Assignment-7

Implement a Jump Search algorithm in Java to efficiently search for a target value in a sorted array.

```java
public class JumpSearchDemo {

    static int jumpSearch(int[] arr, int x) {
        int n=arr.length;
        int step=(int)Math.floor(Math.sqrt(n));
        int prev=0;

        System.out.println("--------------");
        System.out.println("Iteration start: "+prev);
        System.out.println("Array length is:"+n);
        System.out.println("Step value is: "+step);



        for(int minStep=Math.min(step, n)-1;
            arr[minStep]<x;
            minStep=Math.min(step, n)-1) {
            prev=step;
            step+=(int)Math.floor(Math.sqrt(n));
            if(prev>=n)
                return -1;
        }
        while(arr[prev]<x){
            prev++;
            if(prev==Math.min(step, n))
                return -1;
        }
        return -1;
    }


    public static void main(String[] args) {
        int arr[]= {0,1,2,3,4,5,8,13,21,34,55,89,144,233,377,610};
```

```java
            int x=55;
            int result=jumpSearch(arr,x);
            System.out.println("\n Number : "+x+"is at index :"+result);


    }

}
```