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subJect: object oriented progra
ming Lab

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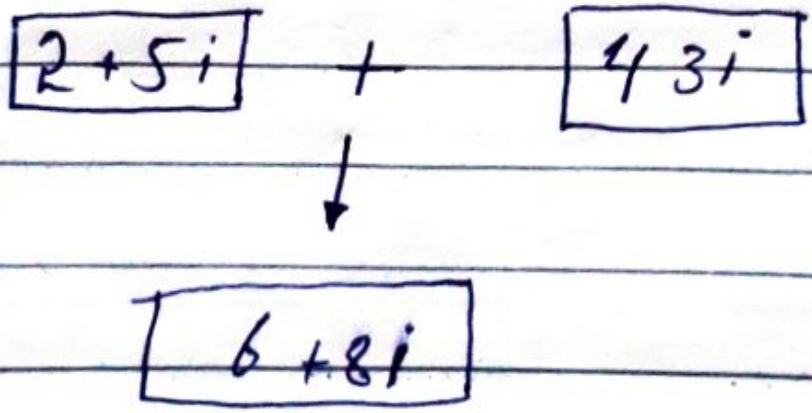
Q1:: Java program to check if a Given integer is odd or even.

```
(1) public class odd even.
(2)     int n;
(3) System.out.print("Enter the number you want to check
(4) Scanner s = new Scanner(System
(5)     n = s. nextInt:");
(6) if (n % 2 == 0).
(7) System.out.println(" The given number "+n+" is even
(8) System.out.println("The Given number "+n+" is odd");
```

Q2 :- complex number have two parts - real part and imaginary part. in this Totorial we will write a Java program to add Two complex number

when addin complex number we add real parts togetter and imaginary parts togetter as shown in the diagram



Q3ans (1) import Java.util
Scanner; class Leap year

(2) public static void main
(String arg[]) {

(3) if(Year != 0) if{ year % 400 == 0)

(4) System.out.println(Year+is
a leap year"); else if (year
% 100 == 0) ....

(5) else if (Year % 4 == 0)
system .out. ....

(6) system.out.println(year +"
is not a leap year"); ....

(7) System.out.println (Year Zero
does not exist");

```
import java scanner;
        class LeapYear
{
public static void main (string
{
        long a, y, c
        Scanner sc = new
System.out.print("enter an y=
        sc.nextlong ();
        if (y != 0)
{
a=(y% 400 ==0) ? (c=1) : (
(y% 100 =
```

```
if ( a==1
system .out .println( x + "
    else

    system .out .println ( x + "

    }

        else

        system .out .print1x (".year
ze

}

}
```

out put

1 inter any calendar year
:1950

2 1950 is not a leap year

Q 4:: in english alphabet the charatter 'a; 'e; 'i; 'o; 'u; are vowel and remaning letter are consonants. To find whether the given letter is a vowel or consonant.

using loop and or operator verify whether given character is 'a' or e. or i or o. or u else it is consonant

Example

```
import Java.util Scanner;
public class vowel or consonant
{
Public static void main (string ar
{
System.out.println("Enter a char
```

```
Scanner sc=new Scanner(System
char ch= sc.next().charAt(0);
if(ch=='a'||ch=='e'||ch=
System.out.println("Given cha
} else {
System.out.println(Given ch
}
}
}
```

out put

Enter a character

a

Given character is an vowel

enter a character :

1

Given character is consonant

Q5:- Even though the Java library has a power function

Math.pow() to calculate the power of a Given number in Java it's a regular programing exercise for Java

programing to implement a power Function.

if you used the Math class then you know that we

Java.lang.Math.pow(double a double b) return the value of the first number

raised to the power of the second number and you need to do the same

Java Function to calculate the power of integer number.

```
package tool;

/**
 *
 * A simple Java program to implement a power
 * return x ^ y.
 * input : (2,3) output : 8
 */

public class Hello {
```

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

    System.out.println("2 to the power
3 : =

system.out.println("3 to the power 3 : =
system.out.println("2 to the power 5 : =
system.out.println("5 to the power 2 : =
system.out.println("9 to the power 2 : =

}

/*

* calculate power using multipli
cation operator

*/
```

```
public static long Power(int x
int y) {
        long result = x
        for (int i = 1; i < y; i++)
        {
        }
        return result
    }
}
```

out put

2 to the power 3 := 8

3 to the power 3 := 27

2 to the power 5 := 32

5 to the power 2 : = 25

9 to the power 2 : 81.