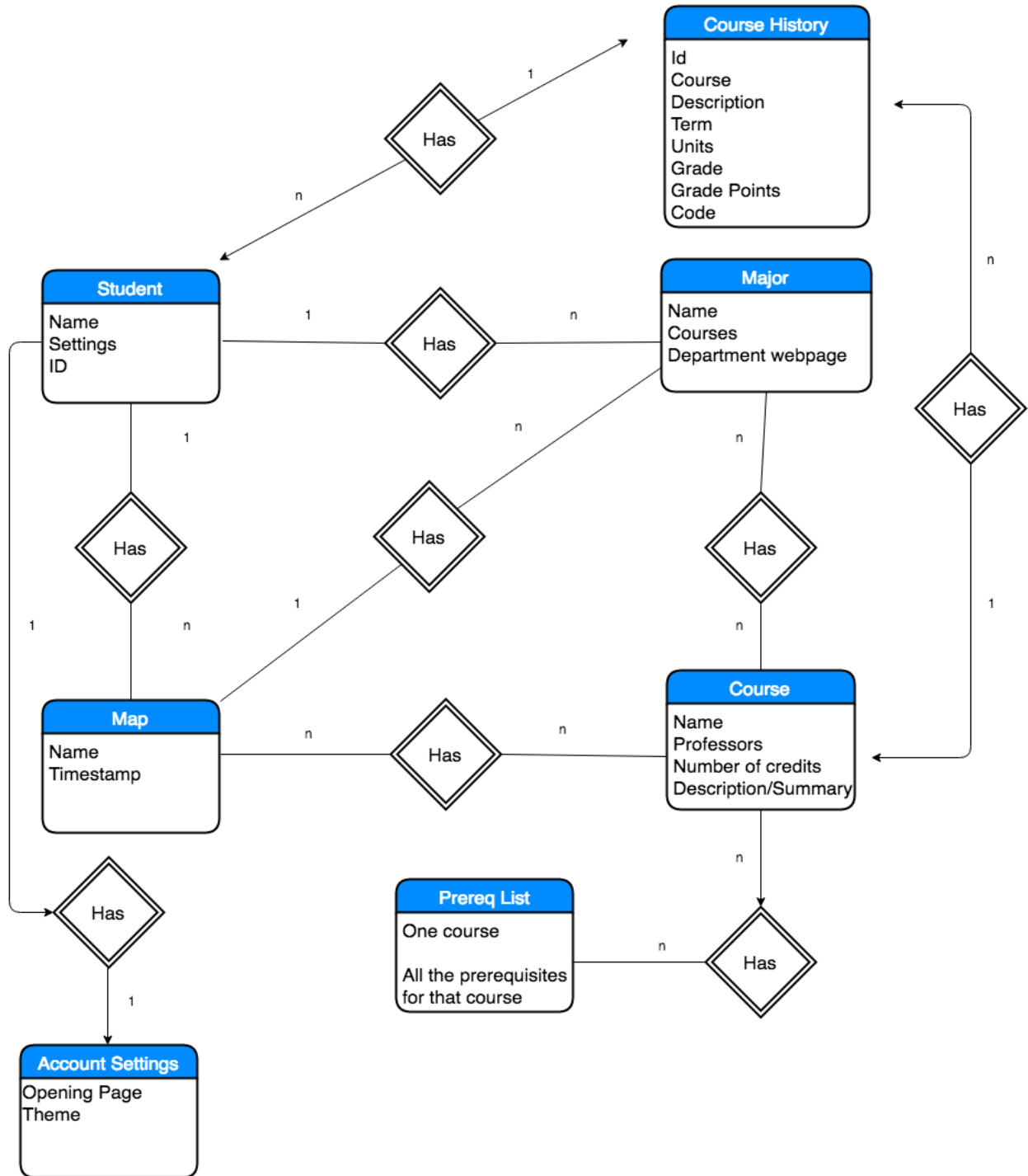


ER Diagram & Description



STUDENT:

Each *Student* object represents a student in the database, and stores all their school credentials. A student can have multiple saved maps, and some majors tied to their account. Students can view their saved maps on their saved maps page and can view their course

requirements for their major on the home page. They can edit their major and other information on their account settings page. *Student* data will be used to:

- 1.) Display the name of a student on the navbar found on all pages
- 2.) Display the maps a student has saved on savePage.html
- 3.) Display the courses a student has completed on CourseHistory.html
- 4.) Display the courses a student has completed on the MainApp.html
- 5.) Displayed the settings a student has saved on AccountSettings.html

Student data contains:

- 1.) *Name*: 1 student name (variable length string)
- 2.) *ID*: 1 unique student identifier (variable length string)
- 3.) *Settings*: 0+ account settings (List of string tuples (setting, setting_value))

ACCOUNT SETTINGS

Each *account settings* represents the various settings associated with each student's account.

Account Settings data will be used to:

- 1.) Display and edit a student's account settings on AccountSettings.html
- 2.) Update the color of all pages elements based on the *theme* in *Account Settings*
- 3.) Set the page a student will be directed to after login

Account Settings Data contains:

- 1.) *Opening Page*: 1 URL of page to default to (variable length string)
- 2.) *Theme*: the color scheme a student wants to use (variable length string)

MAJOR:

Each major represents a major offered at Umass. Major data will be used to:

- 1.) Select a major on the MainApp.html

Major data contains:

- 1.) *Name*: 1 unique name (variable length string)
- 2.) *Courses*: 1+ unique course identifiers (List of variable length strings)
- 3.) *Department webpage*: 1 URL of the department homepage (variable length string)

MAP:

Each *Map* represents the saved state of the view on MainApp.html for a user. Map data is used to:

- 1.) Populate the savePage.html with all of the maps a user has saved.
- 2.) Restore the state of a previous view on the MainApp.html.

Map data contains:

- 1.) *Timestamp* 1 date-time of when the map was saved (string: 'ss/mm/DD/MM/YY')
- 2.) *Major* 0+ majors being displayed (list of variable length string)
- 3.) *Courses* 0+ courses being displayed (list of unique course identifiers)

- 4.) *Student ID* 1+ student id for the user who saved a map (variable length string)

COURSE:

Each *Course* represents a course at Umass. *Course* data will be used to:

- 1.) Pick and display courses on MainApp.html
- 2.) Pick and save the user completed courses on CourseHistory.html
- 3.) Display detailed course information on CourseDetails.html
- 4.) Reconstruct the state of MainApp.html from a MAP displayed on savePage.html

Course data contains:

- 1.) *Name*: 1 unique course identifier (variable length string, ex: 'CS326 Web Programming')
- 2.) *Professors*: 0+ professor names (list of variable length strings)
- 3.) *Number of credits*: 1+ credits (non-negative integer)
- 4.) *Description/Summary*: 1 course description (variable length string)

COURSE HISTORY

Each *Course History* represents the courses a student has taken. *Course History* data will be used to:

- 1.) Display a student's course history on CourseHistory.html
- 2.) Display a student's completed courses on MainApp.html

Course History data contains:

- 1.) *Id*: a student ID for this course history record (variable length string)
- 2.) *Course*: course identifier (variable length string)
- 3.) *Description*: description of course (variable length string)
- 4.) *Term*: term of completion (variable length string)
- 5.) *Units* number of credits earned (non-negative integer)
- 6.) *Grade*: letter grade earned by student (non-negative integer hopefully)
- 7.) *Grade Points*: number of grade points earned (non-negative floating point number)
- 8.) *Code*: abbreviated course identifier (variable length string, ex: CS121)

PREREQ LIST:

Each *Prereq List* represents the pre-requisites required for a given course. All of the unique course identifiers within a *Prereq List* can be used to match a *Course* with its' 0 or more required *Course*. *Prereq List* data will be used to:

- 1.) Draw the edges between courses displayed on MainApp.html
- 2.) Display the required courses for a course displayed on CourseDetails.html

Prereq List data contains:

- 1.) *Course name*: 1 unique course identifier (variable length string)
- 2.) *Prerequisites*: 0+ unique course identifiers (list of variable length strings)