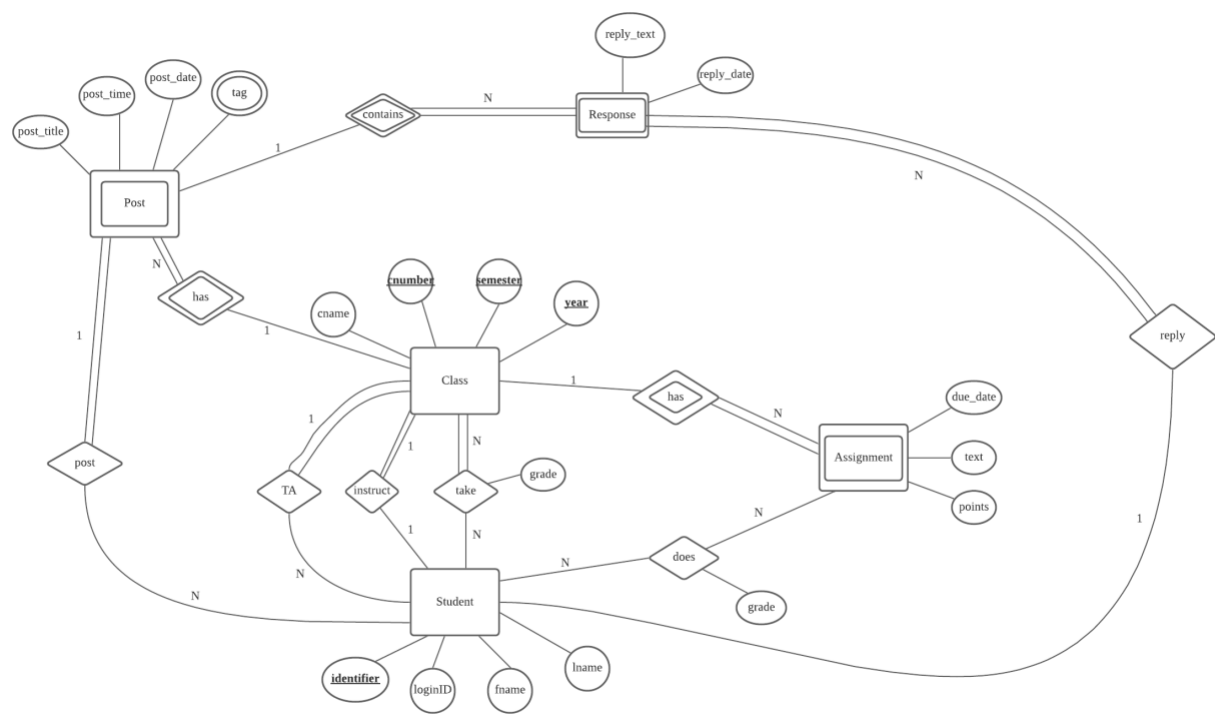
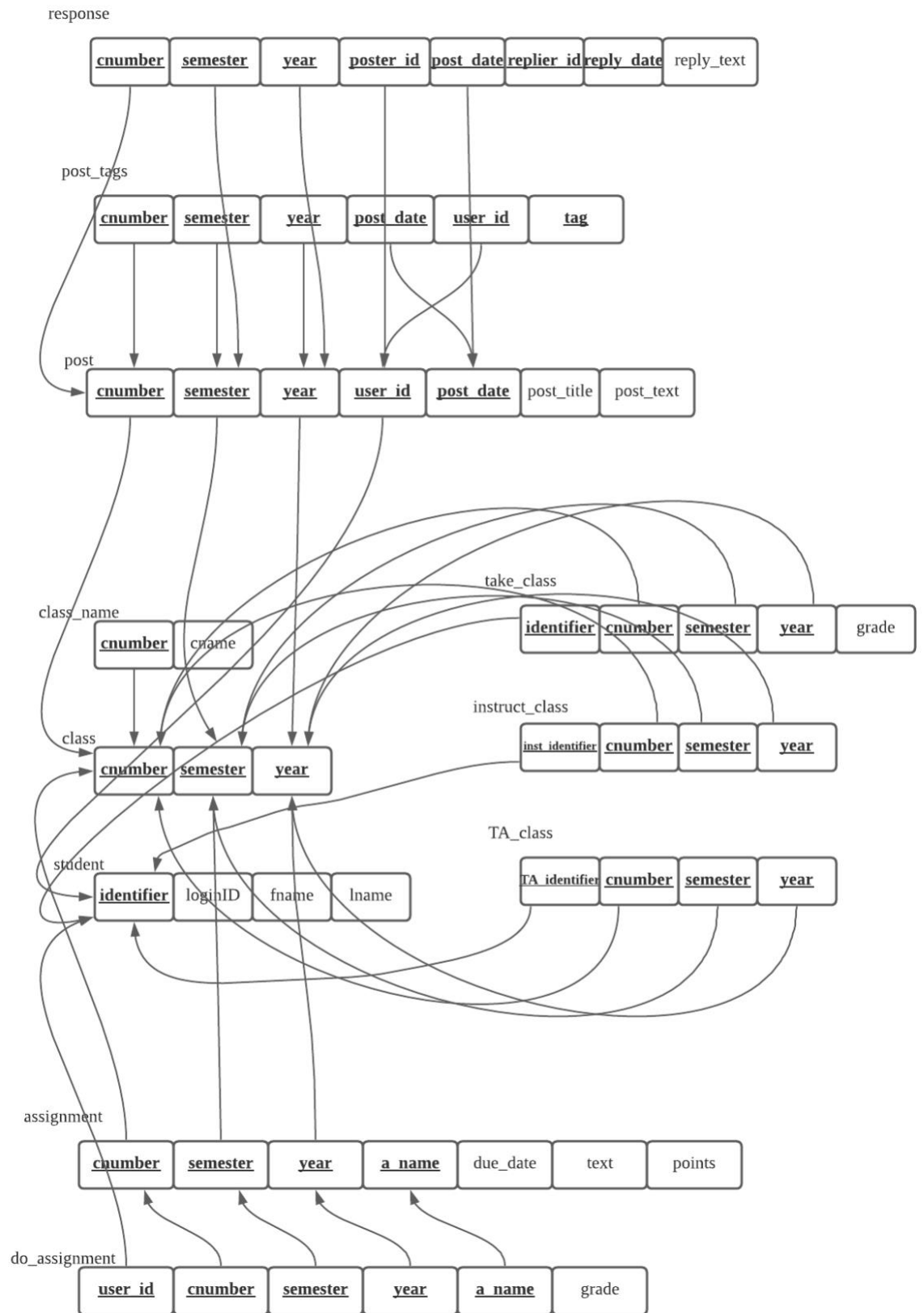


CS 377 Final Project – Howard Hou

1.



2.



3. Here are the functional dependencies that should hold.

`number` -> `cname` in `take_class` table.

Identifier -> (`loginID`, `fname`, `lname`) in `student` table.

(`identifier`, `number`, `semester`, `year`) -> `grade` in `take_class` table.

(`cnumber`, `semester`, `year`, `a_name`) -> (`due_date`, `text`, `points`) in `assignment` table.

(`user_id`, `cnumber`, `semester`, `year`, `a_name`) -> `grade` in `do_assignment` table.

(`cnumber`, `semester`, `year`, `user_id`, `post_date`) -> (`post_title`, `post_text`) in `post` table.

(`cnumber`, `semester`, `year`, `poster_id`, `post_date`, `replier_id`, `reply_date`) -> `reply_text` in `response` table.

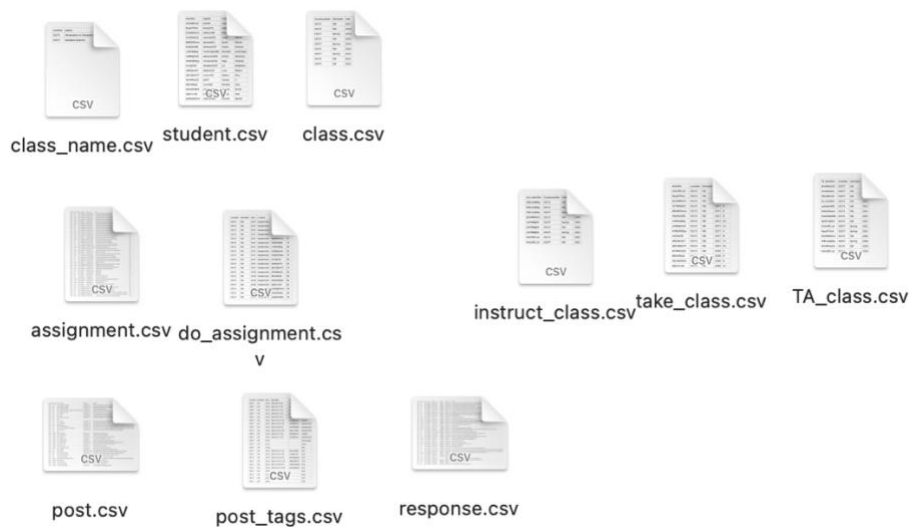
The relational schema is already normalized to 3NF in Q2.

4. <http://35.224.234.87/LoginPage.php>

- 5.



- 6.



The csv file names correspond to their table names in the database.

table name:	class		
ATTRIBUTE NAME	ATTRIBUTE TYPE	DESCRIPTION	
cnumber	CHAR(10)	course number	
semester	CHAR(9)	semester	
year	INT	year	
table name:	class_name		
ATTRIBUTE NAME	ATTRIBUTE TYPE	DESCRIPTION	
cnumber	CHAR(10)	couse number	
cname	CHAR(40)	course name or description	
table name:	student		
ATTRIBUTE NAME	ATTRIBUTE TYPE	DESCRIPTION	
identifier	CHAR(15)	UserID	
loginID	CHAR(15)	LoginID	
fname	CHAR(15)	first name	
lname	CHAR(15)	last name	
table name:	instruct_class		
ATTRIBUTE NAME	ATTRIBUTE TYPE	DESCRIPTION	
inst_identifier	CHAR(15)	instructor UserID	
cnumber	CHAR(10)	course number	
semester	CHAR(9)	semester	
year	INT	year	
table name:	take_class		
ATTRIBUTE NAME	ATTRIBUTE TYPE	DESCRIPTION	
identifier	CHAR(15)	student UserID	
cnumber	CHAR(10)	course number	
semester	CHAR(9)	semester	
year	INT	year	
grade	CHAR(3)	letter grade	
table name:	TA_class		
ATTRIBUTE NAME	ATTRIBUTE TYPE	DESCRIPTION	
TA_identifier	CHAR(15)	TA UserID	
cnumber	CHAR(10)	course number	
semester	CHAR(9)	semester	
year	INT	year	

table name:	assignment	
ATTRIBUTE NAME	ATTRIBUTE TYPE	DESCRIPTION
cnumber	CHAR(10)	course number
semester	CHAR(9)	semester
year	INT	year
a_name	CHAR(20)	assignment name
due_date	DATETIME	due date
text	CHAR(30)	assignment text
points	DECIMAL(7,2)	total points possible

table name:	do_assignment	
ATTRIBUTE NAME	ATTRIBUTE TYPE	DESCRIPTION
cnumber	CHAR(10)	course number
semester	CHAR(9)	semester
year	INT	year
a_name	CHAR(20)	assignment name
user_id	CHAR(15)	student UserID
grade	DECIMAL(7,2)	grade for the student

table name:	post	
ATTRIBUTE NAME	ATTRIBUTE TYPE	DESCRIPTION
cnumber	CHAR(10)	course number
semester	CHAR(9)	semester
year	INT	year
post_title	CHAR(30)	title of the post
post_date	DATETIME	post date
post_text	CHAR(50)	text of the post
user_id	CHAR(20)	UserID of the 'poster'

table name:	post_tags	
ATTRIBUTE NAME	ATTRIBUTE TYPE	DESCRIPTION
cnumber	CHAR(10)	course number
semester	CHAR(9)	semester
year	INT	year
post_date	DATETIME	post date
user_ID	CHAR(20)	UserID
tag	CHAR(15)	tag of the post

table name:	response	
ATTRIBUTE NAME	ATTRIBUTE TYPE	DESCRIPTION
cnumber	CHAR(10)	course number
semester	CHAR(9)	semester
year	INT	year
poster_id	CHAR(15)	UserID of the author of post
post_date	DATETIME	date of the post
replier_id	CHAR(15)	UserID of the reply
reply_date	DATETIME	date of the reply
reply_text	CHAR(50)	text of the reply

7-10.

loginPage.php: Ask for UserID and LoginID.

homePage.php: Checks whether the login information exists. If exists, print 3 tables: the courses the user is taking (where final letter grade is shown), the courses the user is instructing, and the courses the user is TA-ing. Click on the relevant courses to direct to the next page.

q7c.php: contains the course content. Allow the student to view their current assignment grades. Click on an assignment to direct to the assignment info page.

q7d.php: contains the details of the assignment.

q8.php: The instructor homepage for a particular course. This webpage allows the instructor (or TA) to view the particular course content. It also has three links that directs to the “assignments page”, “students page” and “Q&A page”.

q8aa.php: shows all the assignment with their total possible points. Clicking on an assignment directs to q8ab.php. It also has form to allow the instructor to create an new assignment, which directs to q8ad.php.

q8ab.php: shows the current grades for all students for this assignment. It also allows the instructor to enter or update the grade of a student for this assignment, which is submitted to q8ac.php.

q8ac.php: adds the newly entered grade of a student for an assignment to the database.

q8ad.php: adds the newly created assignment to the database.

q8ba.php: shows all the students in this class with letter grades (if available). Clicking on a student directs to q8bb.php. It also allows an instructor to enter or update the letter grade for a student for this course, which is submitted to q8bd.php.

q8bb.php: shows all the assignment grades for the current student. Clicking on any assignment would direct to q7d.php, which is the assignment info page. It also allows the instructor to enter or update the grade for a particular assignment for this student, which is submitted to q8bc.php.

q8bc.php: adds the newly entered grade of a student for an assignment to the database.

q8bd.php: adds the entered letter grade of a student for this course to the database.

QnA.php: shows all the current posts of this class (which is displayed in ascending order of timestamp). It allows filter by tag, which is submitted to QnA_tag.php. It allows to enter into a particular post, which is sent to threads.php. It also allows to add a post, which is submitted to addPost.php.

QnA_tag.php: shows all the current posts of the class under the tag specified. It has all the functionality of QnA.php.

threads.php: shows the text for the post and shows all the current replies to the post. It allows the user to add a reply, which is sent to addReply.php.

addPost.php: adds the added post to the database.

addReply.php: adds the added reply to the database.