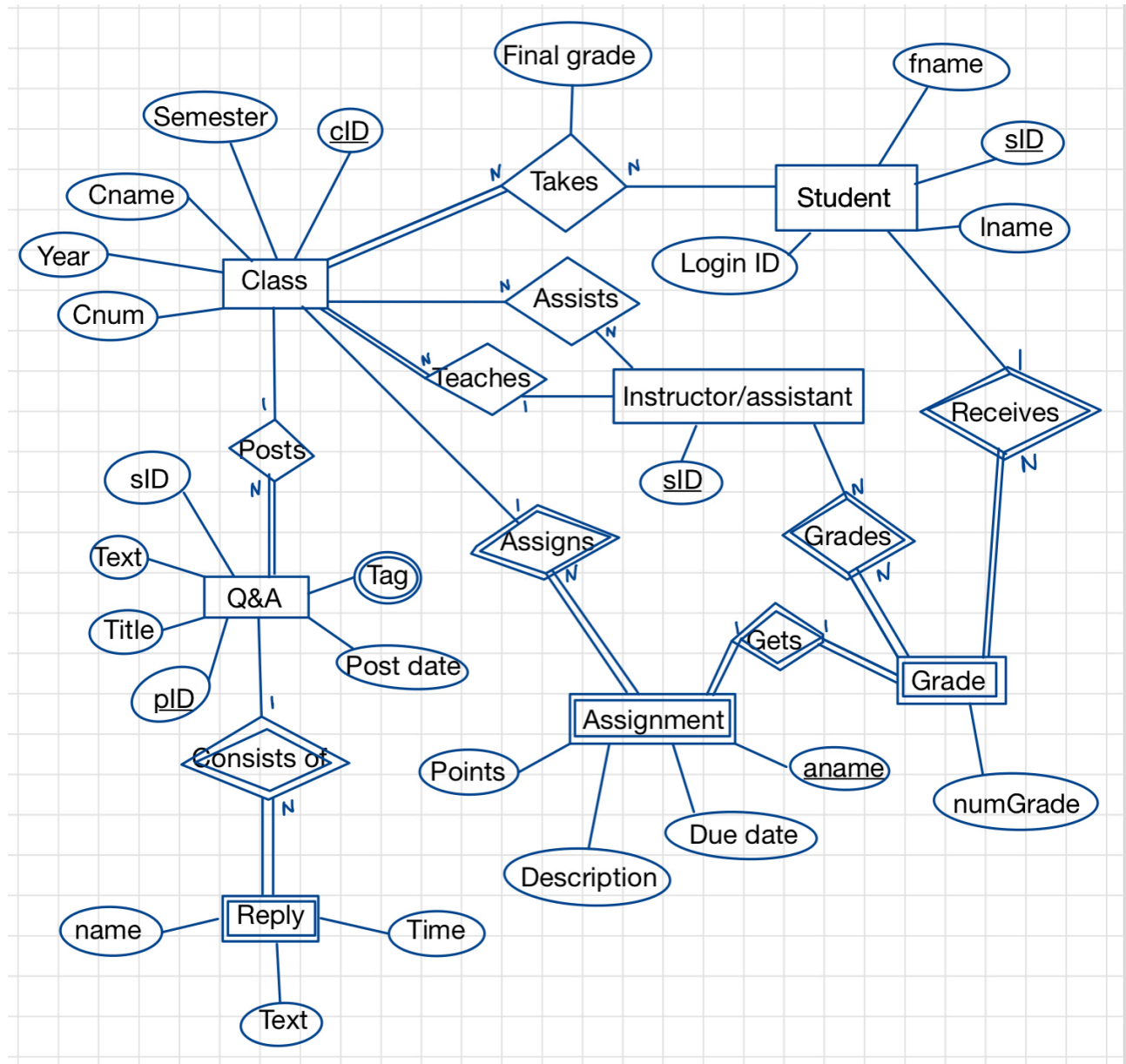


Question 1

Assumptions

- A class must have students
- A student will only take a class once
- The assignments given from a class are the same across different semesters and years



Question 2

Student

<u>sID</u>	fname	lname	login_ID

Class

<u>cid</u>	cnum	cname	cyear	semester

Teaches

<u>sID</u>		<u>cid</u>

TA

<u>sID</u>		<u>cid</u>

Takes

<u>sID</u>	<u>cid</u>	final_grade

Assignment

<u>aname</u>	due_date	adescription	Points	<u>cid</u>

ass_grade

<u>sID</u>	<u>aname</u>	cnum <u>cid</u>	numGrade

qa

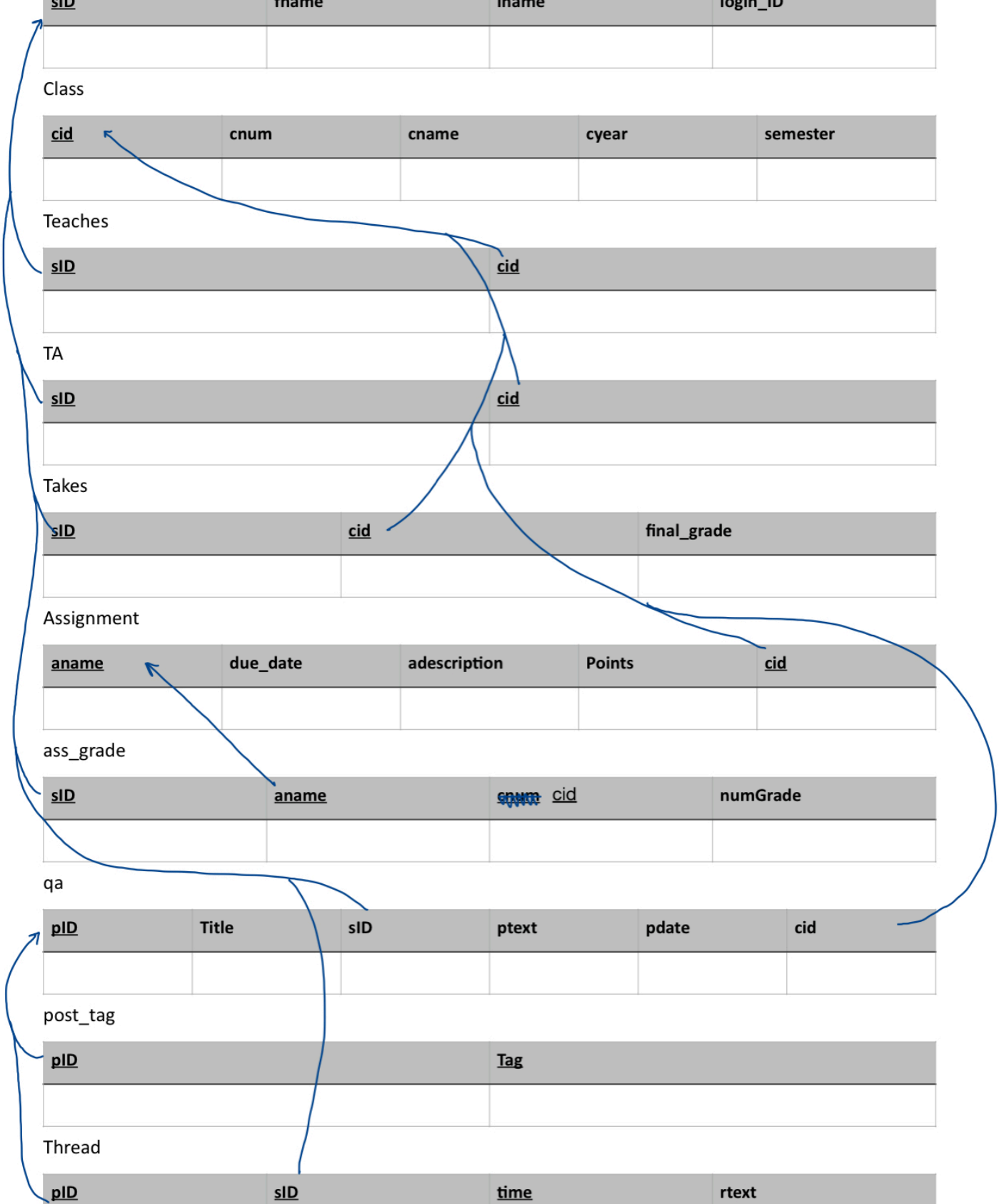
<u>pID</u>	Title	<u>sID</u>	ptext	pdate	cid

post_tag

<u>pID</u>		<u>Tag</u>

Thread

<u>pID</u>	<u>sID</u>	<u>time</u>	rtext



Question 3

3NF

sID, login_ID → fname, lname

Cnum, year, semester → cname, instructor_sID, assistant_sID, aname

sID, cnum → final_grade

aname → due_date, description, points

sID, a_name, cnum → numGrade

pID, sID, cnum → title, ptext, post_date, rtext, time, tag

Question 6

(c)

The STUDENT table defines all the students present in the database.

Attribute name	Attribute type	Description
sID	varchar(10)	Unique identifier for each student
fname	char(9)	First name of the student
lname	char(9)	Last name of the student
login_ID	varchar(20)	Each student's unique login_ID

The CLASS table defines all the classes in the database.

Attribute name	Attribute type	Description
cid	char(5)	Unique identified of course number across all semesters and years
cnum	char(5)	Course number
cname	varchar(25)	Name of classes
cyear	int	Defines the year the class is held
semester	varchar(6)	Semester the class is held

The TEACHES table defines what class each instructor teaches in the specific semester and year.

Attribute name	Attribute type	Description
sID	varchar(10)	Unique identifier of each each student
cid	char(5)	Unique identified of course number across all semesters and years

The TA table defines what class each TA assists in the specific semester and year.

Attribute name	Attribute type	Description
sID	char(9)	Unique identifier of each each student
cid	char(5)	Unique identified of course number across all semesters and years

The TAKES table defines what class each student takes in the specific semester and year.

Attribute name	Attribute type	Description
sID	varchar(10)	Unique identifier of each each student
cid	char(5)	Unique identified of course number across all semesters and years
final_grade	varchar(2)	Final grade the student receives in the class

The ASSIGNMENT table defines all the assignment assigned in each class.

Attribute name	Attribute type	Description
aname	varchar(15)	Uniquely defined name of the assignment of each class
due_date	date	Submission date of the assignment
adescription	char	Describes the assignment
points	int	Total point of the assignment
cid	char(5)	Unique identified of course number across all semesters and years

The ASS_GRADE table defines the grades each student receives in each assignment in their classes.

Attribute name	Attribute type	Description
sID	varchar(10)	Unique identifier of each each student
aname	varchar(15)	Uniquely defined name of the assignment of each class
cid	char(5)	Unique identified of course number across all semesters and years
numGrade	int	Grade the student receives on the assignment

The QA table contains the posted questions and answers.

Attribute name	Attribute type	Description
pID	char(4)	Unique identifier of each post
sID	varchar(10)	Unique identifier of each each student
title	varchar(20)	Title of the post
ptext	text	Question or answer that the student posted
pdate	datetime	Date the question/answer was posted
cid	char(5)	Unique identified of course number across all semesters and years

The POST_TAG table defines the tags attached to each question/answer

Attribute name	Attribute type	Description
pID	char(4)	Unique identifier of each post
tag	varchar(20)	Tag attached to the question/answer

The THREAD table contains each reply to the posted question and answer.

Attribute name	Attribute type	Description
pID	char(4)	Unique identifier of each post
sID	varchar(10)	Unique identifier of each each student
time	datetime	Time when the reply was posted
rtext	Text	Text of the reply

Login page start with: <http://35.224.242.211/login.php>

- Please “end session” before logging into another use id and login id

Summary of what each PHP file does

[login.php](#): login page, takes in information of user ID and login ID and pass onto welcome.php

[welcome.php](#): checks whether user ID and login ID match. If so, shows the classes the student takes or teaches/TAs

[class.php](#): list out the class content, including an outline of all assignments and the student’s final grade in that specific class. Also brings the user over a specific assignment detail.

[student_grade.php](#): shows the assignment grade of the student

[teach.php](#): can create a new assignment, gives assignment details of all students’ all assignments and their grades. Also provides information on all the students taking the course. Contains forms to enter a new grade for assignments and to enter the final grade.

[newass.php](#): creates a new assignment, updates the database

[newfg.php](#): updates the final grade of the student in the database

[newgrade.php](#): puts in a grade for a student’s assignment

[qa.php](#): can filter posts with tags, create new posts, lists out all the existing posts of the class. Can lead to the threads of a specific post

[filter.php](#): displays the filtered posts of the class

[newpost.php](#): adds a new row in the qa table with the user’s information and the post_time

[thread.php](#): displays the selected post and the corresponding threads of that specific post

[end.php](#): clear all the session variables and end connection to the database