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1)

Aim:

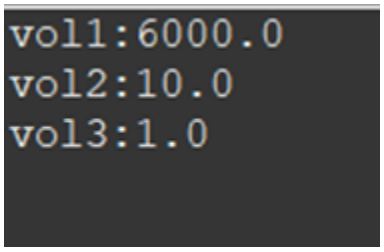
To write a java program to calculate the volume of box. Use constructors with parameter, no arg constructors and default constructor.

Code:

```
package home_assign2;

import java.util.*;

public class volume {

        float a,b,c;

        public volume(float a, float b, float c) {

                this.a=a;

                this.b=b;

                this.c=c;

        }

        public volume(float a) {

                this.a=a;

                this.b=1;

                this.c=1;

        }

        public volume() {

                this.a=1;
```

```
                this.b=1;
                this.c=1;
        }
        public float vol() {
                return this.a*this.b*this.c;
        }
        public static void main(String args[]) {
                volume vol1= new
volume(10,20,30);
System.out.println("vol1:"+vol1.vol());
                volume vol2= new volume(10);
System.out.println("vol2:"+vol2.vol());
                volume vol3= new volume();
System.out.println("vol3:"+vol3.vol());
        }
}
```

Output:



2)

Aim:

To write a java program with 4 methods add, subtract, multiply and divide and perform the operations in each method.

Code:

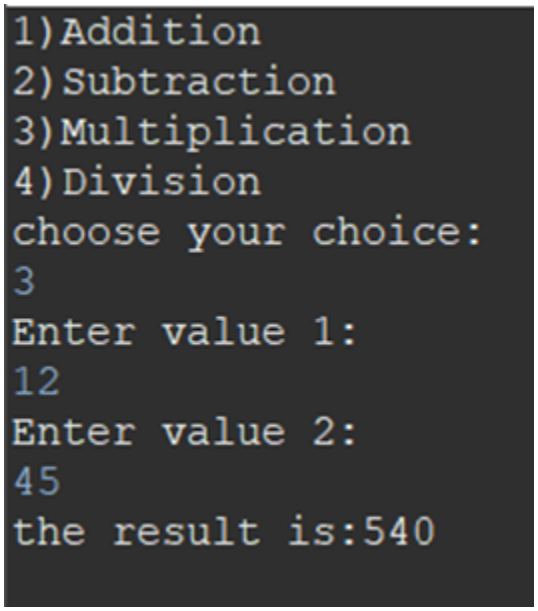
```
package home_assign2;

import java.util.*;

public class main {

	public int add(int a, int b) {

			int sum=a+b;

			return sum;

	}

	public int sub(int a, int b) {

			int sub=b-a;

			return sub;
```

```
        }
        public int mul(int a, int b) {
                int mul=a*b;
                return mul;
        }
        public int div(int a, int b) {
                int div=a/b;
                return div;
        }
        public static void main(String args[]) {
                int x,y,result,op;
                Scanner sc= new
Scanner(System.in);

System.out.println("1)Addition\n2)Subtraction\n3)Multi
plication\n4)Division\nchoose your choice:");
                op=sc.nextInt();
                main obj= new main();
                switch (op)
                {
                case 1:

System.out.println("Enter value 1:");
```

```
                                    x=sc.nextInt();

System.out.println("Enter value 2:");
                                    y=sc.nextInt();
                                    result=obj.add(x,y);

System.out.println("the result is:" +result);
                                    break;
                        case 2:

System.out.println("Enter value 1:");
                                    x=sc.nextInt();

System.out.println("Enter value 2:");
                                    y=sc.nextInt();
                                    result=obj.sub(x, y);

System.out.println("the result is:" +result);
                                    break;
                        case 3:

System.out.println("Enter value 1:");
                                    x=sc.nextInt();
```

```
System.out.println("Enter value 2:");
                                    y=sc.nextInt();
                                    result=obj.mul(x, y);

System.out.println("the result is:" +result);
                                    break;
                        case 4:

System.out.println("Enter value 1:");
                                    x=sc.nextInt();

System.out.println("Enter value 2:");
                                    y=sc.nextInt();
                                    result=obj.div(x, y);

System.out.println("the result is:" +result);
                                    break;
                        default:

System.out.println("Enter a valid choice");
                        }
          }
}
```

Output:


1)Addition
2)Subtraction
3)Multiplication
4)Division
choose your choice:
3
Enter value 1:
12
Enter value 2:
45
the result is:540