```
package taskall;
import java.util.Scanner;
public class ArrayMax {
        Scanner s = new Scanner(System.in);
        int size;
        int arr[];
        int diff;
        int i,j;
        int l;

        public void max() {
                System.out.println("Enter array size:");
                size=s.nextInt();
                arr=new int[size];

                System.out.println("Enter array values:");
                l=arr.length;
                for(i=0;i<size;++i) {
                        arr[i]=s.nextInt();
                }


           int max=arr[0];
           int min=arr[0];
           for(i=0;i<size;++i) {
                   if(arr[i]>max) {
                           max=arr[i];
                   }
                   if(arr[i]<min) {
                           min=arr[i];
                   }

           }
            diff=max-min;
            System.out.println("Max:"+max);
            System.out.println("Min:"+min);
                System.out.println("Difference:"+diff);
```

```
    }

    public static void main(String[] args) {
        ArrayMax a = new ArrayMax();
        a.max();

    }

}
```

Output:

```
Enter array size:
5
Enter array values:
40
20
2
80
18
Max:80
Min:2
Difference:78
```

```
package taskall;

public class Stock {

    public static int max(int[] prices) {
        if(prices ==null || prices.length<2) {
            return 0;
        }
        int minPrice = prices[0];
        int maxProfit=0;
        for(int i=1;i<prices.length;++i) {
            if(prices[i]< minPrice) {
                minPrice = prices[i];
            }else if(prices[i]-minPrice >maxProfit) {
                maxProfit = prices[i]-minPrice;
            }
        }
        return maxProfit;
    }

    public static void main(String[] args) {
        int []prices= {20,50,70,85,90};
        int profit=max(prices);
        System.out.println("Highest profit:"+profit);


    }

}
```

Output:

```
Highest profit:70
```

3.Can you store null keys in HashMap?

HashMap allows one null key and multiple null values whereas Hashtable doesn't allow any null key or value.

```
package taskall;
import java.util.*;
public class HM {

    public static void main(String[] args) {
    HashMap <Integer,String> m = new HashMap
<Integer,String>();
        m.put(1,"a");
        m.put(1,"j");
        m.put(2,"k");
        m.put(null, null);
        m.put(3, null);
        m.put(4, null);
        m.put(null, "j");

        System.out.println(m);




    }

}
```

Output:

```
{null=j, 1=j, 2=k, 3=null, 4=null}
```

4.What is hash collision in HashMap?

A collision, or more specifically, a hash code collision in a HashMap, is a situation where two or more key objects produce the same final hash value and hence point to the same bucket location or array index.