1. ***Sorting data per wise using static***

import java.util.\*;

class Student

{

int rno;

String name;

float per;

static int cnt=0;

Student()

{

rno=1;

name="minal";

per=98.9F;

cnt++;

}

Student(int rno,String name,float per)

{

this.rno=rno;

this.name=name;

this.per=per;

cnt++;

}

void Display()

{

System.out.println("Roll no"+rno);

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

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

}

void accept()

{

Scanner sc=new Scanner(System.in);

System.out.println("enter roll no:");

rno=sc.nextInt();

System.out.println("enter name:");

name=sc.next();

System.out.println("enter percentage:");

per=sc.nextFloat();

}

static void sortStud(Student[] D)

{

int i,j;

Student temp;

for(i=0;i<cnt;i++)

{

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

{

if(D[i].per>D[j].per)

{

temp=D[i];

D[i]=D[j];

D[j]=temp;

}

}

}

}

}

public class Main

{

public static void main(String[] args) {

Scanner scr=new Scanner(System.in);

System.out.println("Enter How Many Students ? :");

int tot=scr.nextInt();

int i;

Student []D=new Student[tot];

for(i=0;i<tot;i++)

{

D[i]=new Student();

D[i].accept();

}

for(i=0;i<tot;i++)

{

D[i].Display();

}

Student.sortStud(D);

System.out.println("After Sorting");

for(int i1=0;i1<tot;i1++)

{

D[i1].Display();

}

}

}

*Output:*

Enter How Many Students ? :

2

enter roll no:

1

enter name:

nitya

enter percentage:

78

enter roll no:

2

enter name:

vidhi

enter percentage:

87

Roll no1

namenitya

per78.0

Roll no2

namevidhi

per87.0

After Sorting

Roll no1

namenitya

per78.0

Roll no2

namevidhi

per87.0

***2.sorting the student data using rollno wise***

import java.util.\*;

class Student

{

int rno;

String name;

float per;

static int cnt=0;

Student()

{

rno=1;

name="minal";

per=98.9F;

cnt++;

}

Student(int rno,String name,float per)

{

this.rno=rno;

this.name=name;

this.per=per;

cnt++;

}

void Display()

{

System.out.println("Roll no"+rno);

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

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

}

void accept()

{

Scanner sc=new Scanner(System.in);

System.out.println("enter roll no:");

rno=sc.nextInt();

System.out.println("enter name:");

name=sc.next();

System.out.println("enter percentage:");

per=sc.nextFloat();

}

static void sortStud(Student[] D)

{

int i,j;

Student temp;

for(i=0;i<cnt;i++)

{

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

{

if(D[i].rno>D[j].rno)

{

temp=D[i];

D[i]=D[j];

D[j]=temp;

}

}

}

}

}

public class Main

{

public static void main(String[] args) {

Scanner scr=new Scanner(System.in);

System.out.println("Enter How Many Students ? :");

int tot=scr.nextInt();

int i;

Student []D=new Student[tot];

for(i=0;i<tot;i++)

{

D[i]=new Student();

D[i].accept();

}

for(i=0;i<tot;i++)

{

D[i].Display();

}

Student.sortStud(D);

System.out.println("After Sorting");

for(int i1=0;i1<tot;i1++)

{

D[i1].Display();

}

}

}

***Output:***

Enter How Many Students ? :

2

enter roll no:

2

enter name:

nita

enter percentage:

78

enter roll no:

1

enter name:

nitya

enter percentage:

98

Roll no2

Name:nita

per78.0

Roll no1

Name:nitya

per98.0

After Sorting

Roll no1

namenitya

per98.0

Roll no2

Name:nita

per78.0

***3.sorting data using static name wise.***

import java.util.\*;

class Student

{

int rno;

String name;

float per;

static int cnt=0;

Student()

{

rno=1;

name="minal";

per=98.9F;

cnt++;

}

Student(int rno,String name,float per)

{

this.rno=rno;

this.name=name;

this.per=per;

cnt++;

}

void Display()

{

System.out.println("Roll no"+rno);

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

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

}

void accept()

{

Scanner sc=new Scanner(System.in);

System.out.println("enter roll no:");

rno=sc.nextInt();

System.out.println("enter name:");

name=sc.next();

System.out.println("enter percentage:");

per=sc.nextFloat();

}

static void sortStud(Student[] D)

{

int i,j;

Student temp;

for(i=0;i<cnt;i++)

{

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

{

if(D[i].name.compareTo(D[j].name)>0)

{

temp=D[i];

D[i]=D[j];

D[j]=temp;

}

}

}

}

}

public class Main

{

public static void main(String[] args) {

Scanner scr=new Scanner(System.in);

System.out.println("Enter How Many Students ? :");

int tot=scr.nextInt();

int i;

Student []D=new Student[tot];

for(i=0;i<tot;i++)

{

D[i]=new Student();

D[i].accept();

}

for(i=0;i<tot;i++)

{

D[i].Display();

}

Student.sortStud(D);

System.out.println("After Sorting");

for(int i1=0;i1<tot;i1++)

{

D[i1].Display();

}

}

}

***Output:***

Enter How Many Students ? :

2

enter roll no:

1

enter name:

vidya

enter percentage:

67

enter roll no:

2

enter name:

nita

enter percentage:

89

Roll no1

namevidya

per67.0

Roll no2

namenita

per89.0

After Sorting

Roll no2

namenita

per89.0

Roll no1

namevidya

per67.0

***4. Sort student id wise in descending order.***

import java.util.\*;

class Student

{

int rno;

String name;

float per;

static int cnt=0;

Student()

{

rno=1;

name="minal";

per=98.9F;

cnt++;

}

Student(int rno,String name,float per)

{

this.rno=rno;

this.name=name;

this.per=per;

cnt++;

}

void Display()

{

System.out.println("Roll no"+rno);

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

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

}

void accept()

{

Scanner sc=new Scanner(System.in);

System.out.println("enter roll no:");

rno=sc.nextInt();

System.out.println("enter name:");

name=sc.next();

System.out.println("enter percentage:");

per=sc.nextFloat();

}

static void sortStud(Student[] D)

{

int i,j;

Student temp;

for(i=0;i<cnt;i++)

{

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

{

if(D[i].rno<D[j].rno)

{

temp=D[i];

D[i]=D[j];

D[j]=temp;

}

}

}

}

}

public class Main

{

public static void main(String[] args) {

Scanner scr=new Scanner(System.in);

System.out.println("Enter How Many Students ? :");

int tot=scr.nextInt();

int i;

Student []D=new Student[tot];

for(i=0;i<tot;i++)

{

D[i]=new Student();

D[i].accept();

}

for(i=0;i<tot;i++)

{

D[i].Display();

}

Student.sortStud(D);

System.out.println("After Sorting");

for(int i1=0;i1<tot;i1++)

{

D[i1].Display();

}

}

}

***Output:***

Enter How Many Students ? :

3

enter roll no:

2

enter name:

vidya

enter percentage:

78

enter roll no:

8

enter name:

nitya

enter percentage:

87

enter roll no:

5

enter name:

vishu

enter percentage:

98

Roll no2

namevidya

per78.0

Roll no8

namenitya

per87.0

Roll no5

namevishu

per98.0

After Sorting

Roll no8

namenitya

per87.0

Roll no5

namevishu

per98.0

Roll no2

namevidya

per78.0

***5. Write a java program to accept the details of n Cricket Players from user***

***(Playercode, name, runs, innings-played and number of times not out ).***

***(Use array of objects, Method overloading and static keyword)***

***The program should contain following menus:***

***-Display average runs of all players.***

***-Display average runs of a single player.***

import java.util.Scanner;

class Cri\_cket{

int player\_no,no\_of\_innings,no\_of\_wickets,no\_of\_notouts,no\_of\_runs;

static double avgSum=0.0;

String player\_name;

static int no\_of\_players=0;

double playerAvg=0.0;

Cri\_cket(String player\_name,int player\_no,int no\_of\_innings,int no\_of\_notouts,int no\_of\_runs,int no\_of\_wickets){

this.player\_name=player\_name;

this.player\_no=player\_no;

this.no\_of\_innings=no\_of\_innings;

this.no\_of\_wickets=no\_of\_wickets;

this.no\_of\_notouts=no\_of\_notouts;

this.no\_of\_runs=no\_of\_runs;

cal\_average();

no\_of\_players++;

}

void cal\_average(){

if(no\_of\_notouts>=no\_of\_innings){

no\_of\_notouts=no\_of\_innings-1;

}

playerAvg=no\_of\_runs/(no\_of\_innings-no\_of\_notouts)\*1.0;

System.out.println(player\_no+"\t\t"+player\_name+"\t\t"+playerAvg);

}

void display(){

System.out.println(player\_no+"\t\t"+player\_name+"\t\t"+no\_of\_innings+"\t\t"+no\_of\_notouts+"\t\t"+no\_of\_wickets+"\t\t"+no\_of\_runs);

}

static int display(Cri\_cket[] D,int id)

{

for(int i=0;i<no\_of\_players;i++)

{

if(D[i].player\_no==id)

{

//System.out.println(player\_no+"\t\t"+player\_name+"\t\t"+no\_of\_innings+"\t\t"+no\_of\_notouts+"\t\t"+no\_of\_wickets+"\t\t"+no\_of\_runs);

// System.out.println("\t\t"+playerAvg);

return i;

}

}

return -1;

}

}

public class Main

{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

System.out.println("Enter No. of Players : ");

int n=sc.nextInt();

int ch,i=0;

int player\_no,no\_of\_innings,no\_of\_wickets,no\_of\_notouts,no\_of\_runs;

String player\_name;

Cri\_cket[] players=new Cri\_cket[n];

do{

System.out.println("1) Add New Player\n2) Display \n3) dispaly single payer details\n4) Average of all the players \n5) Exit\n");

ch=sc.nextInt();

switch(ch){

case 1:

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

{

System.out.println("\nPlayer "+(i+1)+": \n");

System.out.println("Enter Player Number : ");

player\_no=sc.nextInt();

sc.nextLine();

System.out.println("Enter Player Name : ");

player\_name=sc.nextLine();

System.out.println("Enter Number of Innings : ");

no\_of\_innings=sc.nextInt();

System.out.println("Enter Number of Wickets : ");

no\_of\_wickets=sc.nextInt();

System.out.println("Enter Number of Notouts : ");

no\_of\_notouts=sc.nextInt();

System.out.println("Enter Runs Scored : ");

no\_of\_runs=sc.nextInt();

players[i]=new Cri\_cket(player\_name,player\_no,no\_of\_innings,no\_of\_notouts,no\_of\_runs,no\_of\_wickets);

}

break;

case 2:

System.out.println("Player Number\tPlayer Name\tNo. of Innings\tNo. of Not-outs\tno.of Wickets\tno. of Runs");

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

players[j].display();

}

break;

case 3:

System.out.println("Enter player id\n");

int id=sc.nextInt();

int j=Cri\_cket.display(players,id);

if(j!=-1)

players[j].display();

else

System.out.println("Not found...!!!");

break;

case 4:

System.out.println("Player Number\tPlayer Name\tBatting Average");

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

players[j].cal\_average();

}

break;

case 5:

break;

default:

System.out.println("Invalid Choice...!!!");

break;

}

}while(ch!=5);

}

}

***Output:***

Enter No. of Players :

2

1) Add New Player

2) Display

3) dispaly single payer details

4) Average of all the players

5) Exit

1

Player 1:

Enter Player Number :

1

Enter Player Name :

nitya

Enter Number of Innings :

2

Enter Number of Wickets :

5

Enter Number of Notouts :

2

Enter Runs Scored :

56

1 nitya 56.0

Player 2:

Enter Player Number :

2

Enter Player Name :

geeta

Enter Number of Innings :

4

Enter Number of Wickets :

8

Enter Number of Notouts :

2

Enter Runs Scored :

89

2 geeta 44.0

1) Add New Player

2) Display

3) dispaly single payer details

4) Average of all the players

5) Exit

2

Player Number Player Name No. of Innings No. of Not-outs no.of Wickets no. of Runs

1 nitya 2 1 5 56

2 geeta 4 2 8 89

1) Add New Player

2) Display

3) dispaly single payer details

4) Average of all the players

5) Exit

3

Enter player id

2

2 geeta 4 2 8 89

1) Add New Player

2) Display

3) dispaly single payer details

4) Average of all the players

5) Exit

4

Player Number Player Name Batting Average

1 nitya 56.0

2 geeta 44.0

1) Add New Player

2) Display

3) dispaly single payer details

4) Average of all the players

5) Exit

***6. Write a java program to accept the details of n Cricket Players from user***

***(Playercode, name, runs, innings-played and number of times not out ,average).***

***(Use array of objects, Method overloading and static keyword)***

***The program should contain following menus:***

***-Display average runs of all players.***

***-Sort cricket player average wise.***

***-Sort cricket player name wise.***

***-Sort cricket player run wise.***

import java.util.Scanner;

class CricketPlayer {

int playerCode;

String name;

int runs;

int innings;

int notOut;

double average;

CricketPlayer(int playerCode, String name, int runs, int innings, int notOut) {

this.playerCode = playerCode;

this.name = name;

this.runs = runs;

this.innings = innings;

this.notOut = notOut;

this.average = calculateAverage();

}

double calculateAverage() {

return (double) runs / (innings - notOut);

}

void display() {

System.out.println(playerCode + "\t" + name + "\t" + runs + "\t" + innings + "\t" + notOut + "\t" + average);

}

}

class CricketPlayerManager {

static Scanner scanner = new Scanner(System.in);

static void acceptPlayerDetails(CricketPlayer[] players) {

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

System.out.print("Enter player code: ");

int playerCode = scanner.nextInt();

System.out.print("Enter player name: ");

String name = scanner.next();

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

int runs = scanner.nextInt();

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

int innings = scanner.nextInt();

System.out.print("Enter not outs: ");

int notOut = scanner.nextInt();

players[i] = new CricketPlayer(playerCode, name, runs, innings, notOut);

}

}

static void displayAverages(CricketPlayer[] players) {

System.out.println("Player Code\tPlayer Name\tAverage");

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

System.out.println(players[i].playerCode + "\t" + players[i].name + "\t" + players[i].average);

}

}

static void sortAverage(CricketPlayer[] players) {

for (int i = 0; i < players.length - 1; i++) {

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

if (players[i].average < players[j].average) {

CricketPlayer temp = players[i];

players[i] = players[j];

players[j] = temp;

}

}

}

System.out.println("Player Code\tPlayer Name\tAverage");

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

System.out.println(players[i].playerCode + "\t" + players[i].name + "\t" + players[i].average);

}

}

static void sortName(CricketPlayer[] players) {

for (int i = 0; i < players.length - 1; i++) {

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

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

CricketPlayer temp = players[i];

players[i] = players[j];

players[j] = temp;

}

}

}

System.out.println("Player Code\tPlayer Name");

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

System.out.println(players[i].playerCode + "\t" + players[i].name);

}

}

static void sortRuns(CricketPlayer[] players) {

for (int i = 0; i < players.length - 1; i++) {

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

if (players[i].runs < players[j].runs) {

CricketPlayer temp = players[i];

players[i] = players[j];

players[j] = temp;

}

}

}

System.out.println("Player Code\tPlayer Name\tRuns");

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

System.out.println(players[i].playerCode + "\t" + players[i].name + "\t" + players[i].runs);

}

}

}

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter number of players: ");

int numPlayers = scanner.nextInt();

CricketPlayer[] players = new CricketPlayer[numPlayers];

CricketPlayerManager.acceptPlayerDetails(players);

int choice;

do {

System.out.println("1. Display average runs of all players");

System.out.println("2. Sort cricket player average wise");

System.out.println("3. Sort cricket player name wise");

System.out.println("4. Sort cricket player run wise");

System.out.println("5. Exit");

choice = CricketPlayerManager.scanner.nextInt();

switch (choice) {

case 1:

CricketPlayerManager.displayAverages(players);

break;

case 2:

CricketPlayerManager.sortAverage(players);

break;

case 3:

CricketPlayerManager.sortName(players);

break;

case 4:

CricketPlayerManager.sortRuns(players);

break;

}

} while (choice != 5);

}

}

***Output:***

Enter number of players: 2

Enter player code: 11

Enter player name: vidhi

Enter runs: 89

Enter innings: 2

Enter not outs: 1

Enter player code: 22

Enter player name: nitya

Enter runs: 67

Enter innings: 3

Enter not outs: 2

1. Display average runs of all players

2. Sort cricket player average wise

3. Sort cricket player name wise

4. Sort cricket player run wise

5. Exit

1

Player Code Player Name Average

11 vidhi 89.0

22 nitya 67.0

1. Display average runs of all players

2. Sort cricket player average wise

3. Sort cricket player name wise

4. Sort cricket player run wise

5. Exit

2

Player Code Player Name Average

11 vidhi 89.0

22 nitya 67.0

1. Display average runs of all players

2. Sort cricket player average wise

3. Sort cricket player name wise

4. Sort cricket player run wise

5. Exit

3

Player Code Player Name

22 nitya

11 vidhi

1. Display average runs of all players

2. Sort cricket player average wise

3. Sort cricket player name wise

4. Sort cricket player run wise

5. Exit

4

Player Code Player Name Runs

11 vidhi 89

22 nitya 67

1. Display average runs of all players

2. Sort cricket player average wise

3. Sort cricket player name wise

4. Sort cricket player run wise

5. Exit

***7. Program to define a class student with roll no. and name, derive class attendance with member as present days. Write method to calculate and print average attendance assuming total days as 180.***

class stud

{

int rn;

String name;

stud(int r, String n)

{

rn = r;

name = n;

}

void put()

{

System.out.println("Roll no:"+rn);

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

}

}

class stud\_att\_cal extends stud

{

double preentday;

stud\_att\_cal(int r, String n, int p)

{

super(r,n);

preentday = p;

}

void calculate()

{

double avg = (100 \* preentday)/180;

put();

System.out.println("Present Days : "+preentday);

System.out.println("Average attendance is: "+avg);

}

}

class Main

{

public static void main(String args[])

{

stud\_att\_cal S1 = new stud\_att\_cal(2,"Ravi",137);

S1.calculate();

}

}

Output:

Roll no:2

Name:Ravi

Present Days : 137.0

Average attendance is: 76.11111111111111

***8. Program to create a class Account having variable accno, accname and balance. Define deposite() and withdraw() methods. Create one object of class and perform the operation.***

import java.util.Scanner;

class Account {

private int accNo;

private String accName;

private double balance;

public Account(int accNo, String accName, double initialBalance) {

this.accNo = accNo;

this.accName = accName;

this.balance = initialBalance;

}

public void deposit(double amount) {

if (amount > 0) {

balance += amount;

System.out.println("Deposited: $" + amount);

} else {

System.out.println("Deposit amount must be positive.");

}

}

public void withdraw(double amount) {

if (amount > 0) {

if (amount <= balance) {

balance -= amount;

System.out.println("Withdrawn: $" + amount);

} else {

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

}

} else {

System.out.println("Withdrawal amount must be positive.");

}

}

public void displayAccountDetails() {

System.out.println("Account Number: " + accNo);

System.out.println("Account Name: " + accName);

System.out.println("Balance: $" + balance);

}

}

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter Account Number: ");

int accNo = scanner.nextInt();

scanner.nextLine();

System.out.print("Enter Account Name: ");

String accName = scanner.nextLine();

System.out.print("Enter Initial Balance: ");

double initialBalance = scanner.nextDouble();

Account account = new Account(accNo, accName, initialBalance);

while (true) {

System.out.println("\nMenu:");

System.out.println("1. Deposit");

System.out.println("2. Withdraw");

System.out.println("3. Display Account Details");

System.out.println("4. Exit");

System.out.print("Enter your choice: ");

int choice = scanner.nextInt();

switch (choice) {

case 1:

System.out.print("Enter amount to deposit: ");

double depositAmount = scanner.nextDouble();

account.deposit(depositAmount);

break;

case 2:

System.out.print("Enter amount to withdraw: ");

double withdrawAmount = scanner.nextDouble();

account.withdraw(withdrawAmount);

break;

case 3:

account.displayAccountDetails();

break;

case 4:

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

scanner.close();

return;

default:

System.out.println("Invalid choice. Please try again.");

}

}

}

}

***Output:***

Enter Account Number: 12345

Enter Account Name: saving

Enter Initial Balance: 234567

Menu:

1. Deposit

2. Withdraw

3. Display Account Details

4. Exit

Enter your choice: 1

Enter amount to deposit: 2345

Deposited: $2345.0

Menu:

1. Deposit

2. Withdraw

3. Display Account Details

4. Exit

Enter your choice: 2

Enter amount to withdraw: 234

Withdrawn: $234.0

Menu:

1. Deposit

2. Withdraw

3. Display Account Details

4. Exit

Enter your choice: 3

Account Number: 12345

Account Name: saving

Balance: $236678.0

Menu:

1. Deposit

2. Withdraw

3. Display Account Details

4. Exit

Enter your choice: 4

Exiting...

***9.java program of krishnmurty number using static method***

import java.util.Scanner;

public class KrishnamurtyNumber {

public static boolean isKrishnamurty(int num) {

int sum = 0;

int originalNum = num;

while (num > 0) {

int digit = num % 10;

sum += factorial(digit);

num /= 10;

}

return sum == originalNum;

}

public static int factorial(int num) {

int fact = 1;

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

fact \*= i;

}

return fact;

}

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

int num = scanner.nextInt();

scanner.close();

if (isKrishnamurty(num)) {

System.out.println(num + " is a Krishnamurty number");

} else {

System.out.println(num + " is not a Krishnamurty number");

}

}

}

***Output:***

Enter a number: 135

135 is not a Krishnamurty number