MATH_REQUIREMENT

- Student is required to take the following 6 courses

MA121 –Differential Calculus

MA122 – Integral Calculus

MA123 – Series, Vectors, Functions, and Surfaces

MA124 – Calculus for Functions of Two Variables

MA222 – Probability and Statistics

MA331 – Intermediate Statistics

MANAGEMENT_REQUIREMENT

- Student is required to take the following 1 course

BT353 Project Management

CS_REQUIREMENT v2
Student is required to take the following 16 courses(almost) ***

CS146 – Intro to Web Programming & Proj. Dev.

CS135 – Discrete Structures

CS334 – Automata & Computation

CS383 – Computer Organization & Programming

CS347 – Software Development Process

CS392 - Systems Programming

CS496 – Principles of Programming Languages

CS442 - Database Management Systems

CS443 – Database Practicum

CS511 - Concurrent Programming

CS492 – Operating Systems

CS522 or CS546 or CS548 (circle one)

CS306 – Intro to IT Security

CS423 – Senior Design I

CS485 - Societal Impact of Info. Technologies

CS424 – Senior Design II

So, CS_REQUIREMENT v2 is actually: Student is required to take the following 15 courses:

CS146 – Intro to Web Programming & Proj.

CS135 – Discrete Structures

CS334 – Automata & Computation

CS383 – Computer Organization & Programming

CS347 – Software Development Process

CS392 - Systems Programming

CS496 – Principles of Programming Languages

CS442 - Database Management Systems

CS443 – Database Practicum

CS511 - Concurrent Programming

CS492 – Operating Systems

CS306 – Intro to IT Security

CS423 – Senior Design I

CS485 - Societal Impact of Info. Technologies

CS424 – Senior Design II

and is required to take 1 course from the following 3 courses:

CS522

CS546

CS548

But We've Seen ORs before

- And we'll know how to deal with them, as tree-form Boolean expressions once we've seen the HW3 solutions.
- So, as the ***first part of HW4***:
  - Construct a DB schema(s) for REQUIREMENT, that is, a schema(s) of which, all the different requirements we've looked at this far can be constructed as instances.
  - Construct instances of all relevant schemas needed to specify all of these requirements (MATH, MANAGEMENT & CS_REQ V2)
  - Be sure to document all tables and attributes, and include any other textual documentation that you feel would help a developer who was going to implement your design(s)
  - Be sure to include fkrs

And

- If we have done a reasonable job on the first part of HW4, we should be able to use the DB schema(s) that we have developed to construct instances of the schema(s) that represent the SCIENCE_REQUIREMENT: Student must take all 3 courses from one of the following types of science courses.

Physics	PEP 111 Mechanics	PEP 112 E&M	PEP 221
Chemistry	CH 115 Gen Chem I	CH 116 Gen Chem II	CH 117
Chem & Bio	CH 115 Gen Chem I	CH 281 Bio & Biotech	CH 117
Chem & Bio	CH 115 Gen Chem I	CH 281 Bio & Biotech	CH 282
Physics & Bio	PEP 111 Mechanics	CH 281 Bio & Biotech	CH 282

- So, as the ***second part of HW4***, construct the instances that represent this requirement.

And finally..

- We somehow forgot SOFTWARE_DEVELOPMENT_REQUIREMENT, which is relatively easy to model as:

Student is required to take 1 of the following 10 courses:

CS 516 Compiler Design

CS 521 TCP/IP Networking

CS 522 Mobile Systems and Applications

CS 526 Enterprise and Cloud Computing

CS 537 Interactive Computer Graphics

CS 541 Artificial Intelligence

CS 546 Web Programming

CS 548 Enterprise Software Architecture and Design

CS 549 Distributed Systems and Cloud Computing

CS 558 Computer Vision

So, include a table instance(s) for SOFTWARE_DEVELOPMENT_REQUIREMENT as part of ***HW4***