

Part1

Class ID	Capacity	Equipments
class1	15	projector,handicapped,no
class2	10	smart_board,no
class3	30	projector,no
class4	12	smart_board,handicapped,no
class5	20	projector,smart_board,handicapped,no

no means accessible for not handicapped students

Course ID	Capacity	Instructor ID	Requirments
course1	13	i1	handicapped
course2	25	i2	Projector,smart_board
course3	16	i3	projector
course4	9	i4	Projector,handicapped
course5	15	i1	smart_board
course6	18	i2	Projector,handicapped,smart_board

Instructor ID	Given Courses	Preferences
i1	course1,course5	projector
i2	course2,course6	projector,smart_board
i3	course3	smart_board
i4	course4	projector,smart_board

Student ID	Taken Courses	Handicapped?
s1	course1	no
s2	course2	no
s3	course3	Handicapped
s4	Course1,course2	Handicapped
s5	Course2,course3	no
s6	Course3,course4	no
s7	Course4,course5	no
s8	Course2,course5	no
s9	Course3,course5	Handicapped
s10	Course3,course6	Handicapped
s11	Course4,course6	no

Class\Time	8	9	10	11	12	13
class1	course1	course1/ course4	course4	course4		
class2						
class3			course3	course3	course3	
class4				course5	course5	course5
class5	course2	course2	course2/course6	course6	course6	

ADD STUDENT

```
?- student(s45,Taken,Handicapped).
false.

?- add_student(s45,[course4,course1],no).
true.

?- student(s45,Taken,Handicapped).
Taken = [course4, course1],
Handicapped = no.
```

ADD CLASS

```
?- class(class100,Capacity,Equipment).
false.

?- add_class(class100,45,[smart_board]).
true.

?- class(class100,Capacity,Equipment).
Capacity = 45,
Equipment = [smart_board].
```

ADD COURSE

```
?- course(course45, Capacity, InstructorID, Needs).  
false.  
  
?- add_course(course45, 23, i2, [projector]).  
true.  
  
?- course(course45, Capacity, InstructorID, Needs).  
Capacity = 23,  
InstructorID = i2,  
Needs = [projector].
```

Check whether there is any scheduling conflict

```
?- check_conflict(course1, course2).  
false.  
  
?- check_conflict(course1, course4).  
true .
```

Check which room can be assigned to a given class

```
?- course_class(course3, Class).  
Class = class3 ;  
Class = class5 .
```

Check which room can be assigned to which classes

```
?- course_class(Course, class5).  
Course = course1 ;  
Course = course3 ;  
Course = course4 ;  
Course = course5 ;  
Course = course6 .
```

Check whether a student can be enrolled to a given class

```
?- student_class(Student,class2).  
Student = s1 ;  
Student = s2 ;  
Student = s5 ;  
Student = s6 ;  
Student = s7 ;  
Student = s8 ;  
Student = s11 .
```

Check which classes a student can be assigned

```
?- student_class(s4,Class).  
Class = class1 ;  
Class = class4 ;  
Class = class5 .
```

PART2

```
?- route(canakkale,X,C).  
X = erzincan,  
C = 6 ;  
X = antalya,  
C = 9 ;  
X = canakkale,  
C = 12 ;  
X = izmir,  
C = 11 ;  
X = diyarbakir,  
C = 13 ;
```

```
?- route(canakkale,istanbul,C).  
C = 13 ;  
C = 18 ;  
C = 26 ;  
C = 22 ;  
C = 30 ;  
C = 29 .
```

```
?- route(A,B,15).  
A = canakkale,  
B = izmir ;  
A = canakkale,  
B = istanbul ;  
A = erzincan,  
B = istanbul ;  
A = erzincan,  
B = gaziantep ;  
.
```

```
?- route(A,istanbul,C).  
A = izmir,  
C = 2 ;  
A = ankara,  
C = 1 ;  
A = rize,  
C = 4 ;  
A = canakkale,  
C = 13 ;  
.
```