

Page 1

Amad

Afridi

13119

BS SE - B

8<sup>th</sup> Semester

5<sup>th</sup> Oct 2020

OOP

Lab

Q11- How to calculate parameter of a triangle using java object oriented approach?

Ans.

```
// A simple C program to find the Perimeter.
```

```
// of triangle
```

```
# include <stdio.h>
```

```
// Function to find perimeter
```

```
float find Perimeter(float a, float b, float c)
```

```
{
```

```
// Formula for finding a perimeter of triangle
```

```
return (a + b + c);
```

```
}
```

```
// Driver code
```

```
int main()
```

```
{
```

```
float a = 2.0, b = 3.0, c = 5.0;
```

```
printf("%f", find Perimeter(a, b, c));
```

```
return 0;
```

```
}
```

Output

10.0

Q31 Leap Year in Java :-

```
Public class LeapYear{
```

```
Public static void main(string[] args) {
```

```
int year = 1900;  
boolean leap = false;
```

```
if (year % 400 == 0)  
{
```

```
if (year % 100 == 0)  
{
```

```
// year is divisible by 400, hence  
the year is leap year
```

```
if (year % 4 == 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 leap Year

when you change the value  
of year to 2012, the  
output will be:

2012 is a leap Year

Q41- How to check that input from user is the vowel or not in using object oriented approach?

4  
mc  
Example:- 1:-

```
Public class vowel Consonant {  
    Public static void main(String[] args) {
```

```
        Char ch = 'i';
```

```
        if (ch == 'a' || ch == 'e' ||  
            ch == 'i' || ch == 'o' ||  
            ch == 'u' )
```

```
            System.out.println(ch + " is  
                                vowel ");
```

```
        else
```

```
            System.out.println(ch + " is  
                                consonant ");
```

```
        }
```

```
    }
```

Output

i is vowel

Example- 21-

```
public class vowelconsonant {  
    public static void main(String[] args) {  
        char ch = 'z';
```

```
        switch (ch) {  
            case 'a';  
            case 'e';  
            case 'i';  
            case 'o';  
            case 'u';  
            System.out.println(ch + " is vowel");  
            break;  
            default;  
            System.out.println(ch + " is vowel  
                consonant");  
        }  
    }  
}
```

output

z is consonant

Q5. How to check power of number in java using object oriented approach?  
Q5. Power of number using a while loop

```
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.print("Answer = "  
            + result);  
    }  
}
```

output

Answer = 81

Power of number using for loop

```
Public class Power {
```

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

```
        int base = 3, exponent = 4;  
        long result = 1;  
        for (; exponent != 0; --  
            exponent)
```

```
        {  
            result *= base;  
        }
```

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

```
}
```

Output

Answer = 81



Calculate the number ~~power~~ of using  
pow() function.

```
Public class power {
```

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

```
        int base = 3, exponent = 4;  
        double result = Math.pow(base,  
            exponent);
```

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

```
    }  
}
```

output

Answer = 0.012345679012345678

Q2. How to calculate diameter of a circle in java using object oriented approach?

Ans:-

```
import java.util.Scanner;  
public class circle {  
    public static void main(String[]  
        args) {  
        final double PI = 3.141592653;  
        Scanner in = new Scanner(System.in);
```

```
        System.out.println("Please enter radius  
            of the circle :");
```

```
        int d = 2 * r;  
        double circumference = 2 * PI * r;  
        double area = PI * r * r;
```

```
        System.out.println("Diameter of circle is  
            : " + d);
```

```
        System.out.println("Circumference of  
            circle is : " + circumference);
```

```
        System.out.println("Area of circle is : " +  
            area);
```

```
    }  
}
```

Output

Please enter radius of  
the circle = 20  
Diameter of circle is = 40  
Circumference of circle is : 125.66370612  
Area of circle is : 1256.6370612