Task 2

Analyze a collection of incorrectly designed relational schemas listed below.

To find what is wrong with the relational schemas listed below use a method of row insertions explained in a presentation 01 Database Design Quality. Insert into the relational tables with the schemas (headers) listed below from 3 to 5 rows that demonstrate the redundancies.

Include into a file `solution2.pdf` the drawings of relational tables with redundancies and briefly explain the reasons behind each redundancy. The scanned neat hand drawings are acceptable.

`STUDENT(snumber, first-name, last-name, ccode)`
A relational table `STUDENT` contains information about the students and the courses enrolled by the students. A course (`ccode`) is enrolled by more than one students (`snumber`) and each student enrols several course. Student number (`snumber`) uniquely identifies each students and course code (`ccode`) uniquely identifies each course. The first (`first-name`) and the last (`last-name`) names describe the students.

```
STUDENT(snumber, first-name, last-name, ccode)
        7        James       Bond       835
        7        James       Bond       851
        7        James       Bond.      803
```

Student number, first name, last name is repeated as many times as many courses are enrolled by a student.

`HOTEL(name, city, capacity, enumber, salary)`
A relational table `HOTEL` contains information about the hotels and employees working in the hotels. A hotel is identified by a pair of attributes (`name, city`) and it is also described by the total number of rooms available (`capacity`). Each employee is identified by employee number (`enumber`) and it is described by a salary (`salary`).

```
HOTEL(name, city, capacity, enumber, salary)
      Ace   Sydney 1000     7        200
      Ace   Sydney 1000     8        300
      Ace   Sydney 1000     9        300
```

Hotel name, capacity and city where a hotel is located is repeated as many times as many employees works at a hotel.

`TEAM(tname, player, supporter)`
A relational table `TEAM` contains information about football teams, football players who belong to the teams and supporters of the teams. Each football team is described a unique name (`tname`). Players and supporters are described by unique names (`player`) and (`supporter`). A team has many players and many supporters.

```
TEAM(tname, player, supporter)
     WSW    James   Jane
     WSW    Peter   Jane
     WSW    James   Kate
     WSW    Peter   Kate
```

Players are repeated as many times as many supporters a team has and supporters are repeated as many times as many players at team has.

Deliverables

A file `solution2.pdf` with the drawings of relational tables with redundancies and the brief explanations of the reasons behind each redundancy

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Submission

Submit the files **solution11.lst**, **solution12.lst**, and **solution2.pdf** through Moodle in the following way:

(1) Access Moodle at **http://moodle.uowplatform.edu.au/**
(2) To login use a **Login** link located in the right upper corner the Web page or in the middle of the bottom of the Web page
(3) When logged select a site **CSCI835/CSCI235 (S220) Database Systems**
(4) Scroll down to a section **SUBMISSIONS**
(5) Click at a link **In this place you can submit the outcomes of Laboratory 1**
(6) Click at a button **Add Submission**
(7) Move a file **solution11.lst** into an area **You can drag and drop files here to add them**. You can also use a link **Add**...
(8) Repeat a step (7) for the files **solution12.lst**, and **solution2.pdf**.
(9) Click at a button **Save changes**
(10) Click at a button **Submit assignment**
(11) Click at the checkbox with a text attached: **By checking this box, I confirm that this submission is my own work,** ... in order to confirm the authorship of your submission.
(12) Click at a button **Continue**

End of specification