Assignment 1

Database Concepts

Q1) 1.1 – No, because there are known constraints to say that super\_empNo needs to be different to emp\_No or two different supervisors could look after the same employee.

1.2 – It is possible as the department number could be set to null however if the department was set to not null it would need a department to exist to insert the project instance.

A project can not have many departments as only one department number is asked for as a foreign key. As Project contains the foreign key defining a relationship between department and project means the relationship will be many projects to one department.

1.3 – It is possible that supervisor looks after no employees as there is no constraints saying that the supervisor employee number is any different to the employee number that they are to supervise.

1.4 – No it cannot assuming that department number of a project can not be null. However if the department number in the Project relation can be null then you could delete it.

Q2)

Q3)

Q4)

[CSAMPR1.its.rmit.edu.au](http://csampr1.its.rmit.edu.au/)

[emu.cs.rmit.edu.au](http://emu.cs.rmit.edu.au/)

DROP TABLE playsfor;

DROP TABLE player;

DROP TABLE team;

PURGE RECYCLEBIN;

CREATE TABLE player

(player\_no INTEGER ,

player\_name VARCHAR(40) ,

phone VARCHAR(40) ,

address VARCHAR(40) ,

city VARCHAR(40) ,

state VARCHAR(40) ,

postcode VARCHAR(40) ,

country VARCHAR(40) ,

PRIMARY KEY (player\_no) );

CREATE TABLE team

(position\_no INTEGER ,

position\_description VARCHAR(40) ,

team\_sport VARCHAR(40) ,

teamaddress VARCHAR(40) ,

coach\_name VARCHAR(40) ,

PRIMARY KEY (position\_no, team\_sport,coach\_name));

CREATE TABLE playsfor

(player\_no INTEGER ,

position\_no INTEGER ,

team\_sport VARCHAR(40) ,

coach\_name VARCHAR(40) ,

PRIMARY KEY (player\_no,position\_no,team\_sport,coach\_name) ,

FOREIGN KEY(player\_no) REFERENCES player(player\_no) ,

FOREIGN KEY(position\_no,team\_sport,coach\_name) REFERENCES team(position\_no,team\_sport,coach\_name));

INSERT INTO player VALUES(103,'Andrew Guy','40.32.2555','54 Rue Royale','Nantes',NULL,'44000','France');

INSERT INTO player VALUES(112,'Simon Stevens','7025551838','8489 Strong St.','Las Vegas','NV','83030','USA');

INSERT INTO player VALUES(119,'Leanne Gills','40.67.8555','67 Rue Des Cinquante Otage','Nantes',NULL,'44000','France');

INSERT INTO player VALUES(121,'Bill Carey','07-98 9555','Erling Skakkes Gate 78','Stavern',NULL,'410','Norway');

INSERT INTO player VALUES(114,'Adam Craft','03 9520 4555','636 St Kilda Road Level 3','Melbourne','Victoria','3004','Australia');

INSERT INTO player VALUES(128,'Ben Court','(49)69 66 90 2555','Lyonerstr. 34','Frankfurt',NULL,'60528','Germany');

INSERT INTO player VALUES(141,'Eddie Carrey','(91)555 94 44','C/moralzarzal 86','Madrid',NULL,'28034','Spain');

INSERT INTO player VALUES(129,'Miley Connar','6505555787','5557 North Pendale Street','San Francisco','CA','94217','USA');

INSERT INTO player VALUES(125,'Hazel Croft','(26)642-7555','ul. Filtrowa 68','Warsawa',NULL,'01-012','Poland');

INSERT INTO player VALUES(124,'Mandy Linn','4155551450','5677 Strong St.','San Rafael','CA','97562','USA');

INSERT INTO player VALUES(231,'Lara Ives','21255557818','897 Long Airport Avenue','NCY','NY','10022','USA');

INSERT INTO team VALUES(10100,'S18\_1749','Tennis','Paris France','Adam Jones');

INSERT INTO team VALUES(10103,'S10\_4325','Football','Melbourne Australia','Mark Fox');

INSERT INTO team VALUES(10167,'S18\_1749','Tennis','Paris France','Will Smith');

INSERT INTO team VALUES(10564,'S24\_1345','Tennis','Paris France','Adam Jones');

INSERT INTO team VALUES(10732,'S11\_9087','Football','Melbourne Australia','Mark Lee');

INSERT INTO team VALUES(10897,'S18\_4409','Football','Melbourne Australia','Cameron Box');

INSERT INTO team VALUES(10903,'S21\_4532','Rugby','Frankfurt Germany','Bill Green');

INSERT INTO team VALUES(11045,'S17\_2091','Cricket','Los Angeles USA','Sam Will');

INSERT INTO team VALUES(11412,'S18\_3409','Tennis','Paris France','Will Smith');

INSERT INTO team VALUES(11453,'S24\_1345','Polo','Paris France','Amanda Kay');

INSERT INTO team VALUES(11509,'S20\_9083','Polo','Paris France','Judith Max');

INSERT INTO team VALUES(11897,'S18\_5690','Basketball','New York USA','Max Williams');

INSERT INTO team VALUES(12098,'S12\_2795','Cricket','Los Angeles USA','Sam Will');

INSERT INTO team VALUES(12345,'S19\_2313','Baseball','New York USA','Bob Karl');

INSERT INTO team VALUES(12945,'S20\_9083','Baseball','New York USA','Karl Marx');

INSERT INTO team VALUES(13209,'S21\_5092','Basketball','New York USA','Max Williams');

INSERT INTO team VALUES(13456,'S12\_8904','Cricket','Los Angeles USA','Sam Will');

INSERT INTO team VALUES(14321,'S22\_4501','Tennis','Paris France','Will Smith');

INSERT INTO playsfor VALUES(103,10100,'Tennis','Adam Jones');

INSERT INTO playsfor VALUES(103,10103,'Football','Mark Fox');

INSERT INTO playsfor VALUES(112,10167,'Tennis','Will Smith');

INSERT INTO playsfor VALUES(119,10564,'Tennis','Adam Jones');

INSERT INTO playsfor VALUES(121,10732,'Football','Mark Lee');

INSERT INTO playsfor VALUES(114,10897,'Football','Cameron Box');

INSERT INTO playsfor VALUES(128,10903,'Rugby','Bill Green');

INSERT INTO playsfor VALUES(141,11045,'Cricket','Sam Will');

INSERT INTO playsfor VALUES(129,11412,'Tennis','Will Smith');

INSERT INTO playsfor VALUES(119,11453,'Polo','Amanda Kay');

INSERT INTO playsfor VALUES(125,11509,'Polo','Judith Max');

INSERT INTO playsfor VALUES(119,11897,'Basketball','Max Williams');

INSERT INTO playsfor VALUES(124,12098,'Cricket','Sam Will');

INSERT INTO playsfor VALUES(119,12345,'Baseball','Bob Karl');

INSERT INTO playsfor VALUES(231,12945,'Baseball','Karl Marx');

INSERT INTO playsfor VALUES(129,13209,'Basketball','Max Williams');

INSERT INTO playsfor VALUES(124,13456,'Cricket','Sam Will');

INSERT INTO playsfor VALUES(129,14321,'Tennis','Will Smith');

SELECT \*

FROM player, team

ORDER BY position\_no;

SELECT \*

FROM playsfor;

SELECT \*

FROM team;

SELECT \*

FROM player

ORDER BY player\_no;

SELECT title

FROM academic

WHERE title IS NOT NULL

GROUP BY title;

SELECT famname, givename, initials

FROM academic

ORDER BY famname DESC, givename DESC, initials DESC;

SELECT instname, deptname

FROM department

WHERE LOWER(state) = 'vic'

OR LOWER(state) = 'tas';

SELECT givename, famname

FROM academic

WHERE RTRIM(givename) LIKE '%y';

SELECT COUNT(\*)

FROM paper

WHERE LOWER(title) LIKE '%data %';

SELECT \*

FROM academic, author

WHERE LOWER(famname) LIKE '%pr%'

ORDER BY panum DESC;

SELECT \*

FROM academic;

SELECT acnum

FROM academic, department

WHERE descrip LIKE '%CS%'

ORDER BY acnum;