**Q1.**

import java.util.\*;

public class q1{

public static void main(String[]args){

Scanner in=new Scanner(System.in);

char ch[]={'a','b','c','d','e','f','g','h','i','j','k','l','m','n','o','p','q','r','s','t','u','v','w','x','y','z'};

int num[]={2,2,2,3,3,3,4,4,4,5,5,5,6,6,6,7,7,7,7,8,8,8,9,9,9,9};

String s=in.nextLine();

int a=s.length();

char ch1[]=new char[a];

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

ch1[i]=s.charAt(i);

}

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

int b=0;

for(int i=0;i<26;i++){

if(ch1[j]==ch[i]){

System.out.print(num[i]+"\t");

}

if(ch1[j]!=ch[i]){

b++;

}

}

if(b==26){

char ch2=(char)((int)ch1[j]+32);

for(int i=0;i<26;i++){

if(ch2==ch[i]){

System.out.print(num[i]+"\t");

}

}

}

}

}

}

**Q2.**

import java.util.\*;

public class q2{

public static void main(String[]args){

Scanner in=new Scanner(System.in);

System.out.println("Enter a string");

String a=in.nextLine();

int n=a.length();

int c=0;

for(int i=n-1;i>=0;i--){

char result =a.charAt(i);

char result1=a.charAt(n-i-1);

if(result==result1){

c++;

}

}

if(c==n){

System.out.println("String is palindrome");

}

else

System.out.println("String is not a palindrome");

}

}

**Q3.**

import java.util.Scanner;

public class Q3 {

public static void main(String[] args) {

Scanner in = new Scanner(System.in);

System.out.println("Enter an English word");

String s = in.nextLine();

String m = "";

int n = s.length();

char a[] = new char[n];

int i;

int p;

int h;

char q = s.charAt(0);

if(q=='a'||q=='e'||q=='i'||q=='o'||q=='u'){

s = s+"way";

System.out.println("New String is ->"+s);

}

p=0;

if((q!='a')&&(q!='e')&&(q!='i')&&(q!='o')&&(q!='u')){

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

a[i] = s.charAt(i);

if(a[i]=='a'||a[i]=='e'||a[i]=='i'||a[i]=='o'||a[i]=='u'){

p++;

}

}

if(p>0){

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

if(a[i]=='a'||a[i]=='e'||a[i]=='i'||a[i]=='o'||a[i]=='u'){

break;

}

}

for(h=i;h<n;h++){

m = m + a[h];

}

for(h=0;h<i;h++){

m = m + a[h];

}

m = m + "ay";

System.out.println("New string is -> "+m);

}

else if(p==0){

System.out.println("New string is -> "+s+"ay");

}

}

}

}

**Q4.**

import java.util.\*;

public class q4 {

public static void main(String[] args) {

factorial x=new factorial();

Scanner in=new Scanner(System.in);

int n=in.nextInt();

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

System.out.print(x.fact(i)+"\t");

}

}

}

class factorial{

public static int fact(int f){

int fact;

if(f==0)

return 1;

fact=f\*fact(f-1);

return fact;

}

}

**Q5.**

import java.util.\*;

public class q5{

public static void main(String[] args) {

Scanner in=new Scanner(System.in);

int a=in.nextInt();

int b=in.nextInt();

sum\_digit s=new sum\_digit();

System.out.println(s.sum\_digit(a,b));

}

}

class sum\_digit{

public static int sum\_digit(int n,int k){

double sum=0;

if(k<0)

return 0;

double e=Math.pow(10,k+1);

double f=Math.pow(10,k);

sum=((n%e)-(n%f))/f+sum\_digit(n,k-1);

return (int) sum;

}

}

**Q6.**

import java.util.Scanner;

public class Q6 {

public static int find\_number(int n, int x) {

int m=0;

while(n>0){

m = (n%10);

n = (n/10);

if(m==x)

break;

}

return m;

}

public static void main(String[] args) {

Scanner in = new Scanner(System.in);

System.out.println("Enter the number");

int a = in.nextInt();

System.out.println("Enter the digit to check");

int b = in.nextInt();

int ans = find\_number(a,b);

if(b==ans){

System.out.println("Yeah, the digit is present");

}

else

System.out.println("Oops, better luck next time");

}

}

**Q7.**

import java.util.\*;

public class q7{

public static void main(String []args){

pow s=new pow();

Scanner in =new Scanner(System.in);

System.out.println("Enter the power");

System.out.println("Enter the upper limit");

int x=in.nextInt();

int y=in.nextInt();

for(int i=1;i<=y;i++){

System.out.print(s.power(x,i)+"\t");

}

}

}

class pow{

public static int power(int a,int b){

double result=Math.pow(b,a);

return (int)result;

}

}

**Q8.**

import java.util.\*;

public class HelloWorld{

public static void main(String []args){

Scanner in=new Scanner(System.in);

int x=in.nextInt();

int y=in.nextInt();

System.out.println(permutation(x,y));

}

public static int permutation(int n,int k){

int p=1;

for(int i=n;i>=n-k+1;i--){

p=p\*i;

}

return p;

}

}

**Q9.**

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**Q10.**

import java.util.\*;

public class HelloWorld{

public static void main(String []args){

Scanner in=new Scanner(System.in);

int b=in.nextInt();

octal o=new octal();

o.oct(b);

}

}

class octal{

void oct(int a){

if(a==1)

System.out.print(1);

else{

System.out.print(a%8);

oct(a/8);

}

}

}

**Q11.**

import java.util.Scanner;

public class Q11 {

public static int three\_integers(int x, int y, int z){

int sum1 = x + y + z;

return sum1;

}

public static double three\_double\_integers(double a, double b, double c){

double sum2 = a + b+ c;

return sum2;

}

public static int four\_integers(int m, int n, int o, int p){

int sum3 = m + n+ o + p;

return sum3;

}

public static void main(String[] args) {

Scanner in = new Scanner(System.in);

System.out.println("Number of integers");

int n = in.nextInt();

if(n==3){

System.out.println("Enter three integral numbers");

int p = in.nextInt();

int u = in.nextInt();

int s = in.nextInt();

int ans1 = three\_integers(p, u, s);

System.out.println("Sum is "+ans1);

}

if(n==3){

System.out.println("Enter three double numbers");

double p = in.nextDouble();

double u = in.nextDouble();

double s = in.nextDouble();

double ans2 = three\_double\_integers(p,u,s);

System.out.println("Sum is "+ans2);

}

if(n==4){

System.out.println("Enter four numbers");

int f = in.nextInt();

int j = in.nextInt();

int i = in.nextInt();

int h = in.nextInt();

int ans3 = four\_integers(f, j, i, h);

System.out.println("Sum is "+ans3);

}

}

}