Bài 1

import java.util.Scanner;

public class bai1 {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

double a , b;

System.out.print("Nhap a :");

a = sc.nextDouble();

System.out.print("Nhap b :");

b = sc.nextDouble();

if (a == 0){

if (b == 0) {

System.out.println("PT vo so nghiem");

} else {

System.out.println("PT vo nghiem");

}

} else {

double x = -b/a;

System.out.printf("Nghiem cua PT la :%f", x);

}

}

}

Bài 2

import java.util.Scanner;

public class bai2 {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

double a, b, c;

System.out.print("Nhap a: ");

a = sc.nextDouble();

System.out.print("Nhap b: ");

b = sc.nextDouble();

System.out.print("Nhap c: ");

c = sc.nextDouble();

double delta = b\*b - 4\*a\*c;

if(a == 0)

{

if(b == 0)

{

if (c == 0)

{

System.out.println("PT vo so nghiem");

} else

{

System.out.println("PT vo nghiem");

}

} else

{

double d = -c / b;

System.out.printf("Nghiem cua PT la :%f", d);

}

} else

{

if (delta < 0)

{

System.out.println("PT vo nghiem");

} else if (delta == 0)

{

double x = -b/(2\*a);

System.out.printf("PT co nghiem kep x = %f", x);

} else

{

double x1 = (-b + Math.sqrt(delta))/(2\*a);

double x2 = (-b - Math.sqrt(delta))/(2\*a);

System.out.println("PT co 2 nghiem phan biet:");

System.out.printf("x1 = %f\n", x1);

System.out.printf("x2 = %f\n", x2);

}

}

}

}

Bài 3

import java.util.Scanner;

public class bai3 {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int sodien , tien;

System.out.print("Nhap so dien dang su dung :");

sodien = sc.nextInt();

if (sodien < 50)

{

tien = sodien \* 1000;

}

else

{

tien = 50\*1000 + (sodien - 50)\*1200;

}

System.out.printf("Tien dien phai tra la :%d\n" , tien);

}

}

Bài 4

import java.util.Scanner;

public class bai4 {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Ban chon chuc nang :");

int choice = sc.nextInt();

switch (choice) {

case 1 -> {

System.out.println("Giai phuong trinh bac 1") ;

giaiPTB1();

}

case 2 -> {

System.out.println("Giai phuong trinh bac 2") ;

giaiPTB2();

}

case 3 -> {

System.out.println("Tinh tien dien");

tinhTienDien();

}

case 4 -> System.out.println("Ket thuc");

default -> System.out.println("Vui long nhap tu 1 den 4");

}

}

public static void giaiPTB1(){

Scanner sc = new Scanner(System.in);

double a , b;

System.out.print("Nhap a :");

a = sc.nextDouble();

System.out.print("Nhap b :");

b = sc.nextDouble();

if (a == 0){

if (b == 0) {

System.out.println("PT vo so nghiem");

} else {

System.out.println("PT vo nghiem");

}

} else {

double x = -b/a;

System.out.printf("Nghiem cua PT la :%f", x);

}

}

public static void giaiPTB2() {

Scanner sc = new Scanner(System.in);

double a, b, c;

System.out.print("Nhap a: ");

a = sc.nextDouble();

System.out.print("Nhap b: ");

b = sc.nextDouble();

System.out.print("Nhap c: ");

c = sc.nextDouble();

double delta = b\*b - 4\*a\*c;

if(a == 0)

{

if(b == 0)

{

if (c == 0)

{

System.out.println("PT vo so nghiem");

} else

{

System.out.println("PT vo nghiem");

}

} else

{

double d = -c / b;

System.out.printf("Nghiem cua PT la :%f", d);

}

} else

{

if (delta < 0)

{

System.out.println("PT vo nghiem");

} else if (delta == 0)

{

double x = -b/(2\*a);

System.out.printf("PT co nghiem kep x = %f", x);

} else

{

double x1 = (-b + Math.sqrt(delta))/(2\*a);

double x2 = (-b - Math.sqrt(delta))/(2\*a);

System.out.println("PT co 2 nghiem phan biet:");

System.out.printf("x1 = %f\n", x1);

System.out.printf("x2 = %f\n", x2);

}

}

}

public static void tinhTienDien() {

Scanner sc = new Scanner(System.in);

int sodien , tien;

System.out.print("Nhap so dien dang su dung :");

sodien = sc.nextInt();

if (sodien < 50)

{

tien = sodien \* 1000;

}

else

{

tien = 50\*1000 + (sodien - 50)\*1200;

}

System.out.printf("Tien dien phai tra la :%d\n" , tien);

}

}

Bài 5

import java.util.Scanner;

public class bai5 {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

double n;

System.out.print("Nhap n :");

n = sc.nextDouble();

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

if (b\*b == n)

{

System.out.println("Day la so chinh phuong");

}

else {

System.out.println("Day khong phai la so chinh phuong");

}

}

}

Bài 6

import java.util.Scanner;

public class bai6 {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

double n;

System.out.print("Nhap diem thi :");

n = sc.nextDouble();

if (n < 5) {

System.out.println("Loai kem");

} else if (5 <= n && n < 7) {

System.out.println("Loai trung binh");

} else if (7 <= n && n < 8) {

System.out.println("Loai kha");

} else if (8 <= n && n <= 10) {

System.out.println("Loai gioi");

} else {

System.out.println("Nhap diem tu 1 den 10");

}

}

}

Bài 7

import java.util.Scanner;

public class bai7 {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Nhap n: ");

int n = sc.nextInt();

int giaiThua = 1;

int i = 1;

while (i <= n) {

giaiThua \*= i;

i++;

}

System.out.println(n + "! = " + giaiThua);

}

}

Bài 8

import java.util.Scanner;

public class bai8 {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n , x;

int a[] = new int[100];

System.out.print("Nhap n: ");

n = sc.nextInt();

System.out.print("Nhap gia tri cua n: ");

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

a[i] = sc.nextInt();

}

System.out.print("Nhap gia tri muon xoa: ");

x = sc.nextInt();

InterchangeSort(a , n);

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

if (a[i] == x) {

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

a[j] = a[j + 1];

}

i--;

n--;

}

}

System.out.printf("Mang sau khi xoa :");

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

System.out.printf("%4d", a[i]);

}

System.out.println("");

}

public static void InterchangeSort(int a[], int n){

int temp = a[0];

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

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

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

temp = a[j];

a[j] = a[i];

a[i] = temp;

}

}

}

}

}

Bài 9

import java.util.Scanner;

public class bai9 {

public static void main(String[] args) {

double a[][] = new double[100][100];

int n;

Scanner sc = new Scanner(System.in);

do {

System.out.print("Nhap so dinh n :");

n = sc.nextInt();

} while (n < 2 || n > 100);

nhapMang(a, n);

if(kiemTraDoiXung(a, n)==true) {

System.out.println("");

System.out.println("Ma tran doi xung :");

xuatMang(a, n);

} else {

System.out.println("Khong phai la ma tran doi xung");

}

}

public static void nhapMang(double a[][], int n) {

Scanner sc=new Scanner(System.in);

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

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

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

a[i][j]=sc.nextDouble();

}

}

}

public static void xuatMang(double a[][],int n) {

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

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

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

}

System.out.println("");

}

}

public static boolean kiemTraDoiXung(double a[][],int n) {

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

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

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

return false;

}

}

}

return true;

}

}