LAP 4:

package Lab4;

import java.util.Scanner;

public class SanPham {

private static final double ThueNhapKhau = 0;

private String tenSp;

private double donGia;

private double giamGia;

public SanPham() {

}

public SanPham(String tenSp, double donGia, double giamGia) {

this.tenSp = tenSp;

this.donGia = donGia;

this.giamGia = giamGia;

}

public String getTenSp() {

return tenSp;

}

public void setTenSp(String tenSp) {

this.tenSp = tenSp;

}

public double getDonGia() {

return donGia;

}

public void setDonGia(double donGia) {

this.donGia = donGia;

}

public double getGiamGia() {

return giamGia;

}

public void setGiamGia(double giamGia) {

this.giamGia = giamGia;

}

@Override

public String toString() {

return "SanPham [tenSp=" + tenSp + ", donGia=" + donGia + ", giamGia=" + giamGia + "thueNhapKhau="+getThueNhapKhau()+"]";

}

private double getThueNhapKhau() {

return 0.1\*this.donGia;

}

public void nhap() {

Scanner sc=new Scanner(System.in);

System.out.println("nhập tên sản phẩm:");

this.setTenSp(sc.nextLine());

System.out.println("nhập đơn giá");

this.setDonGia(sc.nextDouble());

System.out.println("nhập giảm giá");

this.setGiamGia(sc.nextDouble());

}

public SanPham(String tenSp, double donGia) {

this.tenSp=tenSp;

this.donGia=donGia;

}

}

public class test {

public static void main(String[] args) {

SanPham sp1=new SanPham();

sp1.nhap();

System.out.println(sp1);

SanPham sp2=new SanPham("Nhi",5);

System.out.println(sp2);

}

}

LAB 5:

1.

package Lab5;

import java.util.ArrayList;

import java.util.Scanner;

public class MangSoThuc {

private ArrayList<Double> list = new ArrayList<>();

public void nhap(){

Scanner sc = new Scanner(System.in);

System.out.println("Nhap mang so thuc");

while(true){

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

Double x = sc.nextDouble();

list.add(x);

sc.nextLine();

System.out.print("Nhap them (Y/N): ");

if(sc.nextLine().equals("N")){

break;

}

}

}

public void hienthidanhsach(){

for (Double double1 : list) {

System.out.println("\n" + double1);

}

}

}

public class Main {

public static void main(String[] args) {

MangSoThuc mt = new MangSoThuc();

mt.nhap();

mt.hienthidanhsach();

}

}

2.

package Lab5;

import java.util.ArrayList;

import java.util.Collections;

import java.util.Scanner;

public class DanhSach {

ArrayList<String> dsn = new ArrayList<>();

Scanner sc = new Scanner(System.in);

public void menu(){

int chosse;

do{

System.out.println("--------");

System.out.println("1. Nhap danh sach ho ten");

System.out.println("2. Xuat danh sach vua nhap");

System.out.println("3. Xuat danh sach ngau nhien");

System.out.println("4. Sap xep giam dan va xuat danh sach");

System.out.println("5. tim va xoa ho ten nhap tu ban phim");

System.out.println("6. Thoat chuong trinh");

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

chosse = sc.nextInt();

switch(chosse){

case 1:

Nhapdanhsach();

break;

case 2:

xuatdanhsach();

break;

case 3:

xuatNgauNhien();

break;

case 4:

sapxep();

break;

case 5:

timVaXoa();

break;

default:

if(chosse != 6){

System.out.println("Vui long nhap lai chuc nang");

}else{

System.out.println("Thoat chuong trinh");

}

}

}while(chosse != 6);

}

public void Nhapdanhsach(){

System.out.println("Vui long dien thong tin ho va ten");

sc.nextLine();

while(true){

System.out.print("Nhap ho va ten: ");

String HoVaTen = sc.nextLine();

if(HoVaTen.isEmpty()){

System.out.println("Nhap thanh cong");

break;

}

dsn.add(HoVaTen);

}

}

public void xuatdanhsach(){

for (String x : dsn) {

System.out.println(x);

}

}

public void xuatNgauNhien(){

Collections.shuffle(dsn);

xuatdanhsach();

}

public void sapxep(){

Collections.sort(dsn);

Collections.reverse(dsn);

xuatdanhsach();

}

public void timVaXoa(){

sc.nextLine();

System.out.print("Nhap vao ten can tim va xoa no: ");

String hoVaTen = sc.nextLine();

for (String t : dsn) {

if(t.indexOf(hoVaTen)>=0){

System.out.println(t);

}

}

for (String x : dsn) {

if(x.equalsIgnoreCase(hoVaTen)){

dsn.remove(x);

System.out.println("Xoa oke");

break;

}

}

xuatdanhsach();

}

}

public class Main {

public static void main(String[] args) {

DanhSach d = new DanhSach();

d.menu();

}

}

LAB 6:

1.

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Nhập họ và tên: ");

String fullName = scanner.nextLine();

// Tìm vị trí của ký tự trắng đầu tiên và cuối cùng

int firstSpaceIndex = fullName.indexOf(' ');

int lastSpaceIndex = fullName.lastIndexOf(' ');

// Lấy họ, tên đệm và tên

String firstName = fullName.substring(lastSpaceIndex + 1);

String middleName = fullName.substring(firstSpaceIndex + 1, lastSpaceIndex);

String lastName = fullName.substring(0, firstSpaceIndex);

// In ra màn hình theo định dạng yêu cầu

System.out.println("Ho: " + lastName.toUpperCase());

System.out.println("Ten dem: " + middleName);

System.out.println("Ten: " + firstName.toUpperCase());

}

}

2.

public class SanPham {

private String tenSp;

private double donGia;

private String hang;

public void xuat() {

System.out.println("Tên sản phẩm: " + tenSp);

System.out.println("Đơn giá: " + donGia);

System.out.println("Hãng: " + hang);

}

public void nhap() {

Scanner scanner = new Scanner(System.in);

System.out.println("Nhập thông tin sản phẩm:");

System.out.print("Tên sản phẩm: ");

this.tenSp = scanner.nextLine();

System.out.print("Đơn giá: ");

this.donGia = scanner.nextDouble();

scanner.nextLine();

System.out.print("Hãng: ");

this.hang = scanner.nextLine();

}

public String getHang() {

return this.hang;

}

}

import java.util.ArrayList;

import java.util.Scanner;

import java.util.regex.Pattern;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

ArrayList<SanPham> danhSachSanPham = new ArrayList<SanPham>();

// Nhập 5 sản phẩm

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

SanPham sanPham = new SanPham();

sanPham.nhap();

danhSachSanPham.add(sanPham);

}

// Xuất thông tin sản phẩm có hãng là Nokia

Pattern pattern = Pattern.compile("^Nokia$", Pattern.CASE\_INSENSITIVE);

for (SanPham sanPham : danhSachSanPham) {

if (pattern.matcher(sanPham.getHang()).find()) {

sanPham.xuat();

}

}

}

}

3.

public class Main {

public static void main(String[] args) {

String[][] students = new String[5][4];

Scanner scanner = new Scanner(System.in);

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

System.out.println("Enter information for student " + (i + 1) + ":");

System.out.print("Full name: ");

students[i][0] = scanner.nextLine();

// Email validation using regular expression

boolean validEmail = false;

do {

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

String email = scanner.nextLine();

if (email.matches("^[\\w-\\.]+@([\\w-]+\\.)+[\\w-]{2,4}$")) {

students[i][1] = email;

validEmail = true;

} else {

System.out.println("Invalid email format. Please enter again.");

}

} while (!validEmail);

// Phone number validation using regular expression

boolean validPhone = false;

do {

System.out.print("Phone number: ");

String phone = scanner.nextLine();

if (phone.matches("^\\d{10}$")) {

students[i][2] = phone;

validPhone = true;

} else {

System.out.println("Invalid phone number format. Please enter again.");

}

} while (!validPhone);

// CMND validation using regular expression

boolean validCMND = false;

do {

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

String cmnd = scanner.nextLine();

if (cmnd.matches("^\\d{12}$")) {

students[i][3] = cmnd;

validCMND = true;

} else {

System.out.println("Invalid CMND format. Please enter again.");

}

} while (!validCMND);

}

// Print the array of students

System.out.println("\nList of students:");

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

System.out.println("Student " + (i + 1) + ":");

System.out.println("Full name: " + students[i][0]);

System.out.println("Email: " + students[i][1]);

System.out.println("Phone number: " + students[i][2]);

System.out.println("CMND: " + students[i][3]);

}

}

}