# **Question 1**

import java.util.Scanner;

public class Welcome {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter your first name: ");

String fName = sc.nextLine();

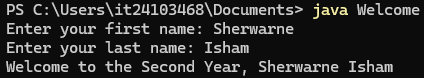
System.out.print("Enter your last name: ");

String lName = sc.nextLine();

System.out.println("Welcome to the Second Year, " + fName + " " + lName);

}

}



# **Question 2**

import java.util.Scanner;

public class Marks {

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

static int[][] students;

static int n;

public static void main(String[] args) {

System.out.println("\n-------- Marking System (C) IT24103468, 2025 --------\n");

System.out.println("Note the following for Subject ID");

System.out.println("1 - Mathematics");

System.out.println("2 - Chemistry");

System.out.println("3 - Physics\n");

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

n = sc.nextInt();

students = new int[n][3];

int option, tempStudent, tempSubject;

do {

System.out.println();

System.out.println("1) Add marks\t2) Update marks");

System.out.println("3) Get subject average\t4) Get student average");

System.out.println("5) Get student total\t6) Get student grades");

System.out.print(">>> ");

option = sc.nextInt();

System.out.println();

switch (option) {

case 1:

System.out.print("Student ID: ");

tempStudent = sc.nextInt();

addMarks(tempStudent);

break;

case 2:

System.out.print("Student ID: ");

tempStudent = sc.nextInt();

System.out.print("Subject ID: ");

tempSubject = sc.nextInt();

updateMarks(tempStudent, tempSubject);

break;

case 3:

System.out.print("Subject ID: ");

tempSubject = sc.nextInt();

avgSubMarks(tempSubject);

break;

case 4:

System.out.print("Student ID: ");

tempStudent = sc.nextInt();

avgStMarks(tempStudent);

break;

case 5:

System.out.print("Student ID: ");

tempStudent = sc.nextInt();

totStMarks(tempStudent);

break;

case 6:

System.out.print("Student ID: ");

tempStudent = sc.nextInt();

getStGrades(tempStudent);

break;

default:

break;

}

} while (option >= 1 && option <= 6);

}

public static void addMarks(int stID) {

if (stID > n || stID < 1) {

System.out.println("Invalid student ID");

} else {

System.out.println("Enter the marks");

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

students[stID - 1][0] = sc.nextInt();

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

students[stID - 1][1] = sc.nextInt();

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

students[stID - 1][2] = sc.nextInt();

}

}

public static void updateMarks(int stID, int subID) {

if (stID > n || stID < 1) {

System.out.println("Invalid student ID");

} else {

System.out.println("Enter the marks for ");

int flag = 0;

switch (subID) {

case 1:

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

break;

case 2:

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

break;

case 3:

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

break;

default:

System.out.print("Invalid subject ID");

flag = 1;

break;

}

if (flag == 0) {

students[stID - 1][subID - 1] = sc.nextInt();

}

}

}

public static void avgSubMarks(int subID) {

int flag = 0;

if (subID < 1 || subID > 3) {

flag = 1;

}

if (flag == 0) {

float avg = 0;

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

avg += students[i][subID - 1];

}

avg /= n;

System.out.print("Average marks for ");

switch (subID) {

case 1:

System.out.print("mathematics ");

break;

case 2:

System.out.print("chemistry ");

break;

case 3:

System.out.print("physics ");

break;

}

System.out.println("is " + avg);

} else {

System.out.print("Invalid subject ID");

}

}

public static void totStMarks(int stID) {

if (stID > n || stID < 1) {

System.out.println("Invalid student ID");

} else {

int sum = 0;

for (int i = 0; i < 3; i++) {

sum += students[stID - 1][i];

}

System.out.println("Student's total marks are " + sum);

}

}

public static void avgStMarks(int stID) {

if (stID > n || stID < 1) {

System.out.println("Invalid student ID");

} else {

float avg = 0;

for (int i = 0; i < 3; i++) {

avg += students[stID - 1][i];

}

avg /= 3;

System.out.println("Student's average mark is " + avg);

}

}

public static void getStGrades(int stID) {

if (stID > n || stID < 1) {

System.out.println("Invalid student ID");

} else {

int markBand;

for (int i = 0; i < 3; i++) {

switch (i+1) {

case 1:

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

break;

case 2:

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

break;

case 3:

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

break;

}

markBand = students[stID - 1][i];

markBand /= 10;

if (markBand > 9) {

markBand = 9;

}

switch (markBand) {

case 9:

System.out.println("Grade A");

break;

case 8:

System.out.println("Grade B ");

break;

case 7:

System.out.println("Grade C ");

break;

case 6:

System.out.println("Grade D ");

break;

default:

System.out.println("Fail");

break;

}

}

}

}

}

