DAY - 4 JAVA TRANING

1)

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

// Upper part (1 to n)

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

// Print spaces

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

System.out.print(" ");

}

// Print alphabets

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

System.out.print((char)(64 + j) + " ");

}

System.out.println();

}

// Lower part (n-1 down to 1)

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

// Print spaces

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

System.out.print(" ");

}

// Print alphabets

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

System.out.print((char)(64 + j) + " ");

}

System.out.println();

}

}

}

2)

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

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

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

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

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

} else {

System.out.print(" ");

}

}

System.out.println();

}

}

}

3)

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

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

char ch = (char)('A' + i - 1); // starting letter for row

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

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

ch++;

}

System.out.println();

}

}

}

4)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s = new Scanner(System.in);

int a = s.nextInt();

int rem=0,sum=0;

if (a>=100 && a<=999) {

System.out.println("Yes");

}

else {

System.out.println("No");

}

/\* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. \*/

}

}

5)

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

String input = sc.nextLine();

// Extract first two digits only

String firstTwoDigits = "";

for (char ch : input.toCharArray()) {

if (Character.isDigit(ch)) {

firstTwoDigits += ch;

if (firstTwoDigits.length() == 2) {

break;

}

}

}

if (firstTwoDigits.length() == 2) {

// Swap digits and print

char firstDigit = firstTwoDigits.charAt(0);

char secondDigit = firstTwoDigits.charAt(1);

System.out.println("" + secondDigit + firstDigit);

} else {

// For less than 2 digits, print "STDOUT"

System.out.println("STDOUT");

}

}

}

6)

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

long n = sc.nextLong();

if (n <= 0 || n > 1000000000) {

System.out.println("Invalid Input");

return;

}

long reversed = 0;

long temp = n;

while (temp > 0) {

long digit = temp % 10;

reversed = reversed \* 10 + digit;

temp /= 10;

}

System.out.println(reversed);

}

}

7)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s = new Scanner(System.in);

int a = s.nextInt();

int[] b = new int[a];

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

b[i] = s.nextInt();

}

int young=b[0];

int old=b[0];

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

{

if(b[i]<young){

young=b[i];

}

if(b[i]>old) {

old=b[i];

}

}

System.out.println("Youngest=" +young);

System.out.println("Oldest=" +old);

}

}

8)

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

int n = sc.nextInt();

sc.close();

int count = 0;

int temp = n;

while (temp != 1) {

System.out.println(temp);

if (temp % 2 == 0) {

temp = temp / 2;

} else {

temp = 3 \* temp + 1;

}

count++;

}

// Print the final 1

System.out.println(1);

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

}

}

9)

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int balance = sc.nextInt(); // Read initial balance

int process = sc.nextInt(); // Read process type

switch (process) {

case 1: // Deposit

int depositAmount = sc.nextInt();

balance += depositAmount;

System.out.println(balance);

break;

case 2: // Withdraw

int withdrawAmount = sc.nextInt();

if (withdrawAmount > balance) {

System.out.println("Insufficient Balance");

} else {

balance -= withdrawAmount;

System.out.println(balance);

}

break;

default: // Invalid input

System.out.println("Invalid Input");

break;

}

}

}

10)

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

String input = sc.nextLine();

if (input.length() != 1) {

System.out.println("Invalid Input");

return;

}

char ch = input.charAt(0);

if (!Character.isLetter(ch)) {

System.out.println("Invalid Input");

return;

}

char chUpper = Character.toUpperCase(ch);

if (chUpper == 'A' || chUpper == 'E' || chUpper == 'I' || chUpper == 'O' || chUpper == 'U') {

System.out.println("The Character " + ch + " is Vowel");

} else {

System.out.println("The Character " + ch + " is Consonant");

}

}

}

11)

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

String name = sc.nextLine();

int[] marks = new int[5];

int total = 0;

for (int i = 0; i < 5; i++) {

marks[i] = sc.nextInt();

total += marks[i];

}

double average = total / 5.0;

String grade;

if (average == 100) {

grade = "S";

} else if (average >= 90) {

grade = "A";

} else if (average >= 80) {

grade = "B";

} else if (average >= 70) {

grade = "C";

} else if (average >= 60) {

grade = "D";

} else if (average >= 50) {

grade = "E";

} else {

grade = "Fail";

}

System.out.println("Name of the Student:" + name);

System.out.println("Total Mark:" + total);

System.out.println("Average Mark:" + average);

System.out.println("Grade Mark:" + grade);

}

}

12)

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int dayNumber = sc.nextInt();

switch(dayNumber) {

case 1:

System.out.println("Monday");

break;

case 2:

System.out.println("Tuesday");

break;

case 3:

System.out.println("Wednesday");

break;

case 4:

System.out.println("Thursday");

break;

case 5:

System.out.println("Friday");

break;

case 6:

System.out.println("Saturday");

break;

case 7:

System.out.println("Sunday");

break;

default:

System.out.println("Enter a valid Input");

break;

}

}

}

13)

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int a = sc.nextInt();

int b = sc.nextInt();

int c = sc.nextInt();

if (a > b) {

if (a > c) {

System.out.println("a is largest then b and c");

} else {

System.out.println("c is largest then a and b");

}

} else {

if (b > c) {

System.out.println("b is largest then a and c");

} else {

System.out.println("c is largest then a and b");

}

}

}

}

14)

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int num1 = sc.nextInt();

int num2 = sc.nextInt();

char operator = sc.next().charAt(0);

double result;

switch (operator) {

case '+':

result = num1 + num2;

System.out.println("Addition of two number is " + result);

break;

case '-':

result = num1 - num2;

System.out.println("Subtraction of two number is " + result);

break;

case '\*':

result = num1 \* num2;

System.out.println("Multiplication of two number is " + result);

break;

case '/':

if (num2 == 0) {

System.out.println("Cannot divide by zero");

} else {

result = (double) num1 / num2;

System.out.println("Division of two number is " + result);

}

break;

case '%':

if (num2 == 0) {

System.out.println("Cannot modulo by zero");

} else {

result = num1 % num2;

System.out.println("Modulo of two number is " + result);

}

break;

default:

System.out.println("Invalid Input");

break;

}

}

}

15)

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int num = sc.nextInt();

if (num > 0) {

System.out.println("positive");

} else if (num < 0) {

System.out.println("negative");

} else {

System.out.println("zero");

}

}

}

16)

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int num = sc.nextInt();

if (num < 100 || num > 999) {

System.out.println("Invalid Input");

return;

}

int originalNum = num;

int reversedNum = 0;

while (num != 0) {

int digit = num % 10;

reversedNum = reversedNum \* 10 + digit;

num /= 10;

}

if (originalNum == reversedNum) {

System.out.println("palindrome");

} else {

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

}

}

}

17)

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s = new Scanner(System.in);

float a = s.nextFloat();

int b = s.nextInt();

int c = s.nextInt();

int d = s.nextInt();

int floorValue = (int) Math.floor(a);

int ceilValue = (int) Math.ceil(a);

int sqrtValue = (int) Math.sqrt(b);

int powValue = (int) Math.pow(c, d);

System.out.println(floorValue);

System.out.println(ceilValue);

System.out.println(sqrtValue);

System.out.println(powValue);

}

}

18)

import java.util.Scanner;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

float num = sc.nextFloat();

// Print with 6 decimal places - float precision

System.out.printf("%.6f\n", num);

// Print with 4 decimal places

System.out.printf("%.4f\n", num);

// Print with 2 decimal places

System.out.printf("%.2f\n", num);

// Print as integer (rounded)

System.out.printf("%d\n", Math.round(num));

sc.close();

}

}

19)

import java.util.Scanner;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int x1 = sc.nextInt();

int y1 = sc.nextInt();

int x2 = sc.nextInt();

int y2 = sc.nextInt();

double midX = (x1 + x2) / 2.0;

double midY = (y1 + y2) / 2.0;

System.out.printf("Binoy's house is located at (%.1f,%.1f)\n", midX, midY);

sc.close();

}

}

20)

import java.util.Scanner;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int x = sc.nextInt(); // Number of copies sold

int a = sc.nextInt(); // Cost per copy (selling price)

int b = sc.nextInt(); // Cost spent by agency per copy

int revenue = x \* a;

int cost = x \* b + 100;

int profit = revenue - cost;

System.out.println("Number of copies sold:" + x);

System.out.println("Cost of each copy:" + a);

System.out.println("Cost spent by agency on each newspaper:" + b);

System.out.printf("The profit obtained is Rs.%d.00\n", profit);

sc.close();

}

}

21)

import java.util.Scanner;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int num = sc.nextInt();

int digit1 = num / 10;

int digit2 = num % 10;

int sum = digit1 + digit2;

System.out.println("Bird said:" + num);

System.out.println("Alice must go in path-" + sum);

sc.close();

}

}

22)

import java.util.Scanner;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int base = sc.nextInt();

int height = sc.nextInt();

int side1 = sc.nextInt();

int side2 = sc.nextInt();

int side3 = sc.nextInt();

double area = 0.5 \* base \* height;

double perimeter = side1 + side2 + side3;

System.out.printf("Area of Triangle is %.2f\n", area);

System.out.printf("Perimeter of Triangle is %.2f\n", perimeter);

sc.close();

}

}

23)

import java.util.Scanner;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int hours = sc.nextInt();

int minutes = sc.nextInt();

int seconds = sc.nextInt();

minutes += seconds / 60;

seconds = seconds % 60;

hours += minutes / 60;

minutes = minutes % 60;

System.out.println("Total Number of hours is " + hours);

System.out.println("Total Number of minutes is " + minutes);

System.out.println("Total Number of seconds is " + seconds);

sc.close();

}

}

24)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s = new Scanner(System.in);

int n=s.nextInt();

int[] a = new int[n];

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

a[i]=s.nextInt();

}

int key=s.nextInt();

int index=-1;

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

if(key==a[i]){

index=i;

}

}

if(index==-1){

System.out.println(index);

}else{

System.out.println("Door Number is 00"+index+"-DN");

}

}

}

25)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s=new Scanner(System.in);

int a=s.nextInt();

int []b= new int[a];

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

b[i]=s.nextInt();

}

int sum=0;

int count=0;

for(int n:b){

sum=sum+n;

count++;

}

float f=(float)sum/count;

System.out.printf("Array Mean Value is %.2f",f);

}

}

26)