

Java practicals

3a

```
import java.util.*;

public class Main
{
    public static void main(String[] args) {
        System.out.print("Enter a string:");
        Scanner scs= new Scanner(System.in);
        String in_user=scs.nextLine();//"hello ,1 .2 @ 3";
        in_user=in_user.toLowerCase();
        int letter=0,space=0,num=0,other=0;
        char b;
        for(int i=0;i<in_user.length();i++)
        {
            b=in_user.charAt(i);
            if(Character.isLetter(b)){
                letter++;
            }
            else if(b==' '){//Character.isSpaceChar(b)
                {
                    space++;
                }

                else if(Character.isDigit(b)){
                    num++;
                }

                else{

```

```

        other++;

    }

}

System.out.println("the number of letters are:"+letter);
System.out.println("the number of numbers are:"+num);
System.out.println("the number of spaces are:"+space);
System.out.println("the number of other characters are:"+other);
}
}

```

3b

```

import java.util.*;

public class Main
{
    public static void digi_sum(){
        long sum1=0,b;
        char arr[]={'1','2','3','4','5','6','7','8','9','0' };
        for(char element : arr){
            b= element-'0'; //because when char to int is done, it converts into ascii value. To
//overcome this , we subtract with ascii value of character '0' to give integer value
            sum1+=b;
            //sum1+=Character.getNumericValue(element);
        }
        System.out.println("the sum of digits is:" +sum1);
    }
}

```

```

        public static void main(String[] args) {
            digi_sum();

        }
    }
}

```

3c

```

import java.util.*;

public class Main
{
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        System.out.print("enter size of array:");
        int size=sc.nextInt();
        int a1,smallest,largest;
        int arr[]=new int[size];
        for(int i=0;i<size;i++){
            System.out.print("enter element of array:");
            a1=sc.nextInt();
            arr[i]=a1;
        }

        //smallest
        smallest=largest=arr[0];
        for(int i=0;i<size;i++){

```

```

        if(smallest>arr[i]){
            smallest=arr[i];
        }

    }

    //largest
    for(int i=0;i<size;i++){
        if(largest<arr[i]){
            largest=arr[i];
        }

    }

    System.out.println("smallest value in array:"+smallest);
    System.out.println("largest value in array:"+largest);

}
}

```

4a

```

import java.util.*;

class SortData{

    public void asec(int arr[]){

        int temp;

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

```

```

        if(arr[j]>arr[j+1]){
            temp=arr[j];
            arr[j]=arr[j+1];
            arr[j+1]=temp;
        }
    }
}

System.out.println("sorted array is:");
for(int i=0;i<arr.length;i++){
    System.out.print(" "+arr[i]);
}

}

```

```

public void desc(int arr[]){
    int temp;
    for(int i =0;i<arr.length;i++){
        for(int j=0;j<arr.length-i-1;j++){
            if(arr[j]<arr[j+1]){
                temp=arr[j];
                arr[j]=arr[j+1];
                arr[j+1]=temp;
            }
        }
    }

    System.out.println("sorted array is:");
    System.out.println("sorted array is:");
    for(int i=0;i<arr.length;i++){
        System.out.print(" "+arr[i]);
    }
}

```

```
}  
}
```

```
}
```

```
public class Main
```

```
{
```

```
    public static void main(String[] args) {  
        Scanner sc=new Scanner(System.in);  
        System.out.print("enter size of array:");  
        int size=sc.nextInt();  
        int a1,switchvar;  
        int arr[]=new int[size];  
        for(int i=0;i<size;i++){  
            System.out.print("enter element of array:");  
            a1=sc.nextInt();  
            arr[i]=a1;  
        }  
        SortData obj1=new SortData();  
        System.out.print("enter 1 for asec , 2 for desc:");  
        switchvar=sc.nextInt();  
        if(switchvar==1){  
            obj1.asec(arr);  
        }  
        else{
```

```
        obj1.desc(arr);

    }

}

}
```

4b

```
import java.util.*;

class construct{
    char a ='8';
    int c,d;
    construct(){
        c=(int) a;
        System.out.println("ascii value of " +a+" is:"+c);
        d=a-'0';
        System.out.println("integer value " +a+" is:"+d);
    }
    construct(char ch){
        int e,f;
        e=(int) ch;
        System.out.println("ascii value " +ch+" is:"+e);
        f=ch-'0';
        System.out.println("integer value " +ch+" is:"+f);
    }
}
```

```
}  
  
public class Main  
{  
  
    public static void main(String[] args) {  
        construct ob=new construct();  
        construct ob1=new construct('6');  
  
    }  
}
```

4c

```
import java.util.*;  
  
abstract class construct{  
    static int a=10,b=10,c;  
    abstract void show();  
    static int add1(){  
        c=a+b;  
        return c;  
    }  
}
```



```
}  
public class Main extends construct  
{  
    void show(){  
        System.out.println("summation is "+construct.add1());  
    }  
    public static void main(String[] args) {  
        Main ob=new Main();  
  
        ob.show();  
  
    }  
}
```