

Team 5

CS 374

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Specifications Beta

The Class Conflict specifications- Z

SWITCH ::= on | off

Report ::= Name of the conflicts

Time: 8...18

Time > 0

Class_ID: N C1

ass_ID > 0

student _ID: N

student _ID > 0

Conflict: N C

onlict > 0

TimeButtons

Input: 8...18 -> SWITCH

ClassButtons

Input: 1.....N -> SWITCH

ReportButtons

Extput: 1.... Conflict -> Report

Report:

List of the conflicts with student_ID.

Complete state space
attempt #1

TimeButtons Class
Buttons ReportButtons

Conflict !=0

..

> TimeButtons(NewTime)=on V Report
Buttons(NewTime)!=0

Complete state space
attempt #2

TimeButtons Class
Buttons ReportButtons

Conflict !=0

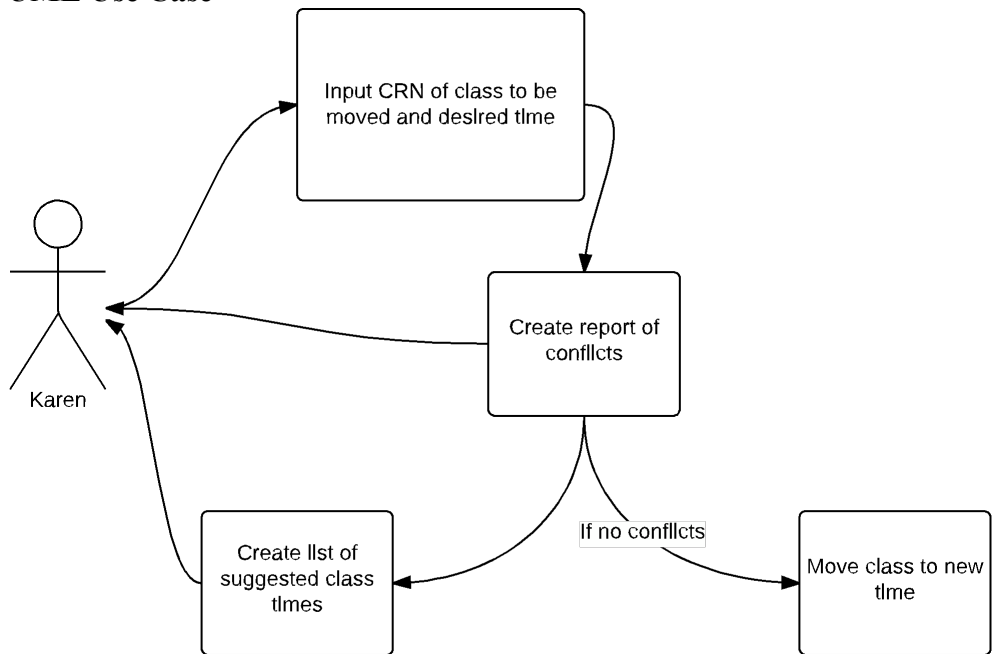
=> TimeButtons(NewTime)=on V Report
Buttons(NewTime)!=0 Conflict =0=>

(f:8...18 * TimeButtons(f)= off ^ ReportButtons(f)!=0)

Logic specifications

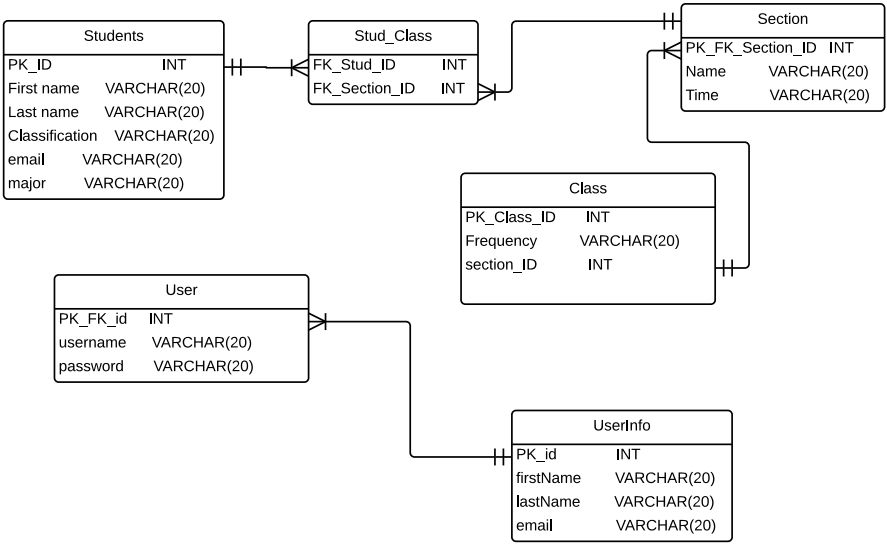
Class Conflict formula:

- New class time which is the class time we want replaces the old class time which is the class time is right now.
- Compare the new time to students schedules who are in the class.
- List all the conflicts which is the new class time conflict with students' other classes schedule from High priority to low priority
 - a) Senior has the Highest priority then Junior then sophomore then freshman (class size will be considered afterwards)
- List the number of conflicts.
- Suggest a new time

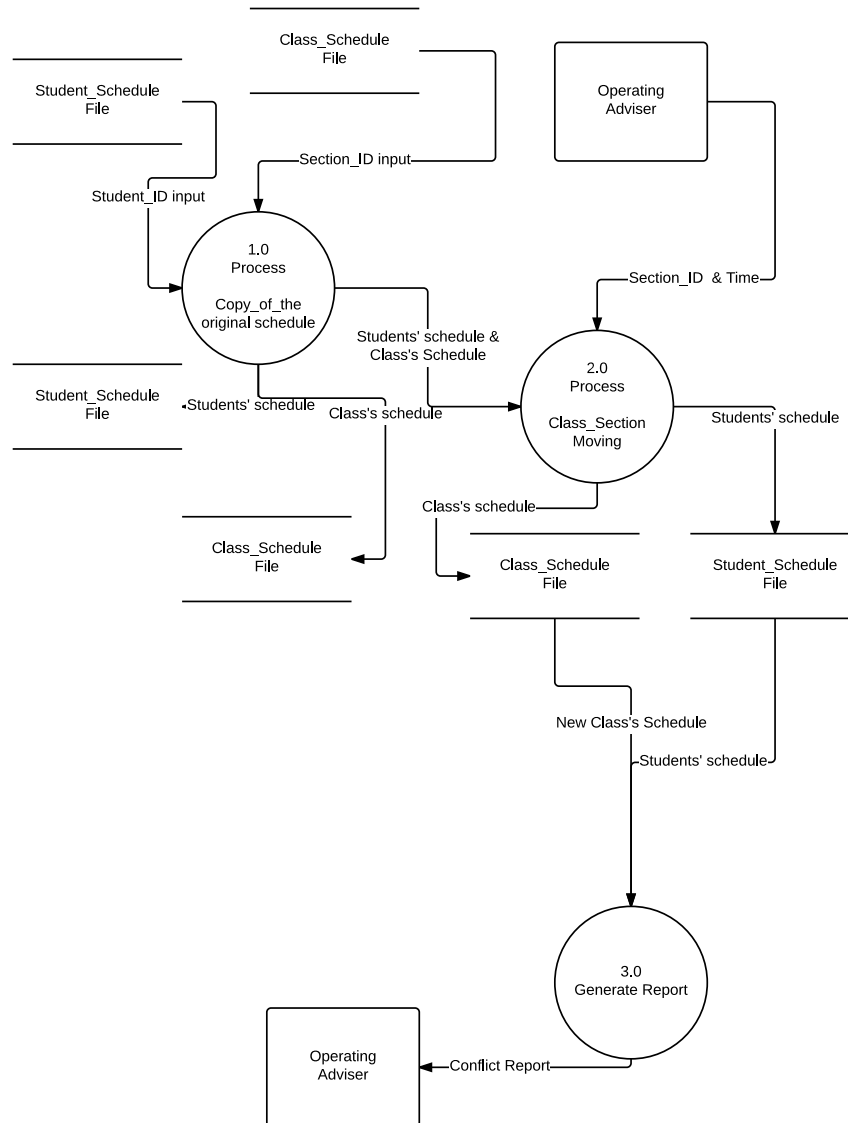
UML Use Case

Class Schedule

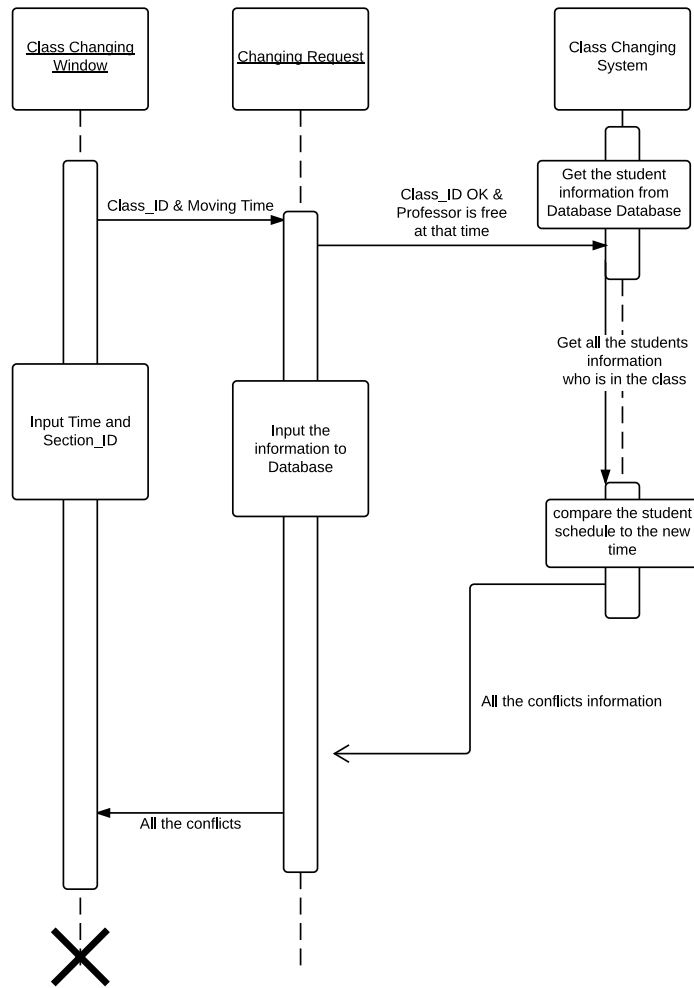
Entity Relationship Diagram



Data Flow Diagram



UML Sequence Diagram



Finite state machines

