1. Write a program to reverse a word using loop? (Not to use inbuilt functions)

Sample Input:

String: TEMPLE

Sample Output:

Reverse String: ELPMET

Test cases:

1. SIGN UP
2. AT-LEAST
3. 1245
4. !@#$%
5. 145\*999=144855

Program:

import java.util.Scanner;  
  
public class ReverseString {  
 public static void main(String[] args) {  
Scanner scanner=new Scanner(System.*in*);  
 System.*out*.println("Enter a string to reverse:");  
 String input=scanner.nextLine();  
 String reversedString=*reverseString*(input);  
 System.*out*.println("Reversed String:" + reversedString);  
 }  
  
 public static String reverseString(String input) {  
 char[] charArray = input.toCharArray();  
 int start = 0;  
 int end = charArray.length - 1;  
 while (start < end) {  
 char temp = charArray[start];  
 charArray[start] = charArray[end];  
 charArray[end] = temp;  
 start++;  
 end--;  
 }  
 return new String(charArray);  
  
 }  
}

2. Write a program to check the entered user name is valid or not. Get both the inputs from the user.

Sample Input:

Enter the user name: Saveetha@789

Reenter the user name: Saveetha@123

Sample Output:

User name is Invalid

import java.util.Scanner;  
  
public class CompareString {  
 public static void main(String[] args) {  
 Scanner sc=new Scanner(System.*in*);  
 System.*out*.println("Enter username:");  
 String s1=sc.nextLine();  
 System.*out*.println("Enter again:");  
 String s2=sc.nextLine();  
 boolean result=s1.equals(s2);  
 if(result==true){  
 System.*out*.println("Username is valid");  
 }  
 else{  
 System.*out*.println("invalid");  
 }  
 }  
}

3. Write a program to reverse a number using loop?(Get the input from user)

Sample Input:

Number: 14567

Sample Output:

Reverse Number: 76541

Test cases:

1. -45721
2. 000
3. AD1947
4. !@#$%
5. 145\*999=144855
6. import java.util.Scanner;  
     
   public class ReverseNumber {  
    public static void main(String[] args) {  
   Scanner scanner=new Scanner(System.*in*);  
    System.*out*.println("Enter a number:");  
    int num=scanner.nextInt();  
    int reversed=*reverseNumber*(num);  
    System.*out*.println("Reversed number:" +reversed);  
    }  
    public static int reverseNumber(int num){  
    int reversedNum=0;  
    while(num!=0){  
    int digit=num%10;  
    reversedNum=reversedNum\*10+digit;  
    num/=10;  
    }  
    return reversedNum;  
    }  
     
   }

4.Write a program to find whether the person is eligible for vote or not. And if that particular person is not eligible, then print how many years are left to be eligible.

import java.util.Scanner;  
  
public class Voting {  
 public static void main(String[] args) {  
 Scanner sc=new Scanner(System.*in*);  
 System.*out*.println("Enter the age:");  
 int age=sc.nextInt();  
 if(age>=18){  
 System.*out*.println("Eligible to vote");  
 }  
 else{  
 int rem=18-age;  
 System.*out*.println("You are elgible to vote after"+rem+"years");  
 }  
 }  
}

1. 5. Find the LCM and GCD of n numbers?

Sample Input:

N value = 2

Number 1 = 16

Number 2 = 20

Sample Output:

LCM = 80

GCD = 4

Test cases:

1. N = 3, {12, 25, 30}
2. N = 2, {52, 25, 63}
3. N = 3, {17, 19, 11}
4. N = -2, {52, 60}
5. N = 2, {30, 45}

import java.util.Scanner;  
  
public class Calculate {  
 static int gcd(int x, int y) {  
 int r = 0, a, b;  
 a = (x > y) ? x : y;  
 b = (x < y) ? x : y;  
 r = b;  
 while (a % b != 0) {  
 r = a % b;  
 a = b;  
 b = r;  
 }  
 return r;  
 }  
  
 static int lcm(int x, int y) {  
 int a;  
 a = (x > y) ? x : y;  
 while (true) {  
 if (a % x == 0 && a % y == 0) {  
 return a;  
 }  
 ++a;  
 }  
 }  
  
 public static void main(String[] args) {  
 try {  
 Scanner sc = new Scanner(System.*in*);  
 System.*out*.println("Enter number of values");  
 int n = sc.nextInt();  
 if (n == 2) {  
 System.*out*.println("Enter the two numbers");  
 int x = sc.nextInt();  
 int y = sc.nextInt();  
 System.*out*.println("GCD of the two number:" + *gcd*(x, y));  
 System.*out*.println("LCM of the two numbers:" + *lcm*(x, y));  
 }  
 if (n == 3) {  
 System.*out*.println("Enter the three numbers");  
 int x = sc.nextInt();  
 int y = sc.nextInt();  
 int z = sc.nextInt();  
 int i;  
 int a = Math.*max*(x, Math.*max*(y, z));  
 while (true) {  
 if (a % x == 0 && a % y == 0 && a % z == 0)  
 break;  
 else  
 ++a;  
  
 }  
 System.*out*.println("LCM of three numbers is:" + a);  
 int b = Math.*min*(x, Math.*min*(y, z));  
 for (i = b; i > 0; i--) {  
 if ((x % i == 0) && (x % y == 0) && (x % z == 0))  
 break;  
 }  
 System.*out*.println("The gcd of three numbers is:" + i);  
 }  
 }  
 catch(Exception e){  
 System.*out*.println("Invalid inputs");  
 }  
  
 }  
}