import java.util.\*;

class Student {

int id;

String name;

boolean isPresent;

Student(int id, String name) {

this.id = id;

this.name = name;

this.isPresent = false; // default

}

void markPresent() {

this.isPresent = true;

}

void markAbsent() {

this.isPresent = false;

}

}

public class AttendanceManagementSystem {

static ArrayList<Student> students = new ArrayList<>();

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

public static void main(String[] args) {

int choice;

do {

System.out.println("\n===== Attendance Management System =====");

System.out.println("1. Add Student");

System.out.println("2. Mark Attendance");

System.out.println("3. View Attendance Report");

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

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

choice = sc.nextInt();

sc.nextLine(); // consume newline

switch (choice) {

case 1:

addStudent();

break;

case 2:

markAttendance();

break;

case 3:

viewReport();

break;

case 4:

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

break;

default:

System.out.println("Invalid choice. Try again!");

}

} while (choice != 4);

}

static void addStudent() {

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

int id = sc.nextInt();

sc.nextLine();

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

String name = sc.nextLine();

students.add(new Student(id, name));

System.out.println("Student added successfully!");

}

static void markAttendance() {

if (students.isEmpty()) {

System.out.println("No students available!");

return;

}

System.out.println("\n--- Mark Attendance ---");

for (Student s : students) {

System.out.print("Is " + s.name + " present? (y/n): ");

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

if (ch == 'y' || ch == 'Y')

s.markPresent();

else

s.markAbsent();

}

System.out.println("Attendance marked successfully!");

}

static void viewReport() {

if (students.isEmpty()) {

System.out.println("No students available!");

return;

}

System.out.println("\n--- Attendance Report ---");

System.out.printf("%-10s %-20s %-10s\n", "ID", "Name", "Status");

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

for (Student s : students) {

String status = s.isPresent ? "Present" : "Absent";

System.out.printf("%-10d %-20s %-10s\n", s.id, s.name, status);

}

}

}