**Prog\_1. Write a program to check whether a number is prime or not?**

*Java:*

**package** JavaProgs;

**import** java.util.Scanner;

**publicclass** PrimeNumber {

**publicstaticvoid** main(String[] args) {

Scanner sc=**new** Scanner(System.***in***);

System.***out***.println("enter a number to check");

**int**x=sc.nextInt();

**int**counter=0;

**for**(**int**i=2;i<=x/2;i++){

**if**(x % i==0){

counter=1;

System.***out***.println("Entered number is not a prime number");

**break**;

}

}

**if**(counter==0)

System.***out***.println("This is a prime number");

}

}

*VBScript:*

*x=inputbox("enter a number to check")*

*counter=0*

*For i=2 to x/2*

*If x mod i=0 Then*

*counter=1*

*msgbox "Entered number is not a prime number"*

*Exit for*

*End If*

*Next*

*If counter=0 Then*

*msgbox "This is a prime number"*

*End If*

**Prog\_2. Write a program to find fibonacci series for a given range.**

*Java:*

**package** JavaProgs;

**import** java.util.Scanner;

**publicclass** Fibonacci {

**publicstaticvoid** main(String[] args) {

Scanner sc=**new** Scanner(System.***in***);

System.***out***.println("Enter a range");

**int**first=0;

**int**sec=1;

**int**last=0;

**int**x=sc.nextInt();

System.***out***.print(first +","+ sec + ",");

String temp="";

**for**(**int**i=1;i<=x;i++){

last=first+sec;

first=sec;

sec=last;

temp=temp+last+",";

}

System.***out***.print(temp);

}

}

*VBScript:*

*x=inputbox("enter a range")*

*temp=""*

*first=0*

*temp1=first*

*sec=1*

*temp2=sec*

*last=0*

*For i=1 to x*

*last=temp1+temp2*

*temp1=temp2*

*temp2=last*

*temp=temp&last&","*

*Next*

*msgbox first&","&sec&","&temp*

**Prog\_3. Write a program to check whether a given string is palindrome or not?**

*Java:*

**package** JavaProgs;

**import** java.util.Scanner;

**publicclass** Palindrome {

**publicstaticvoid** main(String[] args) {

Scanner sc=**new** Scanner(System.***in***);

System.***out***.println("Enter a string to check");

String temp="";

String x=sc.nextLine();

**for**(**int**i=0;i<x.length();i++){

temp=x.charAt(i)+temp;

}

**if**(x.equals(temp)){

System.***out***.println("The given string is palindrome");

}

**else**

{

System.***out***.println("Not a palindrome");

}

}

}

*VBScript:*

*x=inputbox("enter a string")*

*temp=""*

*len1=len(x)*

*For i=1 to len1*

*y=mid(x,i,1)*

*temp=y&temp*

*Next*

*If x=temp Then*

*msgbox "This is a palindrome"*

*else*

*msgbox "Not a palindrome"*

*End If*

**Prog\_4. Write a program tocheck whether a number is Armstrong number?**

*Java:*

**package** JavaProgs;

**import** java.util.Scanner;

**publicclass** ArmstrongNumber {

**publicstaticvoid** main(String[] args) {

Scanner sc=**new** Scanner(System.***in***);

System.***out***.println("enter a number to check");

**int**x=sc.nextInt();

**int**temp=x;

**int**sum=0;

**while**(temp!=0){

**int**r=temp%10;

sum=sum+r\*r\*r;

temp=temp/10;

}

**if**(x==sum){

System.***out***.println("Armstrong number");

}

**else**{

System.***out***.println("Not an armstrong number");

}

}

}

**Prog\_5. Write a program to find duplicates in an array.**

*Java:*

*Method 1:*

**package** JavaProgs;

**import** java.util.HashSet;

**publicclass** DupliArray {

**publicstaticvoid** main(String[] args) {

**int** [] arr={4,12,1,23,4,1,5,16,1};

HashSet<Integer>h1=**new** HashSet<Integer>();

**for**(Integer i1 : arr){

**if**(h1.add(i1)==**false**){

System.***out***.println("Duplicates are"+" "+i1+",");

}

}

}

}

*Method 2:*

**package** JavaProgs;

**publicclass** DupliArray2 {

**publicstaticvoid** main(String[] args) {

**int** [] arr={4,12,1,23,4,1,5,16,1};

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

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

**if**(arr[i]==arr[j]){

System.***out***.println("Duplicates are:"+ " "+arr[i]);

}

}

}

}

}

*VBScript:*

*arr=array(12,3,21,14,3,1,12,3)*

*For i=0 to ubound(arr)*

*For j=i+1 to ubound(arr)*

*If arr(i)=arr(j) Then*

*print "Duplicates are:"& " "&arr(i)*

*End If*

*Next*

*Next*

**Prog\_6. Write a program to find duplicate character in a string.**

*Java:*

**package** JavaProgs;

**import** java.util.HashSet;

**publicclass** DupliChar {

**publicstaticvoid** main(String[] args) {

String s="indonesiain";

**char**[] ch=s.toCharArray();

HashSet<Character>hash=**new** HashSet<Character>();

**for**(Character c: ch){

**if**(hash.add(c)==**false**)

System.***out***.println("Duplicates are:"+" "+c);

}

}

}

**Prog\_7. Write a program tocheck number of times substring appeared in a string.**

*Java:*

**package** JavaProgs;

**publicclass** DupliWords {

**publicstaticvoid** main(String[] args) {

String s="raghu ne raghu se kaha ki raghu nahi aayega";

String [] arr=s.split("raghu");

System.***out***.println((arr.length)-1);

}

}

*VBScript:*

*str="raghu ne raghu se kaha ki raghu nahi aayega"*

*strArray=split(str,"raghu")*

*print ubound(strArray)*

**Prog\_8. Write a program toprint below pattern:**

1  
12  
123  
1234  
12345

*Java:*

**package** JavaProgs;

**import** java.util.Scanner;

**publicclass** Pattern1 {

**publicstaticvoid** main(String[] args) {

Scanner sc=**new** Scanner(System.***in***);

System.***out***.println("enter a range");

**int**x=sc.nextInt();

**for**(**int**i=1;i<=x;i++){

**for**(**int**j=1;j<=i;j++){

System.***out***.print(j);

}

System.***out***.println();

}

}

}

**Prog\_9. Write a program toprint below pattern:**

\*  
\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*\*\*  
\*\*\*\*\*\*\*\*\*

*Java:*

**package** JavaProgs;

**import** java.util.Scanner;

**publicclass** Pattern2 {

**publicstaticvoid** main(String[] args) {

Scanner sc=**new** Scanner(System.***in***);

System.***out***.println("enter a range");

**int**x=sc.nextInt();

**int**p=0;

**for**(**int**i=1;i<=x;i++){

**for**(**int**j=1;j<=i+p;j++){

System.***out***.print("\*");

}

System.***out***.println();

p=p+1;

}

}

}

**Prog\_10. Write a program toprint Floyd’s triangle.**

*Java:*

**package** JavaProgs;

**import** java.util.Scanner;

**publicclass** FloyedsTriangle {

**publicstaticvoid** main(String[] args) {

Scanner sc=**new** Scanner(System.***in***);

System.***out***.println("enter a range");

**int**x=sc.nextInt();

**int**p=1;

**for**(**int**i=1;i<=x;i++){

**for**(**int**j=1;j<=i;j++){

System.***out***.print(p);

p++;

}

System.***out***.println();

}

}

}

**Prog\_11. Write a program toread file line by line.**

*Java:*

**package** JavaProgs;

**import** java.io.BufferedReader;

**import** java.io.FileReader;

**import** java.io.IOException;

**publicclass** ReadFileLineByLine {

**publicstaticvoid** main(String[] args) **throws** IOException {

String s=**null**;

BufferedReader br=**new** BufferedReader(**new** FileReader("C:\\Users\\Dell1\\Desktop\\MyFile.txt"));

**while**((s=br.readLine())!=**null**){

System.***out***.println(s);

}

}

}

**Prog\_12. Write a program toswap 2 numbers without using temp variable.**

*Java:*

**package** JavaProgs;

**import** java.util.Scanner;

**publicclass** SwappingNum {

**publicstaticvoid** main(String[] args) {

Scanner sc=**new** Scanner(System.***in***);

System.***out***.println("enter first number");

**int**a=sc.nextInt();

System.***out***.println("enter second number");

**int**b=sc.nextInt();

a=a+b;

b=a-b;

a=a-b;

System.***out***.println("First number is:"+a+" "+"and second number is"+" "+b);

}

}

*VBScript:*

*a=12*

*b=6*

*a=a+b*

*b=a-b*

*a=a-b*

*print a*

*print b*

**Prog\_13. Write a program tofind factorial of a number.**

*Java:*

**package** JavaProgs;

**import** java.util.Scanner;

**publicclass** Factorial {

**publicstaticvoid** main(String[] args) {

**int**fact=1;

Scanner sc=**new** Scanner(System.***in***);

System.***out***.println("enter a number to find factorial");

**int**x=sc.nextInt();

**for**(**int**i=x;i>=1;i--){

fact=fact\*i;

}

System.***out***.println(fact);

}

}

*VBScript:*

*x=inputbox("enter a number")*

*fact=1*

*For i=x to 1 step -1*

*fact=fact\*i*

*Next*

*print fact*

**Prog\_14. Write a program tocheck if a number is palindrome.**

*Java:*

**package** JavaProgs;

**import** java.util.Scanner;

**publicclass** PalinNumber {

**publicstaticvoid** main(String[] args) {

Scanner sc=**new** Scanner(System.***in***);

System.***out***.println("enter a number to check");

**int**x=sc.nextInt();

**int**temp=x;

**int**sum=0;

**while**(temp>0){

**int**r=temp%10;

sum=(sum\*10)+r;

temp=temp/10;

}

**if**(x==sum){

System.***out***.println("Palindrome");

}

**else**{

System.***out***.println("Not a Palindrome");

}

}

}

**Prog\_15. Write a program tosort(Bubble) an array.**

*Java:*

**package** JavaProgs;

**publicclass** BubbleSort {

**publicstaticvoid** main(String[] args) {

**int** [] arr={23,1,12,4,5,61,18,7};

**int**temp;

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

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

**if**(arr[j]>arr[j+1]){

temp=arr[j];

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

arr[j+1]=temp;

}

}

}

String flag="";

**for**(**int**k=0;k<arr.length;k++){

flag=flag+arr[k]+",";

}

System.***out***.println(flag);

}

}

*VBScript:*

*arr=Array(21,2,32,12,5,6,11,1,18)*

*For i=lbound(arr) to ubound(arr)*

*For j=lbound(arr) to ubound(arr)-1*

*If arr(j)>arr(j+1) Then*

*temp=arr(j)*

*arr(j)=arr(j+1)*

*arr(j+1)=temp*

*End If*

*Next*

*next*

*flag=""*

*For k=lbound(arr) to ubound(arr)*

*flag=flag&arr(k)&","*

*Next*

*print flag*

**Prog\_16. Write a program tofind length of a string without using inbuilt function(len or length()).**

*VBScript:*

*Method 1:*

*str="India is awesome"*

*str1=str&"$"*

*print instr(1,str1,"$")-1*

*Method 2:*

*str="India is awesome"*

*i=1*

*Do*

*If mid(str,i,1)<>"" then*

*i=i+1*

*else*

*Exit do*

*end if*

*Loop*

*print i-1*

**Prog\_17. Write a program to determine if an year is leap year.**

*Java:*

**package** JavaProgs;

**import** java.util.Scanner;

**publicclass** LeapYear {

**publicstaticvoid** main(String[] args) {

Scanner sc=**new** Scanner(System.***in***);

System.***out***.println("enter a year to check");

**int**year=sc.nextInt();

**if**((year % 400 == 0) || ((year % 4 == 0) && (year % 100 != 0)))

System.***out***.println("Year " + year + " is a leap year");

**else**

System.***out***.println("Year " + year + " is not a leap year");

}

}

**Prog\_18. Write a program to find number of vowels in a string.**

*Java:*

**package** JavaProgs;

**publicclass** FindVowel {

**publicstaticvoid** main(String[] args) {

String s="india is a big country";

**int**counter=0;

**for**(**int**i=0;i<s.length();i++){

**if**(s.charAt(i)=='a'||s.charAt(i)=='e'||s.charAt(i)=='i'||s.charAt(i)=='o'||s.charAt(i)=='u'){

counter=counter+1;

}

}

System.***out***.println(counter);

}

}

**Prog\_19. Write a program to make the string “Name is Smith” as “Smith is Name”.**

*Java:*

**package** JavaProgs;

**publicclass** ChangeString {

**publicstaticvoid** main(String[] args) {

String s="Name is Smith";

String temp;

String [] arr=s.split(" ");

temp=arr[0];

arr[0]=arr[2];

arr[2]=temp;

**for**(String s1 : arr){

System.***out***.print(s1+" ");

}

}

}

**Prog\_20. Write a program to extract numeric values from a string.**

*VBScript:*

*str="India123awe4781som9e"*

*flag=""*

*For i=1 to len(str)*

*If isnumeric(mid(str,i,1))=true Then*

*flag=flag&mid(str,i,1)&","*

*End If*

*Next*

*print flag*

*Java:*

**package** JavaProgs;

**publicclass** OnlyNumeric {

**publicstaticvoid** main(String[] args) {

String s="Struggle12for5andind829";

String s2="";

String arr[]=s.split("[a-zA-Z]+");

**for**(String s1 : arr){

s2=s2+s1.trim();

}

//System.out.println(s2);

**char**[]ch=s2.toCharArray();

**for**(Character c : ch){

System.***out***.print(c+",");

}

}

}

**Prog\_21. Write a program to find second largest number in an array.**

*Java:*

**package** JavaProgs;

**publicclass** SecHighestNum {

**publicstaticvoid** main(String[] args) {

**int** [] arr={12,2,14,7,32,18,23,22,11};

**int**temp;

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

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

**if**(arr[j]>arr[j+1]){

temp=arr[j];

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

arr[j+1]=temp;

}

}

}

System.***out***.println(arr[(arr.length)-2]);

}

}

**Prog\_22. Write a program to sort a string.**

*Java:*

**package** JavaProgs;

**import** java.util.Arrays;

**publicclass** SortString {

**publicstaticvoid** main(String[] args) {

String s ="unconditionalscope";

**char**[]ch=s.toCharArray();

Arrays.*sort*(ch);

String sorted=**new** String(ch);

System.***out***.println(sorted);

}

}

**Prog\_23. Write a program to find factorial of a number using recursion.**

*Java:*

**package** JavaProgs;

**publicclass** FactWithRecursion {

**publicstaticvoid** main(String[] args) {

FactWithRecursion rec=**new** FactWithRecursion();

**int**res=rec.fact(6);

System.***out***.println(res);

}

**publicint** fact(**int**x){

**if**(x==1){

**return** 1;

}

**int**fact1=fact(x-1)\*x;

**return**fact1;

}

}

**Prog\_24. Write a program to reverse a string using recursion.**

*Java:*

**package** JavaProgs;

**publicclass** StrRevWithRecursion {

**publicstaticvoid** main(String[] args) {

String s="Mahabharat";

StrRevWithRecursion rec=**new** StrRevWithRecursion();

String rev=rec.revRecurse(s);

System.***out***.println(rev);

}

**public** String revRecurse(String myStr){

**if**(myStr==**null**||myStr.length()<1){

**return**myStr;

}

**return** revRecurse(myStr.substring(1))+myStr.charAt(0);

}

}

**Prog\_25. Write a program to find most repeated/frequent element in an array.**

*Java:*

*Method 1:*

**package** JavaProgs;

**publicclass** MostRepeatedNum {

**publicstaticvoid** main(String[] args) {

**int**arr[]={2,12,5,4,12,3,4,2,4,5,12,5,14,3,5};

**int**element=0;

**int**count=0;

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

**int**tempElement=arr[i];

**int**tempCount=0;

**for**(**int**j=0;j<arr.length;j++){

**if**(arr[j]==tempElement){

tempCount++;

}

**if**(tempCount>count){

element=tempElement;

count=tempCount;

}

}

}

System.***out***.println("The most frequent element is:"+element+" "+"frequency is:"+count);

}

}

*Method 2:*

**package** JavaProgs;

**import** java.util.HashMap;

**import** java.util.Iterator;

**import** java.util.Map.Entry;

**import** java.util.Set;

**publicclass** MostRepeatedNum2 {

**publicstaticvoid** main(String[] args) {

**int**[] arr = {1,2,9,3,4,3,3,1,2,4,5,3,8,3,9,0,3,2};

**int**maxKey = -1;

**int**maxValue = -1;

HashMap<Integer, Integer>hash = **new** HashMap<Integer, Integer>();

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

**if** (!hash.containsKey(arr[i]))

hash.put(arr[i], 1);

**else**

hash.put(arr[i], hash.get(arr[i])+1);

}

Set<Entry<Integer,Integer>>s1=hash.entrySet();

Iterator<Entry<Integer, Integer>>i1=s1.iterator();

**while**(i1.hasNext()){

Entry<Integer,Integer>entry=i1.next();

**if** (entry.getValue() >maxValue) {

maxKey = entry.getKey();

maxValue = entry.getValue();

}

}

System.***out***.println("The winner is number "+maxKey+" its frequency of occurrence is "+maxValue);

}

}

**Prog\_26. Write a program to check whether a number is perfect number.**

*Java:*

**package** JavaProgs;

**import** java.util.Scanner;

**publicclass** PerfectNum {

**publicstaticvoid** main(String[] args) {

Scanner sc=**new** Scanner(System.***in***);

System.***out***.println("Enter a number to check");

**int**x=sc.nextInt();

**int**counter=0;

**for**(**int**i=1;i<=x/2;i++){

**if**(x%i==0){

counter=counter+i;

}

}

**if**(x==counter){

System.***out***.println("Perfect number");

}

**else**

System.***out***.println("Not a perfect number");

}

}

**Prog\_27. Write a program to find common elements in 2 arrays.**

*Java:*

**package** JavaProgs;

**publicclass** CommonElemArray {

**publicstaticvoid** main(String[] args) {

**int** [] arr1={22,5,13,12,32,7,8,3,2,17};

**int** [] arr2={20,51,1,12,2,17,28,13,2,7,5,23,9};

**for**(**int**i=0;i<arr1.length;i++){

**for**(**int**j=0;j<arr2.length;j++){

**if**(arr1[i]==arr2[j]){

System.***out***.println("Common elements are:"+arr1[i]);

}

}

}

}

}

**Prog\_28. Write a program to sort elements of an array using selection sort.**

*Java:*

**package** JavaProgs;

**publicclass** SelectionSort {

**publicstaticvoid** main(String[] args) {

**int** [] arr={12,4,5,1,23,7,9,13};

**for**(**int**arrow=0;arrow<arr.length;arrow++){

//find the minimum

**int**min=arr[arrow];

**int**minPos=arrow;

**for**(**int**i=arrow;i<arr.length;i++){

**if**(arr[i]<min){

min=arr[i];

minPos=i;

}

}

//swap

**int**temp=arr[arrow];

arr[arrow]=min;

arr[minPos]=temp;

}

//collecting and printing array

String sort="";

**for**(**int**j=0;j<arr.length;j++){

sort=sort+arr[j]+",";

}

System.***out***.println(sort);

}

}

**Prog\_29. Write a program for binary search.**

*Java:*

**package** JavaProgs;

**import** java.util.Scanner;

**publicclass** BinarySearch {

**publicstaticvoid** main(String[] args) {

**int**c, first, last, middle, n, search, array[];

Scanner in = **new** Scanner(System.***in***);

System.***out***.println("Enter number of elements");

n = in.nextInt();

array = **newint**[n];

System.***out***.println("Enter " + n + " integers");

**for** (c = 0; c<n; c++)

array[c] = in.nextInt();

System.***out***.println("Enter value to find");

search = in.nextInt();

first = 0;

last = n - 1;

middle = (first + last)/2;

**while**( first<= last )

{

**if** ( array[middle] <search )

first = middle + 1;

**elseif** ( array[middle] == search )

{

System.***out***.println(search + " found at location " + (middle + 1) + ".");

**break**;

}

**else**

last = middle - 1;

middle = (first + last)/2;

}

**if** ( first>last )

System.***out***.println(search + " is not present in the list.\n");

}

}

**Prog\_30. Write a program to get maximum word count in a line from a file.**

*Java:*

**package** JavaProgs;

**import** java.io.BufferedReader;

**import** java.io.FileReader;

**import** java.io.IOException;

**publicclass** MaxWordsInFile {

**publicstaticvoid** main(String[] args) **throws** IOException {

String s=**null**;

**int**maxCount=0;

BufferedReader br=**new** BufferedReader(**new** FileReader("C:\\Users\\Dell1\\Desktop\\MyFile.txt"));

**while**((s=br.readLine())!=**null**){

String arr[]=s.split(" ");

**int**count=arr.length;

**if**(count>maxCount){

maxCount=count;

}

}

System.***out***.println(maxCount);

}

}

**Prog\_31. Write a program for linear search.**

*Java:*

**package** JavaProgs;

**import** java.util.Scanner;

**publicclass** LinearSearch {

**publicstaticvoid** main(String[] args) {

**int**i,j,n,search, array[];

Scanner in = **new** Scanner(System.***in***);

System.**out**.println("Enter number of elements");

n = in.nextInt();

array = **newint**[n];

System.***out***.println("Enter " + n + " integers");

**for** (i = 0; i<n; i++)

array[i] = in.nextInt();

System.***out***.println("Enter value to find");

search = in.nextInt();

**for**( j=0;j<n;j++){

**if**(array[j]==search){

System.***out***.println("search found at location "+(j+1));

**break**;

}

}

**if**(j==n){

System.***out***.println("Element is not present in the list");

}

}

}

**Prog\_32. Write a program to find factorial of large number.**

*Java:*

**package** JavaProgs;

**import** java.math.BigInteger;

**publicclass** LargeFactorial {

**publicstaticvoid** main(String[] args) {

**int**num=25;

BigInteger fact=BigInteger.***ONE***;

**for**(**int**i=1;i<=num;i++){

fact=fact.multiply(BigInteger.*valueOf*(i));

}

System.***out***.println(fact);

}

}

**Prog\_33. Write a program to swap 2 numbers using multiplication and division operator but without using a temp variable.**

*Java:*

**package** JavaProgs;

**publicclass** SwapUsingOperator {

**publicstaticvoid** main(String[] args) {

**int**a=4;

**int**b=13;

a=a\*b;

b=a/b;

a=a/b;

System.***out***.println(a);

System.***out***.println(b);

}}

**Prog\_34. Write a program to check whether 2 string are Anagram or not.**

*Java:*

**package** JavaProgs;

**import** java.util.Arrays;

**publicclass** Anagram {

**publicstaticvoid** main(String[] args) {

String s1="gullu";

String s2="lgluu";

**char**[]ch1=s1.toCharArray();

**char**[]ch2=s2.toCharArray();

Arrays.*sort*(ch1);

Arrays.*sort*(ch2);

String s3=**new** String(ch1);

String s4=**new** String(ch2);

**if**(s3.equals(s4)){

System.***out***.println("Anagram");

}

**else**

System.***out***.println("Not a Anagram");

}

}

**Prog\_35. Write a program to swap 2 elements in a list.**

*Java:*

**package** JavaProgs;

**import** java.util.ArrayList;

**import** java.util.Collections;

**public class** SwapList {

**public static void** main(String[] args) {

ArrayList al=**new** ArrayList();

al.add(2);

al.add(4);

al.add(8);

al.add(19);

System.***out***.println("Before swapping"+al);

Collections.*swap*(al, 2, 3);

System.***out***.println("After swapping"+al);

}

}

**Prog\_36. Write a program to reverse elements in a list.**

*Java:*

**package** JavaProgs;

**import** java.util.ArrayList;

**import** java.util.Collections;

**public class** ReverseList {

**public static void** main(String[] args) {

ArrayList al=**new**ArrayList();

al.add(2);

al.add(4);

al.add(8);

al.add(19);

System.***out***.println("Before reversing"+al);

Collections.*reverse*(al);

System.***out***.println("After reversing"+al);

}

}

**Prog\_37. Write a program to check whether input character is an alphabet.**

*Java:*

**package** JavaProgs;

**import** java.util.Scanner;

**public class** CharCheck {

**public static void** main(String[] args) {

Scanner sc=**new** Scanner(System.***in***);

System.***out***.println("enter a character");

**char**ch=sc.next().charAt(0);

**if**((ch>='a'&&ch<='z')||(ch>='A'&&ch<='Z')){

System.***out***.println("character is an alphabet");

}

**else**{

System.***out***.println("character is not an alphabet");

}

}

}

**Prog\_38. Write a program using recursion to check whether a number is prime or not.**

import java.util.\*;

class ex{

public static void main(String [] args){

Scanner sc=new Scanner(System.in);

System.out.println("Enter a number to check");

int x=sc.nextInt();

ex e1=new ex();

int flag=e1.primer(x,2);

if(flag==0){

System.out.println("Entered number is not prime");

}

else

System.out.println("This is a prime number");

}

public int primer(int y, int i){

if (i<y) {

if(y%i!=0){

return primer(y,++i);

}

else

return 0;

}

return 1;

}

}

**Prog\_39. Write a program to find distinct elements in an array.**

**or**

**Write a program to remove duplicate elements in an array.**

**Method:1**

package JavaProgs;

public class DistinctElem {

public static void main(String[] args) {

int arr[]={2,1,3,4,3,2,1,6,8,9,34,2,34};

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

boolean dist=false;

for(int j=0;j<i;j++){

if(arr[i]==arr[j]){

dist=true;

break;}

}

if(dist==false){

System.out.println(arr[i]);

}

}

}

}

**Method:2**

package JavaProgs;

public class RemoveDuplicates {

public static void main(String[] args) {

int arr[]={2,12,3,4,4,7,6,9,12,2,19};

int size=arr.length;

for(int i=0;i<size;i++){

for(int j=i+1;j<size;j++){

if(arr[i]==arr[j]){

while(j<size-1){

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

j++;

}

size--;

}

}

}

for(int k=0;k<size;k++){

System.out.print(arr[k]+",");

}

}

}

**Prog\_40. Write a program to check whether a number is even/odd without using / or % operator.**

package JavaProgs;

import java.util.Scanner;

public class EvenOrOdd {

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

System.out.println("Enter a number to check");

int x=sc.nextInt();

if((x & 1)==0)

System.out.println("Even number");

else

System.out.println("Odd number");

}

}

**Prog\_41. Write a program to find fibonacci series using recursion.**

package JavaProgs;

public class RecFib {

public static void main(String[] args) {

RecFib r1=new RecFib();

int x=r1.fibo(3);

System.out.println(x);

}

public int fibo(int x){

if(x==0) return 0;

if(x==1||x==2){

return 1;

}

return fibo(x-1)+fibo(x-2);

}

}

**Prog\_42. Write a program to find length of a string without using length().**

package JavaProgs;

public class StringLen {

public static void main(String[] args) {

String s1 = "ptutorial";

int i = 0;

for(char c: s1.toCharArray()){

i++;

}

System.out.println("Length of String="+i);

}

}

**Prog\_43. Write a program to find uncommon elements in 2 array.**

package JavaProgs;

public class UncommonElement {

public static void main(String[] args) {

int arr1[]={2,1,3,4,6,7,9};

int arr2[]={6,1,0,14,26,7,9};

for(int i=0;i<arr1.length;i++){

boolean dist=false;

for(int j=0;j<arr2.length;j++){

if(arr1[i]==arr2[j]){

dist=true;

break;

}

}

if(!dist){

System.out.println(arr1[i]);

}

}

for(int i=0;i<arr2.length;i++){

boolean dist=false;

for(int j=0;j<arr1.length;j++){

if(arr2[i]==arr1[j]){

dist=true;

break;

}

}

if(!dist){

System.out.println(arr2[i]);

}

}

}

}

**Prog\_44. Write a program to check if a number is binary.**

package JavaProgs;

import java.util.Scanner;

public class CheckBinary {

public static void main(String[] args) {

System.out.println("enter a number to check");

Scanner sc=new Scanner(System.in);

int x=sc.nextInt();

int temp=x;

boolean isBinary=true;

while(temp!=0){

int temp1=temp%10;

if(temp1>1){

isBinary=false;

break;

}

else{

temp=temp/10;

}

}

if(isBinary){

System.out.println("Given number is binary");

}

else

System.out.println("Not a binary number");

}

}

**Prog\_45. Write a program in VBScript to store data in arr3 from arr1 and arr2 as (1,"a",2,"b",3,"c",4,"d")**

**where arr1=Array(1,2,3,4) and arr2=Array("a","b","c","d").**

arr1=Array(1,2,3,4)

arr2=Array("a","b","c","d")

dim arr3(7)

j=0

for i=0 to ubound(arr2)

arr3(j)=arr1(i)

arr3(j+1)=arr2(i)

j=j+2

next

temp=""

for each item in arr3

temp=temp&item&","

next

msgbox temp