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Java = lab

Exam = summer

Q1:

Perimeter of triangle=(t1+t2+t3)

Enter the three sides of the triangle as inputs. Calculate the perimeter by utilizing formula and get the ideal output.

Here is the source code of the Java Program to Find the Perimeter of Triangle. The Java program is effectively ordered and kept running on a Windows framework.

Java Program To Find Perimeter of triangle

```
import java.util.Scanner;
class Triangle
{
public static void main(String args[])
{
Scanner sc=new Scanner(System.in);
System.out.print("Enter the sides of triangle : ");
int a = sc.nextInt();
int b = sc.nextInt();
int c = sc.nextInt();
if(a+b>c && b+c>a && a+c>b && a!=0 && b!=0 && c!=0)
System.out.println("Perimeter of triangle : " + (a+b+c));
else
System.out.println("Invalid sides entered.");
}
```

OUTPUT:

Enter the sides of triangle : 5 12 13

Perimeter of triangle : 30

Q2:

Java program to calculate diameter, circumference and area of circle

```
import java.util.Scanner;
class Test
{
public static void main(String args[])
{
double radius, diameter, circumference, area;
Scanner op=new Scanner(System.in);
/*
* Input radius of circle from user
*/
System.out.print("Enter radius of circle: ");
radius=op.nextDouble();
/*
* Calculate diameter, circumference and area
*/
diameter = 2 * radius;
```

```
circumference = 2 * 3.14 * radius;
area = 3.14 * (radius * radius);
/*
 * Print all results
 */
System.out.println("Diameter of circle = "+diameter+" units ");
System.out.println("Circumference of circle = "+circumference+" units ");
System.out.println("Area of circle = "+area+" sq. units ");
}
}
Output:
```

Enter radius of circle: 5

Diameter of circle = 10.0 units

Circumference of circle = 31.400000000000002 units

Area of circle = 78.5 sq. units

Q3

A leap year is exactly divisible by 4 except for century years (years ending with 00). The century year is a leap year only if it is perfectly divisible by 400.

Example: Java Program to Check a Leap Year

```
public class LeapYear {

    public static void main(String[] args) {

        int year = 1900;
        boolean leap = false;

        if(year % 4 == 0)
        {
            if( year % 100 == 0)
            {
                // year is divisible by 400, hence the year is a leap year
                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.

Q 4

* Java Program Example - Check for Vowel */

```
import java.util.Scanner;

public class JavaProgram
{
    public static void main(String args[])
    {
        char ch;
        Scanner scan = new Scanner(System.in);

        System.out.print("Enter an Alphabet : ");
        ch = scan.next().charAt(0);

        if(ch=='a' || ch=='A' || ch=='e' || ch=='E' ||
           ch=='i' || ch=='I' || ch=='o' || ch=='O' ||
           ch=='u' || ch=='U')
        {
            System.out.print("This is a Vowel");
        }
        else
        {
            System.out.print("This is not a Vowel");
        }
    }
}
```

Q 5

```
public class Power {

    public static void main(String[] args) {

        int base = 3, exponent = 4;

        long result = 1;

        while (exponent != 0)
        {
            result *= base;
            --exponent;
        }

        System.out.println("Answer = " + result);
    }
}
```

Output

Answer = 81