# CSE 341 – PROGRAMMING LANGUAGE

# HW4 – REPORT



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## PART 1:

**ADD STUDENT:**

```
?- student(s_id10,CoursesTaken,Handicapped).
false.

?- addStudent(s_id10,[cse101,cse232],no).
true.

?- student(s_id10,CoursesTaken,Handicapped).
CoursesTaken = [cse101, cse232],
Handicapped = no.
```

**ADD ROOM:**

```
?- room(z60,Capacity,Needs).
false.

?- addRoom(z60,20,[computer,projector]).
true.

?- room(z60,Capacity,Needs).
Capacity = 20,
Needs = [computer, projector].
```

**ADD COURSE:**

```
?- course(cse343,Capacity,InstructionID,Hours,RoomID,Needs).
false.

?- addCourse(cse343,16,habil_kalkan,2,z30,[projector]).
true.

?- course(cse343,Capacity,InstructionID,Hours,RoomID,Needs).
Capacity = 16,
InstructionID = habil_kalkan,
Hours = 2,
RoomID = z30,
Needs = [projector].
```

**CHECK WHETHER THERE IS ANY SCHEDULING CONFLICT:**

```
?- conflictCheck(cse101,cse102).
false.

?- conflictCheck(cse101,cse108).
true .
```

## CHECK WHICH ROOM CAN BE ASSIGNED TO A GIVEN CLASS:

```
?- assignCourseRoom(cse101,Class).
Class = z06 ;
Class = z10 ;
Class = z16 ;
Class = z30 .
```

## CHECK WHICH ROOM CAN BE ASSIGNED TO WHICH CLASSES:

```
?- assignCourseRoom(Course,z23).
Course = cse102 ;
Course = cse108 ;
Course = cse341 ;
Course = cse343 .
```

## CHECK WHETHER A STUDENT CAN BE ENROLLED TO A GIVEN CLASS:

```
?- enrollStudentCourse(Student,cse108).
Student = s_id3 ;
Student = s_id4 ;
Student = s_id7 ;
Student = s_id8 ;
Student = s_id10 .
```

## CHECK WHICH CLASSES A STUDENT CAN BE ASSIGNED:

```
?- enrollStudentCourse(s_id2,Course).
Course = cse102 ;
Course = cse107 ;
Course = cse232 ;
Course = cse341 .
```

## THESE ARE TABLES:

| ROOMS | CAPACITY | NEEDS |
|-------|----------|-------|
| Z06 | 27 | [smart_board, no] |
| Z10 | 20 | [computer,handicapped,no] |
| Z11 | 15 | [smart_board,handicapped,no] |
| Z16 | 21 | [projector,computer,no] |
| Z23 | 19 | [smart_board,projector,computerhandicapped,no] |
| Z30 | 25 | [projector,no] |

| COURSE_ID | CAPACITY | INSTRUCTOR_ID | HOURS | ROOM_ID | NEEDS |
|---|---|---|---|---|---|
| CSE101 | 20 | mehmet_gokturk | 2 | Z06 | [no] |
| CSE102 | 14 | yakup_genc | 3 | Z23 | [computer,projecto,handicapped,no] |
| CSE107 | 21 | mehmet_gokturk | 3 | Z11 | [smart_board,handicapped,no] |
| CSE108 | 12 | yakup_genc | 3 | Z06 | [computer, smart_board,no] |
| CSE232 | 20 | habil_kalkan | 2 | Z16 | [projector,handicapped,no] |
| CSE331 | 22 | alp_arslan | 2 | Z30 | [smart_board,projector,no] |
| CSE341 | 18 | ysa | 3 | Z23 | [smart_board,computer,handicapped,no] |

| INSTRUCTOR_ID | COURSES | NEEDS |
|---|---|---|
| mehmet_gokturk | [cse101, cse107] | [computer] |
| yakup_genc | [cse102, cse108] | [smart_board,projector] |
| habil_kalkan | [cse232] | [projector] |
| alp_arslan | [cse331] | [smart_board] |
| ysa | [cse341] | [projector,computer] |

| STUDENT_ID | COURSES | HANDICAPPED |
|---|---|---|
| s_id1 | [cse101] | handicapped |
| s_id2 | [cse102] | handicapped |
| s_id3 | [cse107] | no |
| s_id4 | [cse101, cse102] | no |
| s_id5 | [cse107, cse102] | handicapped |
| s_id6 | [cse102, cse232] | handicapped |
| s_id7 | [cse107, cse232] | no |
| s_id8 | [cse107, cse341] | no |
| s_id9 | [cse108, cse341] | handicapped |

## PART 2:

**I ADDED TWO MORE CITY. THESE ARE: GIRESUN AND MERSIN.**
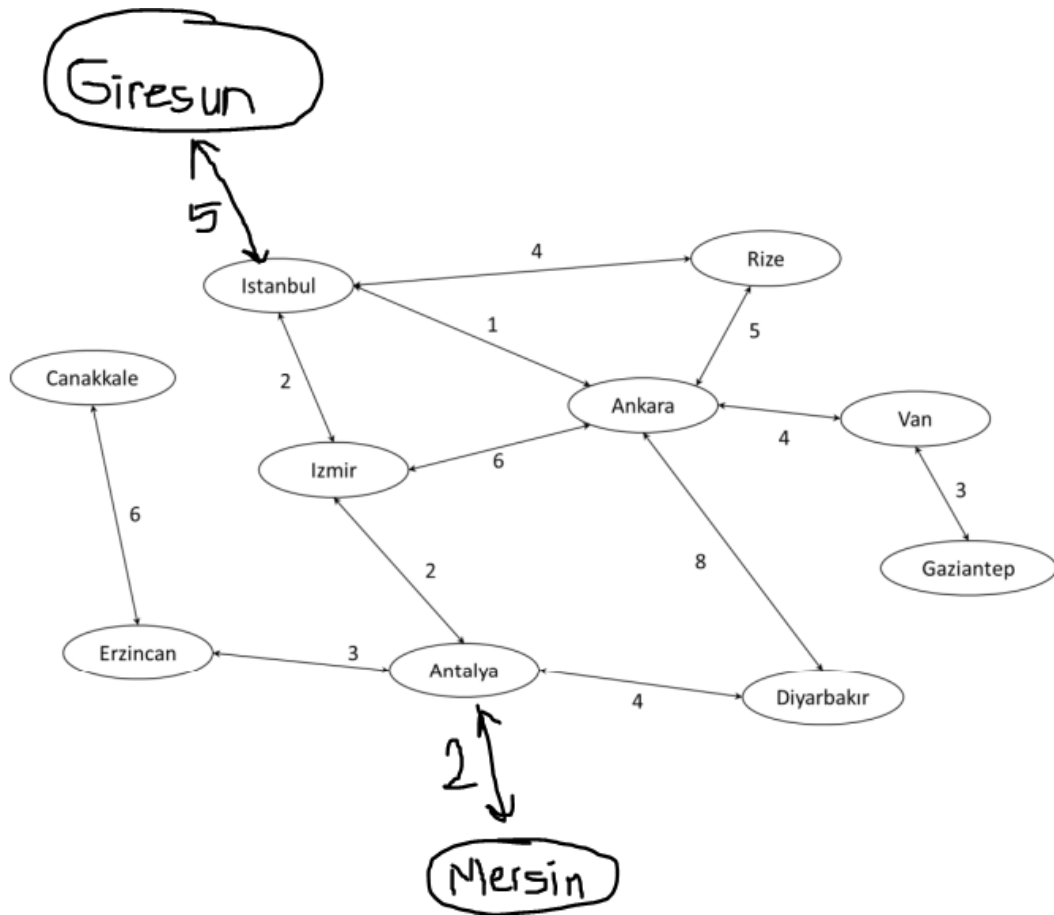


**CHECK IF THERE IS A CONNECTION BETWEEN TO GIVEN CITIES:**

```
?- connection(istanbul,diyarbakir,C).
C = 9 ;
C = 13 ;
C = 8 ;
C = 16 ;
C = 17 ;
C = 21 .
```

```
?- connection(antalya,van,C).
C = 9 ;
C = 17 ;
C = 12 ;
C = 16 .
```

**LIST ALL THE CONNECTED CITIES FOR A GIVEN CITY:**

```
?- connection(istanbul,Y,C).
Y = ankara,
C = 1 ;
Y = izmir,
C = 2 ;
Y = rize,
C = 4 ;
Y = giresun,
C = 5 ;
Y = istanbul,
C = 2 ;
Y = van,
C = 5 ;
Y = rize,
C = 6 ;
Y = izmir,
C = 7 ;
Y = diyarbakir,
C = 9 ;
Y = gaziantep,
C = 8 ;
Y = ankara,
C = 9 ;
Y = van,
C = 11 ;
Y = istanbul,
C = 10 ;
Y = ankara,
C = 11 ;
Y = antalya,
C = 9 ;
Y = istanbul,
C = 9 ;
Y = ankara,
C = 13 ;
Y = izmir,
C = 11 ;
Y = mersin,
C = 11 ;
Y = erzincan,
C = 12 ;
Y = diyarbakir,
C = 13 ;
Y = antalya,
C = 13 ;
Y = antalya,
C = 15 ;
```