**CODE:**

import java.util.ArrayList;

import java.util.Scanner;

class Student {

private int id;

private String name;

private String roomNumber;

public Student(int id, String name, String roomNumber) {

this.id = id;

this.name = name;

this.roomNumber = roomNumber;

}

public int getId() {

return id;

}

public String getName() {

return name;

}

public String getRoomNumber() {

return roomNumber;

**}**

@Override

public String toString() {

return "ID: " + id + ", Name: " + name + ", Room Number: " + roomNumber;

}

}

public class HostelManagementSystem {

private ArrayList<Student> students;

private Scanner scanner;

public HostelManagementSystem() {

students = new ArrayList<>();

scanner = new Scanner(System.in);

}

public void addStudent() {

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

int id = scanner.nextInt();

scanner.nextLine(); // Consume newline

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

String name = scanner.nextLine();

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

String roomNumber = scanner.nextLine();

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

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

}

public void viewStudents() {

if (students.isEmpty()) {

System.out.println("No students found.");

} else {

System.out.println("Student List:");

for (Student student : students) {

System.out.println(student);

}

}

}

public void removeStudent() {

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

int id = scanner.nextInt();

boolean removed = false;

for (int i = 0; i < students.size(); i++) {

if (students.get(i).getId() == id) {

students.remove(i);

removed = true;

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

break;

}

}

if (!removed) {

System.out.println("Student not found!");

}

}

public void menu() {

while (true) {

System.out.println("\n--- Hostel Management System ---");

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

System.out.println("2. View Students");

System.out.println("3. Remove Student");

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

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

int choice = scanner.nextInt();

switch (choice) {

case 1:

addStudent();

break;

case 2:

viewStudents();

break;

case 3:

removeStudent();

break;

case 4:

System.out.println("Exiting... Thank you!");

return;

default:

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

}

}

}

public static void main(String[] args) {

HostelManagementSystem hms = new HostelManagementSystem();

hms.menu();

}

}

**OUTPUT:**

--- Hostel Management System ---

1. Add Student

2. View Students

3. Remove Student

4. Exit

Enter your choice: 1

Enter Student ID: 101

Enter Student Name: Alice

Enter Room Number: A1

Student added successfully!

--- Hostel Management System ---

1. Add Student

2. View Students

3. Remove Student

4. Exit

Enter your choice: 1

Enter Student ID: 102

Enter Student Name: Bob

Enter Room Number: B2

Student added successfully!

--- Hostel Management System ---

1. Add Student

2. View Students

3. Remove Student

4. Exit

Enter your choice: 2

Student List:

ID: 101, Name: Alice, Room Number: A1

ID: 102, Name: Bob, Room Number: B2

--- Hostel Management System ---

1. Add Student

2. View Students

3. Remove Student

4. Exit

Enter your choice: 3

Enter Student ID to remove: 101

Student removed successfully!

--- Hostel Management System ---

1. Add Student

2. View Students

3. Remove Student

4. Exit

Enter your choice: 2

Student List:

ID: 102, Name: Bob, Room Number: B2

--- Hostel Management System ---

1. Add Student

2. View Students

3. Remove Student

4. Exit

Enter your choice: 4

Exiting... Thank you!