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Assignment no 1

1. Write a Java program to declare and initialize all eight primitive data types and print their values.

```
class AllDatatype{
    public static void main(String[] args){
        byte bytenum = 124;
        short shortnum = 30000;
        int intnum = 1576485;
        long longnum = 654782199020L;
        float floatnum = 123.45f;
        double doublenum = 1234.7381264128;
        char ch = 'R';

        boolean bool = true;

        System.out.println("bytenum: " +bytenum);
        System.out.println("shortnum: " +shortnum);
        System.out.println("intnum: " +intnum);
        System.out.println("longnum: " +longnum);
        System.out.println("floatnum: " +floatnum);
        System.out.println("doublenum: " +doublenum);
        System.out.println("ch: " +ch);
        System.out.println("bool: " +bool);
    }
}
```

```

C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 2>javac AllDatatype.java

C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 2>java AllDatatype
bytenum: 124
shortnum: 30000
intnum: 1576485
longnum: 654782199020
floatnum: 123.45
doublenum: 1234.7381264128
ch: R
bool: true

C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 2>

```

2. Write a java program that takes two integers as input and performs all arithmetic operations on them.

```

import java.util.Scanner;

class Arithmetic{

    public static void main(String[] args){

        Scanner sc = new Scanner(System.in);

        System.out.println("Enter a 1st number:");
        int a =sc.nextInt();

        System.out.println("Enter a 2nd number:");
        int b = sc.nextInt();

        int add = a+b;
        int sub = a-b;
        int mul = a*b;
        int div = a/b;
        int mod = a%b;

        System.out.println("Add:" + add + " " + "Sub:" + sub + " " + "Mul:" + mul + "
"+ "Div:" + div + " " + "Mod:" + mod);

    }
}

```

```
}
```

```
C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 2>javac Arithmetic.java
C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 2>java Arithmetic
Enter a 1st number:
25
Enter a 2nd number:
10
Add:35 Sub:15 Mul:250 Div:2 Mod:5
C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 2>
```

3.Implement a Java program to demonstrate implicit and explicit type casting

```
class ImpliedExplicit{
    public static void main(String[] args){
        int ch = 'A';
        int i = ch;

        System.out.println("value of i: " +i);

        double d = 123.457642;
        int j = (int)d;

        System.out.println("value of j: " +j);
    }
}
```

```
C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 2>javac ImpliedExplicit.java
C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 2>java ImpliedExplicit
value of i: 65
value of j: 123
C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 2>
```

4. Create a Java program that converts a given integer to a double and vice versa using wrapper classes

```
class Wrapper{  
    public static void main(String[] args){  
        //Integer to Double  
  
        int a = 100;  
  
        Integer intObj = Integer.valueOf(a);  
  
        Double doubleObj = intObj.doubleValue();  
  
        System.out.println("Integer to Double: " +doubleObj);  
  
        // Double to Integer  
  
        double d = 123.4245;  
        Double doubleVal = Double.valueOf(d);  
  
        Integer intVal = doubleVal.intValue();  
  
        System.out.println("Double to Integer: " +intVal);  
    }  
}
```

```
C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 2>javac Wrapper.java  
C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 2>java Wrapper  
Integer to Double: 100.0  
Double to Integer: 123  
C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 2>
```

5. Write a Java program to swap two numbers using a temporary variable and without using a temporary variable

```
import java.util.Scanner;

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

        System.out.println("Enter a 1st number: ");
        int num1 = sc.nextInt();

        System.out.println("Enter a 2nd number: ");
        int num2 = sc.nextInt();

        System.out.println("Before Swapping: " +num1 +"," +num2);
        int temp = num1;
        num1 = num2;
        num2 = temp;

        System.out.println("After Swapping: " +num1 +"," +num2);

    }
}
```

```

C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 3>javac Swap.java

C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 3>java Swap
Enter a 1st number:
10
Enter a 2nd number:
20
Before Swapping: 10,20
After Swapping: 20,10

C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 3>|

```

```

import java.util.Scanner;

class Swap1{
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);

        System.out.println("Enter a 1st number: ");
        int num1 = sc.nextInt();

        System.out.println("Enter a 2nd number: ");
        int num2 = sc.nextInt();

        System.out.println("Before Swapping: " +num1 +"," +num2);

        num1 = num1 + num2;
        num2 = num1 - num2;
        num1 = num1 - num2;

        System.out.println("After Swapping: " +num1 +"," +num2);
    }
}

```

```

C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 3>javac Swap1.java

C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 3>java Swap1
Enter a 1st number:
25
Enter a 2nd number:
30
Before Swapping: 25,30
After Swapping: 30,25

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```

6.Develop a program that takes user input for a character and prints whether it is a vowel or consonant.

```

import java.util.Scanner;
class Vowel_Consonant {
    public static void main(String[] args){

        Scanner sc = new Scanner(System.in);

        System.out.println("Enter a character: ");
        char ch = sc.next().charAt(0);

        if(ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u' ||ch == 'A' ||ch == 'E' ||ch == 'I' ||ch ==
'O' ||ch == 'U' )
        {
            System.out.println(ch +" is a vowel");
        }
        else
        {
            System.out.println(ch +" is a consonants");
        }
    }
}

```

```

C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 3>javac Vowel_Consonant.java

C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 3>java Vowel_Consonant
Enter a character:
b
b is a consonants

C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 3>javac Vowel_Consonant.java

C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 3>java Vowel_Consonant
Enter a character:
A
A is a vowel

C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 3>

```

7.Create a Java program to check whether a given number is even or odd using command-line arguments.

```

class Odd_Even{
    public static void main(String[] args){

        int num = Integer.parseInt(args[0]);

        if(num % 2 == 0)
        {
            System.out.println(num + " is even number.");
        }
        else
        {
            System.out.println(num + " is odd number.");
        }
    }
}

```



```
C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 3>javac Odd_Even.java
```

```
C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 3>java Odd_Even 15  
15 is odd number.
```

```
C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 3>java Odd_Even 20  
20 is even number.
```

```
C:\Users\Admin\OneDrive\Desktop\CDAC\00JP\Day 3>
```