= 60
c=65
d=60
e=55
The average of all subject marks is 58.0

TUTORIAL / PRACTICAL No. 2

Write a program to print your name and average of marks of 5 subjects.

```
import java.util.Scanner;
class Avg
{
  Public static void main (String [] args)
  {
    System.out.println ("Rohan");
    int a, b, c, d, e;
     float avg;
    Scanner obj = new Scanner (System.in);
    System.out.println ("Enter the subject marks");
    a = obj.nextInt ();
    b = obj.nextInt ();
    c = obj.nextInt ();
    d = obj.nextInt ();
    e = obj.nextInt ();
    avg = (a+b+c+d+e)/5;
  System.out.println ("The average of all 5 subject marks is "+avg);
  }
}
```

Output

Enter number to check prime or not.

Case 1:

1

Neither prime nor composite

Case 2:

19

Prime

Case 3:

24

Not Prime

TUTORIAL / PRACTICAL No. 3

Write a program to input a number and to check whether it is prime or not

```
import java.util.scanner;
class Prime
{
  public static void main (String [] args)
  {
   System.out.println ("Enter no. to check
    Prime or not");
   int n, i;
   scanner obj = new Scanner (System.in);
   n = obj.nextInt();
   if (n==1)
  System.out.println ("Neither prime nor
          composite");
for (i = 2; i<n; i++)
if (n % i == 0)
  {
   System.out.println ("Not Prime");
   break;
  }
  else
  {
   System.out.println ("Prime");
   break;
  }
}
}
```

Output

Enter First Matrix

1 1 1 1 1 1 1 1

Enter Second Matrix

3 2 4 2 3 2 1 6 7

Sum of Matrix

4 3 5 3 4 3 2 7 8

TUTORIAL / PRACTICAL No. 4

WAP to input two array of 10 numbers and store the sum of respective index value of two arrays in third array.

```
import java.util.*;
class array
{
  Public static void main (String[] args)
  {
    int i;
    int ar1[]; ar2[]; ar3[];
    ar1 = new int[10];
    ar2 = new int[10];
    ar3 = new int[10];
    System.out.println("Enter first Matrix");
    for(i=0;i<ar.length;i++)
    {
      Scanner obj = new Scanner(System.in);
      ar1[i] = obj.nextInt();
    }
    System.out.println("Enter second Matrix");
    for(i=0;i<ar.length;i++)
    {
      Scanner obj2 = new Scanner(System.in);
      ar2[i] = obj2.nextInt();
    }
    System.out.println("Sum of Matrix");
    for(i=0;i<ar3.length;i++)
    {
      System.out.println(ar1[i]+ar2[i]);
    }
  }
}
```

Output :-

Sum of even no. is 2550
Sum of odd no. is 2500

TUTORIAL / PRACTICAL No. 5

Write a program to print the sum of all even and odd no. between 1 to 100.

```
class Sum
{
 public static void main (String [] args)
 {
    int i, sum = 0, sum2 = 0;
    for (i=1;i<101;i++)
    { if (i%2==0)
      { sum=sum+i;
      }
    }
  System.out.println ("Sum of even no. is"
  +sum);
  for (i=1;i<101;i++)
  {
     if (i%2!=0)
     sum2 = sum2+i;
  }
  }
  System.out.println("Sum of odd no. is"+sum);
 }
}
```

TUTORIAL / PRACTICAL NO. 6

Write a program to use switch statement:
case 1: To print the sum of digits of a number
case 2: To print the number in reverse order
case 3: To check the number as armstrong or not

```
import java.util.Scanner;
Public class switch
{
  Public static void main (String[] args)
  {
    int choice;
  System.out.println("Enter Your Choice");
 System.out.println("1. To print sum of digit");
System.out.println("2. To print the number in
                    reverse order");
System.out.println("3. To check the armstrong
                    number");
choice = in.nextInt();
switch(choice)
{
  case 1: Def.Sum();
  break;
  case 2: Def.reverseform();
  break;
  case 3: Def.armstrong();
  break;
  default: System.out.println("Enter correct
                              choice");
  }
}

class Def {

public static void sum()
```

```
{
  int a, b;
  Scanner obj = new Scanner (System.in);
  System.out.println ("Enter two number");
  a = obj.nextInt();
  b = obj.nextInt();
  System.out.println(a+b);
}
public static void reverseform()
{
int reverse = 0, single = 0, n;
System.out.println ("Enter number to reverse it");
Scanner rev = new Scanner (System.in);
  n = rev.nextInt();
  while(n != 0)
{ single = n % 10;
  reverse = reverse * 10 + single;
    n = n/10;
}
  System.out.println(reverse);
}
public static void armstrong ()
{ System.out.println ("Enter no. which you
  want to check");
  int number, originalNumber, remainder,
  result = 0, n = 0;
  Scanner arm = new Scanner (System.in);
  number = arm.nextInt();
  originalNumber = number;
```

Output

Enter Your choice:
1. To print the sum of digits"
2. To print the number in reverse order"
3. To check the armstrong number":
1.
Enter two no: 3
4
7


```
for(originalNumber1=0; originalNumber1=n; ++)
  originalNumber = number;
for(originalNumber1=0 originalNumber1=0)
  {
    remainder = originalNumber % 10;
    result += Math.pow(remainder,n);
  }
if(result == number)
System.out.println(number+" is an
    armstrong number.");
else
System.out.println(number+" is not an
    armstrong number");
}
```

Write a program to input an array and perform insertion in a sorted array

Code:-

```
import java.util.*;
class Sort
{
  Public static void main (String args[])
  {
     int i,n;
     int ar1[];
     ar1 = new int [7];
    System.out.println ("Enter the array
                         elements");
    for(i=0;i<6;i++)
    {
      System.out.println("The sorted array
      is ");
    for(i=1; i<6; i++)
     {
       j=i;
       temp=ar1[i];
       while(j>0 && temp<ar1[j-1])
       {
         ar1[j] = ar1[j-1];
           j = j-1;
       }
       for(i=0;i<6;i++)
    {
    System.out.println(ar1[i]);
    }
```

Output

```
Enter the array elements
24
14
7
5
34
20
The sorted array is :
5
7
14
20
24
34
Enter the Element to be inserted
17.
New sorted array is
5
7
14
17
20
24
34
```

```
Scanner obj = new Scanner (System.in);
  n = obj.nextInt ();
  for (i=0;i<6;i++)
  {
    if((ar1[i]<n) && (ar1[i+1]>n))
    {
      int p=i;
      for(int s=6;s>p;s--)
       {
        ar1[s]= ar1[s-1];
       }
      ar1[i+1]=n;
    }
  }
  for(i=0;i<=6;i++)
  System.out.println(ar1[i]);
  }
}
```

Write a program to insert an array and Perform deletion in an array -

```
import java.util.*;
class Deletion
{
  public static void main (String args[])
  {
    int i, c, n, position;
    int arr1[];
    arr1 = new int [7];
    System.out.println("Enter the array elements");
    for (i=0; i<6; i++)
    {
      Scanner obj1 = new Scanner (System.in);
      arr1[i] = obj1.nextInt();
    }
    int j, temp;
    System.out.println("The sorted array is");
    for (i=1; i<6; i++)
    {
      j=i;
      temp = arr1[i];
      while (j>0 && temp<arr1[j-1])
      {
        arr1[j] = arr1[j-1];
        j = j-1;
      }
      arr1[j] = temp;
    }
    for (i=0; i<6; i++)
```

Output

Enter the Strings:..
Mohit
Pandey
The length of string1 is 5
The length of string2 is 6
Concated String is MohitPandey
False
LowerCase string is mohit
UpperCase string is MOHIT

TUTORIAL / PRACTICAL NO. 9

* Write a program in java and show their implementation of 5 string function.

```
import java.util.*;
class ABC
 {
  public static void main (String [] args)
  {
   String s1, s2, s3, s1lower, s1upper;
   Scanner sc = new Scanner (System.in);
   System.out.println ("Enter the Strings");
   s1 = sc.nextLine();
   s2 = sc.nextLine();
   System.out.println (s1);
   System.out.println (s2);
  System.out.println ("The length of the String
   1 is") + s1.length();
 System.out.println ("The length of the string
      is") + s2.length();
 s3 = s1.concat(s2);
 System.out.println ("Concated String is" + s3);
 System.out.println (s1.isEmpty());
 s1lower = s1.toLowerCase();
 System.out.println ("Lowercase string is" +
                      s1.lower);
 s1upper = s1.toUpperCase();
 System.out.println ("UpperCase String is" +
                     s1.upper);
  }
}
```

TUTORIAL / PRACTICAL NO. 10

(10) Write a program in JAVA to implement concept of inheritance. (Multiple inheritance)

code:-

```
import java.util.Scanner;
class Personal {
Private String Name;
Privati int age;
Void getname (String s)
  {
   name=s;
  }
 void getage(int a)
  {
   age=a;
  }
String showname()
  {
  return (name);
 }
 int showage()
{
  return (age);
    }
}
class student extends personal {
 private int roll;
void get roll (int r)
 {
  roll r;
 }
 int showroll()
 {  return (roll);
    }
 }
```

Output

Enter name age and Roll No.

Sanjay

20

2018021000

Name:- sanjay

Age:- 20

Roll No.- 2018021050

TUTORIAL / PRACTICAL NO.

```
Public class stud_info {
  Public static void main (String [])
  Student s1 = new Student();
  Scanner i = new Scanner (System.in);
  System.out.println ("Enter name, age and
  Roll");
String n = i.next();
  int age = in.nextInt();
  int rn = i.nextInt();
    s1.getname(n);
    s1.getage (age);
     s1.getrollno();
  System.out.println ("Name:" + s1.showname())
                + "\nRoll No:" + s1.showRoll())
                + "Age:" + s1.showage())
  }
```

Output:-
drawing circle.

TUTORIAL / PRACTICAL NO. 11

Write a program in JAVA to implement interface with an example.

Code:-

```
interface Drawable {
  void draw();
}
class Rectangle implements Drawable{
 Public void draw()
 {
  System.out.println("drawing rectangle");
 }
class circle implements Drawable
{
  Public void draw()
  {
   System.out.println("Drawing circle");}
class Test Interface{
Public static void main(String args[])
{
Drawable d = new Circle();
   d.draw();
  }
}
```

Output
java.lang.ArithmeticException: / by zero.
Rest of the code.

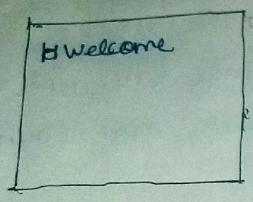
TUTORIAL / PRACTICAL NO. 12

Object :- Write a program to implement exception handling using try-catch statement.

Code :-

```
Public class TryCatchExample{
{
Public static void main (String [] args)
{
    try
    {
    int data = 50/0;
    }
    catch(ArithmeticException e)
    {
      System.out.println(e);
    }
    System.out.println("rest of the code");
}}
```

Output



TUTORIAL / PRACTICAL NO. 13

Aim/object :- Write a program to create a JAVA applet.

code :-

```
import java.applet.*;
import java.awt.Graphics;
public class First extends Applet
{
  public void paint(Graphics g)
  {
    g.drawString("Welcome",150,150);
  }
}
```

HTML code :-

```
<html>
<body>
<applet code="First.class" width="300"
height="300">
</applet>
</body>
</html>
```

Output
Hello World

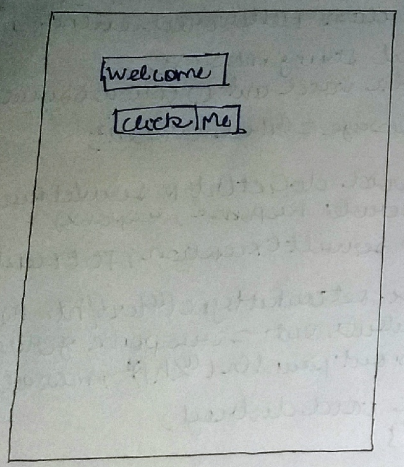
TUTORIAL / PRACTICAL NO. 14

Object! – Write a program using servlet to print Hello World!

Code:–

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
Public class HelloWorld extends HttpServlet
{
  private String message;
  Public void init() throws ServletException
  {
    message = "Hello World";
  }
  Public void doGet(HttpServletRequest,
  HttpServletResponse response)
  throws ServletException, IOException
  {
  response.setContentType("text/html");
  PrintWriter out = response.getWriter();
  System.out.println("<h1>" + message + "</h1>");
  }
  public void destroy()
  { }
}
```

Output



TUTORIAL / PRACTICAL NO.15

Object:- Write a program to implement event handling using Action listener

Code:-

```
import java.awt.*;
import java.awt.event.*;
class AEvent extends Frame implements
Action Listen
{ TextField tf;
  AEvent()
  {
    tf = new TextField();
    tf.setBounds(60,50,70,20);
    Button b = new Button("Click
    me");
    b.setBounds(100,120,80,30);
    b.ActionListener(this);
    add(b); add(tf);
    setSize(300,700);
    setLayout(null);
    setVisible(true);
    public static void main(String
    args)
    { new AEvent();
    }
  }
public void actionPerformed(Action
  Event e)
{ tf.setText("Welcome");
}
```