

**PRACTICE PROGRAM 2 (JAVA)**  
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**ref: <https://studump.payperlez.com>**

1. Write a program to convert numbers. The user should be able to select from a menu option and enter the number to convert. The program must do the conversion and display output. After that, the program must ask if the user wants to perform another conversion without exiting

1. Decimal to Binary
2. Binary to Decimal

**SOLUTION**

```
import java.util.Scanner;
public class ConvertNumbers {

    public static void main(String[] args) {
        Scanner acc = new Scanner(System.in);

        showMenu();
        do
        {

            int UserI = acc.nextInt();

            switch (UserI) {

                case 1:

                    binaryToDecimal();
                    newCon();

                    break;

                case 2:

                    DecimalToBinary();
                    newCon();

                    break;

                default :

                    System.out.println("Invalid choice");

            }
        }
```

```

    }while(true);

}

public static void showMenu() {
    // TODO Auto-generated method stub
    System.out.println("CONVERT A NUMBER ");
    System.out.println("1) Binary to Decimal");
    System.out.println("2) Decimal to Binary");
    System.out.print("Enter Choice : ");
}

public static void newCon() {
    // TODO Auto-generated method stub
    Scanner scan = new Scanner(System.in);

    System.out.println("Do you want to perform another conversion?");
    String input = scan.nextLine();

    if (input.equals("yes")) {
        showMenu();
    } else {
        System.out.println("Than You for using this Convertor");
        System.exit(0);
    }
}

static void binaryToDecimal()
{

    Scanner vhim =new Scanner(System.in);

    System.out.println("Enter a binary number: ");
    int i= vhim.nextInt();

    int dec=0,p=0;

    while(i!=0)
    {
        dec+=((i%10)*Math.pow(2,p));
        i=i/10;
        p++;
    }

    System.out.println("Binary to Decimal is: " + dec);
}

```

```

}

    public static void DecimalToBinary() {
        // TODO Auto-generated method stub
        int decii, coy, i=1, j;
        int bina[] = new int[100];

        Scanner scan = new Scanner(System.in);

        System.out.print("Input a Decimal Number : ");
        decii = scan.nextInt();

        coy = decii;

        while(coy != 0)
        {
            bina[i++] = coy%2;
            coy = coy/2;
        }

        System.out.print("Your converted Decimal to Binary number is: ");
        for(j=i-1; j>0; j--)
        {
            System.out.print(bina[j]);
        }

    }

}

```

2. Write a program to sum the digits in an integer. (use % and / operators) e.g. 1234 = 10

### **SOLUTION**

```

import java.util.Scanner;
public class SumNumbers {
    public static void main(String[] args) {
        Scanner inner = new Scanner(System.in);
        System.out.print("Input numbers: ");
        float inside = inner.nextFloat();
        System.out.println("sum is: " + sumnumbers(inside));
    }
}

```

```
}  
  
public static int sumnumbers(float inside) {  
    int ad = 0;  
    while (inside != 0) {  
        ad += inside % 10;  
        inside /= 10;  
    }  
    return ad;  
}  
}
```