

Complex Class

```
public class Complex{

    int real;

    int imaginary;

    public void add(int real1,int imaginary1)

    {

        int sumReal=real+real1;

        int sumImaginary=imaginary+imaginary1;

        System.out.println("Addition of two complex
number:"+sumReal+"+"+sumImaginary+"i");

    }

    public void sub(int real1,int imaginary1)

    {

        int subReal=real-real1;

        int subImaginary=imaginary-imaginary1;

        System.out.println("Subraction of two complex
number:"+subReal+"+"+subImaginary+"i");

    }

    public void multiply(int real1,int imaginary1)

    {

        int mulReal=(real*real1)-(imaginary*imaginary1);

        int mulImaginary=(real1*imaginary)+(real*imaginary1);

        System.out.println("multiplication of two complex
numbers:"+mulReal+"+"+mulImaginary+"i");

    }

    public void divisionBy(int real1,int imaginary1)

    {

        int numeratorReal=(real*real1)-(imaginary*((-1)*imaginary1));
```

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        int numeratorImaginary=(real1*imaginary)+(real*((-1)*imaginary1));

        int denominatorReal=(real1*real1)-(imaginary1*((-1)*imaginary1));

        int denominatorImaginary=(real1*imaginary1)+(real1*((-1)*imaginary1));

        System.out.println("division of two complex
numbers:"+numeratorReal+"+"+numeratorImaginary+"i"+"/"+"denominatorReal+"+"denominatorI
maginary+"i");

    }

}

```

Solution class

```

import java.io.BufferedReader;

import java.io.IOException;

import java.io.InputStreamReader;

public class Solution {

    public static void main(String args[]) throws IOException {

        BufferedReader bf=new BufferedReader(new InputStreamReader(System.in));

        Complex complex=new Complex();

        System.out.println("enter the first complex number");

        complex.real=Integer.parseInt(bf.readLine());

        complex.imaginary=Integer.parseInt(bf.readLine());

        System.out.println("enter the second complex number");

        int real1=Integer.parseInt(bf.readLine());

        int imaginary1=Integer.parseInt(bf.readLine());

        System.out.println("enter your choice");

        int choice=Integer.parseInt(bf.readLine());

        switch(choice) {

            case 1:

                complex.add(real1,imaginary1);

                break;

```

case 2:

complex.sub(real1,imaginary1);

case 3:

complex.multiply(real1,imaginary1);

case 4:

complex.divisionBy(real1,imaginary1);

}

}

}