DAY-1

1.REVERSE WORD:

import java.util.Scanner;

public class ReverseWord {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a word: ");

String inputWord = scanner.nextLine();

String reversedWord = "";

for (int i = inputWord.length() - 1; i >= 0; i--) {

reversedWord += inputWord.charAt(i);

}

System.out.println("Reversed word: " + reversedWord);

}

}

OUTPUT:

Enter a word: ABHI

Reversed word: IHBA

2.VALID USERNAME OR NOT:

import java.util.\*;

public class validusername

{

public static void main(String[]args)

{

Scanner input=new Scanner(System.in);

String S1=input.nextLine();

String S2=input.nextLine();

if(S1==S2)

{

System.out.println("USERNAME IS VALID");

}

else{

System.out.println("USERNAME IS INVALID");

}

}

}

OUTPUT:

saveetha@123

saaaveeetha@123

USERNAME IS INVALID

3.REVERSE A NUMBER:

import java.util.Scanner;

public class ReverseNumber {

public static void main(String[] args) {

int number = 12345, reversed = 0;

while (number != 0) {

int digit = number % 10;

reversed = reversed \* 10 + digit;

number /= 10;

}

System.out.println(reversed);

}

}

OUTPUT:

54321

4.ELIGIBLE FOR VOTE OR NOT:

import java.util.\*;

public class vote

{

public static void main(String[]args)

{

Scanner input=new Scanner(System.in);

int age=input.nextInt();

if(age>18)

{

System.out.println("person is eligible to vote");

}

else if(age<=18){

System.out.println("person is not eligible to vote.he is eligible after"+(18-age));

}

else{

System.out.println("not eligible");

}

}

}

OUTPUT:

14

person is not eligible to vote.he is eligible after4

5.LCM AND GCD:

import java.util.\*;

public class LCMandGCD {

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

while (b != 0) {

int temp = b;

b = a % b;

a = temp;

}

return a;

}

public static int lcm(int a, int b, int gcd) {

return (a \* b) / gcd;

}

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter the first number: ");

int num1 = input.nextInt();

System.out.print("Enter the second number: ");

int num2 = input.nextInt();

int gcdResult = gcd(num1, num2);

int lcmResult = lcm(num1, num2, gcdResult);

System.out.println("GCD of " + num1 + " and " + num2 + " is: " + gcdResult);

System.out.println("LCM of " + num1 + " and " + num2 + " is: " + lcmResult);

}

}

OUTPUT:

Enter the first number: 23

Enter the second number: 12

GCD of 23 and 12 is: 1

LCM of 23 and 12 is: 276

6.Right aligned triangle pattern:

import java.util.Scanner;

public class RightAlignedTrianglePattern {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter the number of rows (n): ");

int n = input.nextInt();

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

for (int j = n; j > i; j--) {

System.out.print(" ");

}

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

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

}

System.out.println();

}

}

}

OUTPUT:

Enter the number of rows (n): 5

\*

\* \*

\* \* \*

\* \* \* \*

\* \* \* \* \*

7.PASCAL NUMBER PATTERN:

import java.util.\*;

public class pascalTraingleNumber

{

public static void main(String[]args)

{

int n=7;

for(int i=1;i<=n;i++)

{

int a=1;

for(int s=1;s<=n-i;s++)

{

System.out.println(" ");

}

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

{

System.out.println(a+" ");

a=a\*(i-j)/j;

}

System.out.println();

}

}

}

OUTPUT:

1

1 1

1 2 1

1 3 3 1

1 4 6 4 1

8.SIMPLE INTEREST:

import java.util.\*;

public class SimpleInterest

{

public static void main(String[]args)

{

int pri=20;

int rate=30;

int time=3000;

int SimpleInterest=(pri\*time\*rate)/100;

System.out.println(SimpleInterest);

}

}

OUTPUT:

18000

9. M TO N BY SKIPPING K NUMBERS IN BETWEEN:

import java.util.\*;

public class mtonnumbersskipk

{

public static void main(String[]args)

{

int i;

int m=50;

int n=100;

int k=7;

for(i=m;i<=n;i=i+k+1)

{

System.out.print(i+" ");

} }

}

OUTPUT:

50 58 66 74 82 90 98

10.MATRIX ADITION:

import java.util.Scanner;

public class MatrixAdd {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

int rows = 2;

int cols = 2;

int[][] mat1 = new int[rows][cols];

int[][] mat2 = new int[rows][cols];

int[][] mat\_sum = new int[rows][cols];

System.out.println("Enter elements of the first 2x2 matrix:");

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

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

mat1[i][j] = input.nextInt();

}

}

System.out.println("Enter elements of the second 2x2 matrix:");

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

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

mat2[i][j] = input.nextInt();

}

}

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

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

mat\_sum[i][j] = mat1[i][j] + mat2[i][j];

}

}

System.out.println("Sum of the two matrices:");

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

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

System.out.print(mat\_sum[i][j] + "\t");

}

System.out.println();

}

}

}

OUTPUT:

Enter elements of the first 2x2 matrix:

2

3

4

5

Enter elements of the second 2x2 matrix:

1

2

3

4

Sum of the two matrices:

3 5

7 9

DAY-2

11.RECTANGLE PATTERN:

import java.util.Scanner;

public class RectanglePattern {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the symbol to use: ");

char symbol = scanner.next().charAt(0);

System.out.print("Enter the width of the rectangle: ");

int width = scanner.nextInt();

System.out.print("Enter the height of the rectangle: ");

int height = scanner.nextInt();

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

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

System.out.print(symbol + " ");

}

System.out.println();

}

}

}

OUTPUT:

Enter the symbol to use: #

Enter the width of the rectangle: 8

Enter the height of the rectangle: 3

# # # # # # # #

# # # # # # # #

# # # # # # # #

12.FIBONACCI SERIES

CODE:

import java.util.\*;

public class fibonnaci

{

public static void main(String[]args)

{

Scanner input=new Scanner(System.in);

int n=input.nextInt();

int a1=0,a2=1,a3;

int a[]=new int[50];

for(int i=0;i<10;i++)

{5

a[i]=a1;

System.out.print(a[i]+" ");

a3=a1+a2;

a1=a2;

a2=a3;

}

int sum=0;

for(int i=0;i<=n\*2;i=i+2)

{

sum=sum+a[i];

}

System.out.println("\nSum: "+sum);

}

}

OUTPUT:

5

0 1 1 2 3 5 8 13 21 34

Sum: 33

13.ORDERING OF WORDS:

CODE:

import java.util.\*;

public class Order {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

String[] arr = {"Banana", "Apple", "Carrot", "Radish", "Jack"};

int len = arr.length;

System.out.print("Enter order (A for Ascending, D for Descending): ");

char order = input.next().charAt(0);

if (order == 'A') {

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

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

if (arr[i].compareTo(arr[j]) > 0) {

String temp = arr[i];

arr[i] = arr[j];

arr[j] = temp;

}

}

}

} else if (order == 'D') {

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

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

if (arr[i].compareTo(arr[j]) < 0) {

String temp = arr[i];

arr[i] = arr[j];

arr[j] = temp;

}

}

}

} else {

System.out.println("Invalid order! Please enter 'A' for Ascending or 'D' for Descending.");

return;

}

for (String item : arr) {

System.out.println(item);

}

}

}

OUTPUT:

Enter order (A for Ascending, D for Descending): A

Apple

Banana

Carrot

Jack

Radish

14.MATRIX MULTIPLICATION

CODE:

import java.util.Scanner;

public class MatrixMul {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

int rows = 2;

int cols = 2;

int[][] mat1 = new int[rows][cols];

int[][] mat2 = new int[rows][cols];

int[][] mat\_mul = new int[rows][cols];

System.out.println("Enter elements of the first 2x2 matrix:");

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

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

mat1[i][j] = input.nextInt();

}

}

System.out.println("Enter elements of the second 2x2 matrix:");

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

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

mat2[i][j] = input.nextInt();

}

}

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

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

mat\_mul[i][j] = mat1[i][j] \* mat2[i][j];

}

}

System.out.println("product of the two matrices:");

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

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

System.out.print(mat\_mul[i][j] + "\t");

}

System.out.println();

}

}

}

OUTPUT:

Enter elements of the first 2x2 matrix:

1

2

4

Enter elements of the second 2x2 matrix:

2

3

4

5

product of the two matrices:

2 6

12 20

15.PATTERN

1

11

111

11

1

CODE:

import java.util.\*;

public class Pattern

{

public static void main(String[]args)

{

Scanner input=new Scanner(System.in);

System.out.print("Enter the number to be printed: ");

int x=input.nextInt();

System.out.print("Max Number of time printed: ");

int n=input.nextInt();

for(int i=1;i<=n;i++)

{

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

{

System.out.print(x);

}

System.out.println();

}

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

{

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

{

System.out.print(x);

}

System.out.println();

}

}

}

OUTPUT:

Enter the number to be printed: 1

Max Number of time printed: 3

1

11

111

11

1

16.SPECIAL CHARACTERS

CODE:

import java.util.\*;

public class SpecialCharacters

{

public static void main(String[]args)

{

Scanner input=new Scanner(System.in);

String s=input.nextLine();

int len=s.length();

char a[]=new char[len];

int sp=0;

for(int i=0;i<len;i++)

{

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

if(a[i]>=65 && a[i]<=90 ||a[i]>=97 &&a[i]<=122

|| a[i]>=48 && a[i]<=57)

{

}

else

{

sp++;

System.out.print(a[i]);

}

}

System.out.println("\n"+sp);

}

}

OUTPUT:

abhi@23#

@#

2

17.COMPOSITE NUMBERS

CODE:

import java.util.\*;

public class composite

{

public static void main(String[]args)

{

Scanner input=new Scanner(System.in);

int a=input.nextInt();

int b=input.nextInt();

for(int i=a+1;i<=b;i++)

{

int c=0;

for(int j=1;j<=b;j++)

{

if(i%j==0)

c++;

}

if(c>2)

System.out.print(i+" ");

}

}

}

OUTPUT:

12

45

14 15 16 18 20 21 22 24 25 26 27 28 30 32 33 34 35 36 38 39 40 42 44 45

18.INVERTED FULL PYRAMID

CODE:

import java.util.\*;

public class Invertedpyramid

{

public static void main(String[]args)

{

Scanner input=new Scanner(System.in);

int n=input.nextInt();

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

{

for(int j=0;j<n-i;j++)

{

System.out.print(" ");

}

for(int k=1;k<=i;k++)

{

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

}

System.out.println();

}

}

}

OUTPUT:

5

\* \* \* \* \*

\* \* \* \*

\* \* \*

\* \*

\*

19.MEAN ,MODE,MEDIAN

CODE:

import java.util.\*;

public class ModeMedianMean

{

public static void main(String[]args)

{

Scanner input=new Scanner(System.in);

int a[]={16,18,27,16,23,21,19};

int len=a.length;

int sum=0;

for(int i=0;i<len;i++)

{

sum=sum+a[i];

}

int mean=sum/len;

System.out.println("mean: "+mean);

for(int i=0;i<len;i++)

{

for(int j=i+1;j<len;j++)

{

if(a[i]>a[j])

{

int temp=a[i];

a[i]=a[j];

a[j]=temp;

}

}

}

for(int i=0;i<len;i++)

{

if(len%2==0)

{

int mid=len/2;

System.out.print("median: "+a[mid-1]);

break;

}

else

{

int mid=(len+1)/2;

System.out.print(mid);

System.out.println("median: "+a[mid-1]);

break;

}

}

for(int i=0;i<len;i++)

{

for(int j=i+1;j<len;j++)

{

if(a[i]==a[j])

{

System.out.println("mode: "+a[i]);

break;

}

}

}

}

}

OUTPUT:

mean: 20

median: 19

mode: 16

DAY-3

20.FACTORIAL OF A NUMBER

CODE:

import java.util.\*;

public class Factorial

{

public static void main(String[]args)

{

Scanner input=new Scanner(System.in);

int n=input.nextInt();

int fact=1;

for(int i=1;i<=n;i++)

{

fact=fact\*i;

}

System.out.print(fact);

}

}

OUTPUT:

6

720

21.PATTERN

%

%%

%%%

CODE:

import java.util.Scanner;

public class Pattern

{

public static void main(String args[])

{

int n;

Scanner input=new Scanner(System.in);

n=input.nextInt();

for(int i=1;i<=n;i++)

{

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

System.out.print("% ");

}

System.out.println(" ");

}

}

}

OUTPUT:

6

%

% %

% % %

% % % %

% % % % %

% % % % % %

22.LEAP YEAR OR NOT

CODE:

import java.util.\*;

public class leapyear

{

public static void main(String[]args)

{

Scanner input=new Scanner(System.in);

System.out.print("Enter year: ");

String year=input.next();

String a[]=year.split("/");

String d=a[2];

int num=Integer.parseInt(d);

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

System.out.println("It is a leap year");

else

System.out.println("Not a leap year");

}

}

OUTPUT:

Enter year: 4/02/2023

Not a leap year

23.NUMBER OF FACTORS

CODE:

import java.util.\*;

public class NumberOfFactors

{

public static void main(String[]args)

{

Scanner input=new Scanner(System.in);

int n=input.nextInt();

int factors=0;

for(int i=1;i<=n;i++)

{

if(n%i==0)

factors=factors+1;

}

System.out.print("Number of factors = "+factors);

}

}

OUTPUT:

6

Number of factors = 4

24.PERFECT NUMBER

CODE:

import java.util.Scanner;

public class PerfectNumberCheck {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter the given number: ");

int number = input.nextInt();

int sum = 0;

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

if (number % i == 0) {

sum += i;

}

}

if (sum == number && number != 0) {

System.out.println("It's a Perfect Number");

} else {

System.out.println("It's not a Perfect Number");

}

}

}

OUTPUT:

Enter the given number: 6

It's a Perfect Number

25.NUMBER OF VOWELS

CODE:

import java.util.Scanner;

public class NoOfVowels {

public static void main(String[] args) {

Scanner input=new Scanner(System.in);

String name=input.nextLine();

int len=name.length();

char a[]=new char[len];

int vow=0;

for(int i=0;i<len;i++)

{

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

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

||a[i]=='A'||a[i]=='E'||a[i]=='I'||a[i]=='O'||a[i]=='U')

vow=vow+1;

}

System.out.println(vow);

}

}

OUTPUT:

Abhi

2

26.HOLLOW SQUARE PATTERN

CODE:

import java.util.Scanner;

public class HollowSquare {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter the size of the square: ");

int n = sc.nextInt();

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

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

if (i == 0 || i == n - 1 || j == 0 || j == n - 1) {

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

} else {

System.out.print(" ");

}

}

System.out.println();

}

}

}

OUTPUT:

Enter the size of the square: 6

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

\* \*

\* \*

\* \*

\* \*

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

27.SEPARTING THE VOWELS AND CONSONANTS

CODE:

import java.util.Scanner;

public class ConstsntAndVowelsSeperately {

public static void main(String[] args) {

Scanner input=new Scanner(System.in);

String name=input.nextLine();

int len=name.length();

char a[]=new char[len];

char vow[]=new char[len];

char con[]=new char[len];

int v=0,c=0;

for(int i=0;i<len;i++)

{

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

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

||a[i]=='A'||a[i]=='E'||a[i]=='I'||a[i]=='O'||a[i]=='U') {

vow[v] = a[i];

v++;

}

else {

con[c] = a[i];

c++;

}

}

System.out.print("Vowels: ");

for(int i=0;i<v;i++)

{

System.out.print(vow[i]);

}

System.out.print("\nConsonants: ");

for(int j=0;j<c;j++)

{

System.out.print(con[j]);

}

}

}

OUTPUT:

abhi is a good girl

Vowels: aiiaooi

Consonants: bh s gd grl

28.FIBONACCI SERIES

CODE:

import java.util.Scanner;

public class ConstsntAndVowelsSeperately {

public static void main(String[] args) {

Scanner input=new Scanner(System.in);

int n=input.nextInt();

int a1=0,a2=1;

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

{

System.out.print(a1+" ");

int a3=a1+a2;

a1=a2;

a2=a3;

}

}

}

OUTPUT:

6

0 1 1 2 3 5

29.PATTERN

1

2 2

3 3 3

4 4 4 4

CODE:

import java.util.Scanner;

public class NumberPattern {

public static void main(String[] args) {

Scanner input=new Scanner(System.in);

int n=input.nextInt();

for(int i=1;i<=n;i++)

{

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

{

System.out.print(i);

}

System.out.println();

}

}

}

OUTPUT:

4

1

22

333

4444

30.SQUARE AND CUBE OF A DECIMAL NUMBER

CODE:

import java.util.Scanner;

public class SquareAndCubeOfDecimalNumber{

public static void main(String[] args) {

Scanner input=new Scanner(System.in);

float n=input.nextFloat();

System.out.print("square: "+(n\*n));

System.out.print("cube: "+(n\*n\*n));

}

}

OUTPUT:

0.6

square: 0.36

cube: 0.21600002

DAY-4

31.FREQUENCY OF A NUMBER

CODE:

import java.util.Arrays;

import java.util.Scanner;

public class ak {

public static void main(String[] args)

{

Scanner input=new Scanner(System.in);

int a[]=new int[] {1,2,8,3,2,2,2,5,1};

int t[]=new int[a.length];

int visited=-1;

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

{

int count=1;

for(int j=i+1;j<a.length;j++)

{

if(a[i]==a[j])

{

count++;

t[j]=visited;

}

}

if(t[i]!=visited)

t[i]=count;

}

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

{

if(t[i]!=visited)

System.out.println(a[i]+" "+t[i]);

}

}

}

OUTPUT:

1 2

2 4

8 1

3 1

5 1

32.PERFECT OR NOT

CODE:

import java.util.\*;

public class PerfectNumberOrNot

{

public static void main(String[]args)

{

Scanner input=new Scanner(System.in);

int n=input.nextInt();

int factors=0;

for(int i=1;i<n;i++)

{

if(n%i==0)

factors=factors+i;

}

if(n==factors)

System.out.print("It's a perfect number");

}

}

OUTPUT:

6

It's a perfect number

33.PATTERN

1

4 9

16 25 36

49 64 81 100

CODE:

import java.util.\*;

public class Pattern

{

public static void main(String[]args)

{

Scanner input=new Scanner(System.in);

int n=input.nextInt();

int k=1;

for(int i=1;i<=n;i++)

{

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

{

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

k++;

}

System.out.println();

}

}

}

OUTPUT:

4

1

4 9

16 25 36

49 64 81 100

34.COMPOSITE NUMBERS IN AN ARRAY

CODE:

import java.util.\*;

public class CompositeNumbersInAnArray

{

public static void main(String[]args)

{

Scanner input=new Scanner(System.in);

int arr[]={16,18,27,16,23,21,19};

int len=arr.length;

int count=0;

for(int i=0;i<len;i++)

{

int c=0;

for(int j=1;j<100;j++)

{

if(arr[i]%j==0)

{

c++;

}

}

if(c>2)

count++;

}

System.out.println(count);

}

}

OUTPUT:

5

35. nth odd number after n odd number

CODE:

import java.util.\*;

public class CompositeNumbersInAnArray

{

public static void main(String[]args)

{

Scanner input=new Scanner(System.in);

int n=input.nextInt();

int arr[]=new int[100];

int j=1;

for(int i=1;i<100;i++)

{

if(i%2!=0) {

arr[j] = i;

j++;

}

}

System.out.print(arr[n\*2]);

}

}

OUTPUT:

4

15

36. **given character is present in a string or not.**

CODE:

import java.util.\*;

public class CompositeNumbersInAnArray

{

public static void main(String[]args)

{

Scanner input=new Scanner(System.in);

String str=input.nextLine();

char c=input.next().charAt(0);

char arr[]=new char[str.length()];

int len=str.length();

int x=0;

for(int i=0;i<len;i++)

{

arr[i]=str.charAt(i);

if(arr[i]==c)

{

System.out.println(c+" is found in string at index: "+(i+1));

x=1;

}

}

if(x==0)

System.out.print("character not found");

}

}

OUTPUT:

I AM A PROGRAMMER

P

P is found in string at index: 8

37.PATTERN

1

2 2

3 3 3

4 4 4 4

3 3 3

2 2

1

CODE:

import java.util.\*;

public class CompositeNumbersInAnArray

{

public static void main(String[]args)

{

Scanner input=new Scanner(System.in);

int n=input.nextInt();

for(int i=1;i<=n;i++)

{

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

{

System.out.print(i);

}

System.out.println();

}

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

{

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

{

System.out.print(i);

}

System.out.println();

}

}

}

OUTPUT:

4

1

22

333

4444

333

22

1

38.ARMSTRONG NUMBER

CODE:

import java.util.Scanner;

public class ArmstrongCheck {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter a number: ");

int number = sc.nextInt();

int original = number, result = 0;

while (original != 0) {

int digit = original % 10;

result += Math.pow(digit, 3);

original /= 10;

}

if (result == number) {

System.out.println(number + " is an Armstrong number.");

} else {

System.out.println(number + " is not an Armstrong number.");

}

}

}

OUTPUT:

Enter a number:

153

153 is an Armstrong number.