## 1. UNARY OPERATOR :

```
package com.torryharris;

public class Main

{

	public static void main(String[] args)

	{

		for(int i=0;i++<=10;i++)

		{

			System.out.println(i);

		}

	}

}
```

```
"C:\Program Files\OpenJDK\jdk-8.0.262.10-hotspot\bin\java.exe" ...
1
3
5
7
9
11
```

## 2. TO FIND THE MIN AND MAX IN THE ARRAY :

```
package com.torryharris;

public class Main

{

	public static void main(String[] args)

	{

		int[] iarr = {11,26,133,47,55};

		int max = iarr[0];

		int min = iarr[0];
```

```
            for(int i=1;i<iarr.length;i++)
            {
                if (iarr[i] > max)
                {
                    max = iarr[i];
                }
                if(iarr[i] < min)
                {
                    min = iarr[i];
                }
            }
            System.out.println("Max element in the array : "+max);
            System.out.println("Min element in the array : "+min);
        }
}
```

```
"C:\Program Files\OpenJDK\jdk-8.0.262.10-hotspot\bin\java.exe" ...
Max element in the array : 133
Min element in the array : 11

Process finished with exit code 0
```

## 3. COMMAND LINE ARGUMENTS :

WITH THE STRING VALUE :

```
package com.torryharris;
public class Main
{
    public static void main(String[] args)
    {
        String str1 = args[0];
        String str2 = args[1];
```

```
            System.out.println(str1+" "+str2);
        }
}
```

(Modify the Command line argument)

```
"C:\Program Files\OpenJDK\jdk-8.0.262.10-hotspot\bin\java.exe" ...
good morning

Process finished with exit code 0
```

**WITH THE INTEGER VALUE IN THE ARGUMENTS :**

```
package com.torryharris;

public class Main
{
        public static void main(String[] args)
        {
            String str1 = args[0];
            String str2 = args[1];
            int num1 = Integer.parseInt(str1);
            int num2 = Intger.parseInt(str2);
            System.out.println("Sum = "+(num1+num2));
        }
}
```

```
"C:\Program Files\OpenJDK\jdk-8.0.262.10-hotspot\bin\java.exe" ...
sum = 233

Process finished with exit code 0
```

## 4. SORTING AN ARRAY(BUBBLE SORT) :

```
package com.torryharris;

import java.util.Scanner;

public class Main

{

	public static void main(String[] args)

	{

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

		int[] arr = new int[len];

		Scanner sc = new Scanner(System.in);

		System.out.println("Enter the elements of the array");

		for(int i=0;i<arr.length;i++)

		{

			arr[i] = sc.nextInt();

		}

		//for sorting the array

		for (int i=0; i< (arr.length)-1;i++)

		{

			for (int j=0;j<(arr.length)-i-1;i++)

			{

				if (arr[j] < arr[j+1])

				{

					int temp = arr[j];

					arr[j] = arr[j+1];

					arr[j+1] = temp;

				}

			}

		}

		//to print the sort of the array

		for (int i=0;i < arr.length;i++)

		{
```

```
                System.out.println(arr[i]+" ");
            }
        }
}
```

//the length of the array is passed in the command line

```
Enter the elements of the array :
77
42
35
12
101
101 77 42 35 12
Process finished with exit code 0
```

## Object Oriented Programming :

```
package com.torryharris;

import java.util.Scanner;

public class Main

{
    public static void main(String[] args)
    {
        /*System.out.pritnln("Enter the details of the book : ");
        int bookId1 = sc.nextInt();
        String bookName1 = sc.next();
        int bookPrice1 = sc.nextInt();
        Book book1 = new Book(bookId1, bookName1, bookPrice1);
        System.out.println(book1);      //torString() will work implicitly
        int bookId2 = sc.nextInt();
        String bookName2 = sc.next();
        int bookPrice2 = sc.nextInt();
        Book book2 = new book(bookId2, bookName2, bookPrice2);
```

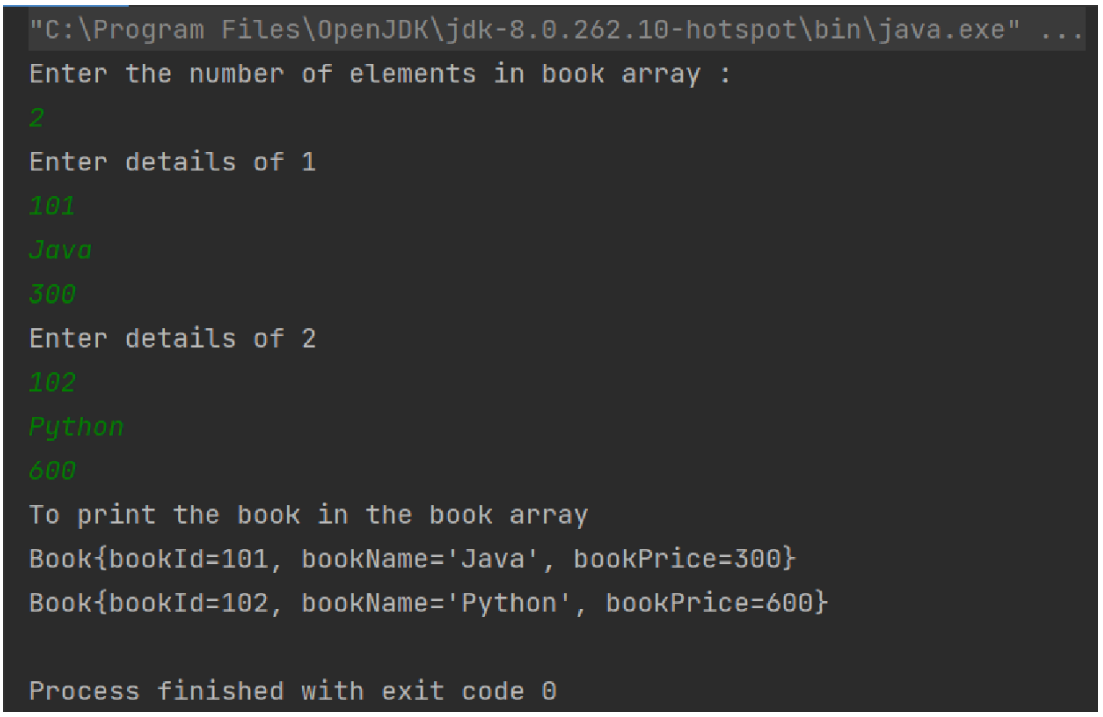
```
		System.out.println(book2);*/
		Scanner sc = new Scanner(System.in);
		System.out.println("Enter the number of elements in book array : ");
		int len = sc.nextInt();

		Book[] bookarr = new Book[len];
		for(int i=0;i<bookarr.length;i++)
		{
			System.out.println("Enter the details of the "+(i+1));
			int bookId = sc.nextInt();
			sc.nextLine();
			String bookName = sc.nextLine();
			int bookPrice = sc.nextInt();
			bookarr[i] = new Book(bookId, bookName, bookPrice);
		}
		System.out.println("To print the book in the book array");
		for(int i=0;i<bookarr.length;i++)
		{
			System.out.println(book[i]);
		}
	}
}
```

## book.java

```
package com.torryharris;
public class Book
{
	int bookId;
```

```
    String bookName;
    int bookPrice;
    //Constructor to construct the initial value
    public Book(int bookId, String bookName, int bookPrice)
    {
        this.bookId = bookId;
        this.bookName = bookName;
        this.bookPrice = bookPrice;
    }
    //print the book object : returning a string
    @override
    public String toString()
    {
        return "Book{" +
                "bookId=" + bookId +
                ", bookName=' " + bookName + '\' ' +
                ", bookPrice=" + bookPrice +
                '}';
    }
}
```




**ENCAPSULATION DEMO :**

```
package com.torryharris;

public class Main

{

        public static void main(String[] args)

        {

                student student1 = new Student(regdno : 101, sname : "Sam", sub1m1: 90, sub2m2 : 95, sub3m3 : 80);

                System.out.println(student1);

        }

}
```

## student.java:

```
package com.torryharris;

public class student
{
	private int regdno;
	private String Sname;
	private int sub1m1;
	private int sub2m2;
	private int sub3m3;
	public student(int regdno, String Sname, int sub1m1, int sub2m2, int sub3m3)
	{
		this.regdno = regdno;
		Sname = sname;
		this.sub1m1 = sub1m1;
		this.sub2m2 = sub2m2;
		this.sub3m3 = sub3m3;
	}
	private double calc_percentage()
	{
		return ((sub1m1+sub2m2+sub3m3)/3);
	}

	@override
	public String toString()
	{
		return "Student{" +
		"regdno=" + regdno +
		", Sname=' " + Sname + '\' ' +
```

```
                ", sub1m1=" + sub1m1 +
                ", sub2m2=" + sub2m2 +
                ", sub3m3=" + sub3m3 + " Percentae= "+ cac_percentage()+
                '}';
        }
}
```

```
"C:\Program Files\OpenJDK\jdk-8.0.262.10-hotspot\bin\java.exe" ...
student{regdno=101, Sname='Sam', sub1m1=90, sub2m2=95, sub3m3=80 Percentage= 88.0}

Process finished with exit code 0
```

## ELECTRICITY BILL :

```
package com.torryharris;

public class Main
{
        public static void main (String[] args)
        {
                customer c1 = new customer(custID: 1, custName:"Prasanna", unitConsumed:2000,
unitPrice:5);
                System.out.println(c1);
        }
}
```

customer.java

```
package com.torryharris;

public class customer
{
	private int custID;
	private String custName;
	private int unitConsumed;
	private int unitPrice;
	public customer(int custID, String custName, int unitConsumed, int unitPrice)
	{
		this.custID = custID;
		this.custName = custName;
		this.unitConsumed = unitConsumed;
		this.unitPrice = unitPrice;
	}
	private double calc_billamt()
	{
		return (untiConsumed*unitPrice);
	}

	@override
	public String toString()
	{
		return "customer{" +
		"custID=" + custID +
		", custName=' " + custName + '\' ' +
		", unitConsumed=" + unitConsumed +
		", unitPrice=" + unitPrice +" Bill amount: "+ calc_billamt()+
```

```
                '}';
        }
}
```

```
"C:\Program Files\OpenJDK\jdk-8.0.262.10-hotspot\bin\java.exe" ...
customer{custID=1, custName='Prasanna', unitConsumed=2000, unitPrice=5 Bill amount: 10000}

Process finished with exit code 0
```