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Subject: OOP

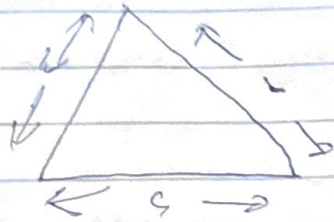
~~Teacher~~ Teacher: Ayub Khan

Assignment

1) D: 13835. Zghoor 15hr

Q: How to calculate parameter of a triangle in java using object oriented approach?

Algt: Parameter of triangle



Where a, b, c are length of side of triangle parameter of a triangle can simply be evaluated using following formula.

$$\text{Parameter} = (a + b + c)$$

Examples:  $a = 2.0$ ,  $b = 3.0$ ,  $c = 5.0$

output = 10.0

Input =  $a = 5.0$ ,  $b = 6.0$ ,  $c = 7.0$

output = 18.0

= Java Program to find Parameter

```
class Test {
```

```
static float findParameter(float a, float b, float c)
```

```
{
// formula for parameter of triangle
return (a + b + c);
}
```

```
// Driver Method
```

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

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

```
P.T.O
```

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```
System.out.println("bind parameter (radius)");  
}
```

```
}
```

Output

10.0

Q8 How to calculate diameter of a circle in java using object oriented approach?

Ans 2 Input java.util.Scanner;  
= Class Area of Circle.

```
{
```

```
public static void main(String args)
```

```
{
```

```
Scanner s = new Scanner(System.in);
```

```
System.out.print("Enter the radius:");
```

```
double r = s.nextDouble();
```

```
double area = (22/7 * r * r);
```

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

```
}
```

```
}
```

Output

Enter radius: 7 | Area of circle

3. 154.0

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Q3 How to check leap year in Java  
 → using object oriented approach?

ANS: Public class leap year {  
 → 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 = true;
```

```
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.

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Q4. How to check that the input from  
 the user is the vowel or not in Java  
 using  
 object oriented approach.

Ans

= / Java Program Example -

```

input java.exe scanner j
public class java program .
{
    public static void main (String args [])
    char ch ;
    Scanner sc = new Scanner (System.in) ;
    System.out.print ("Enter an Alphabet :");
    ch = sc.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.println ("This is a vowel");
    }
    else
    {
        System.out.print ("This is not
        a vowel");
    }
}
)

```

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Q5 How to use Power of a number  
= in Java using object oriented  
approach.

Ans

```
import java.util.Scanner;
```

```
public class Power of number {  
    public static void main (String args[]) {  
        public static void main (String args[]) {  
            Scanner sc = new Scanner (System.in);  
            System.out.println ("Enter the base  
            number:");  
            int base = sc.nextInt ();  
            int temp = base;  
            System.out.println ("Enter the exponent  
            number:");  
            int exp = sc.nextInt ();  
            for (int i=1, j=exp; i++) {  
                temp = temp * temp;  
            }  
            System.out.println ("Result of  
            " + base + " Power  
            " + exp + " is " + temp);  
        }  
    }  
}
```

output  
Enter the base number:

12

Enter the Exponent number:

2  
Result of 12 Power 2 is 144.