Term Project for CMPE 532

Due Date: 3 June 2019 Monday, 11:00 a.m. Projects will be checked same day.

Timetable maker for students, minimizing clashes

Implement a solution in Eclipse, using its constraint solving capability. The problem is to assign a student to course groups such that the number of clashes are minimized.

Information about courses and sections (groups) should be given as below.

course(coursecode, group_no, day, period). So, for example, the course CMPE532 meets on Tuesdays at 11:30 (period 4) and Thursdays 10:30 for two hours (i.e. periods 3 and 4). We would represent this data by using three facts in the Eclipse database:

```
course(cmpe532, 1, tuesday, 4).
course(cmpe532, 1, thursday, 3).
course(cmpe532, 1, thursday, 4).
```

Actual data for Spring 2019 is provided separately. Use this as the database of courses. The courses for which data is provided are: CMPE107, CMPE112, CMPE211, CMPE231, ENGL191, MATH151, MATH163 and PHYS101.

Define a predicate **assign(List_of_courses, No_of_clashes, Schedule)** such that it takes a list of course codes in **List_of_courses**, and returns in **No_of_clashes** the smallest achievable number of clashes, and in **Schedule** the list of **(Course,Group_no)** pairs that result in **No_of_clashes** clashes.

For example, the query

?- assign([cmpe101,cmpe108,cmpe112], N, R).

Should return *something like*

N=1

R=[(cmpe101,1),(cmpe108,2),(cmpe112,1)]

What to hand in: A report that contains the problem definition, description of your program (each predicate that you wrote and what it does), as well as sample runs for up to seven courses, and your program as an appendix.

Bonus (5 points OVERALL): Print the best timetable (the one with the least number of clashes) on the screen as a table, showing the days of the week, periods, and courses.