Faculty of Engineering and Computer Science
Expectations of Originality

This form sets out the requirements for originality for work submitted by students in the Faculty of Engineering and Computer Science. Submissions such as assignments, lab reports, project reports, computer programs and take-home exams must conform to the requirements stated on this form and to the Academic Code of Conduct. The course outline may stipulate additional requirements for the course.

1. Your submissions must be your own original work. Group submissions must be the original work of the students in the group.
2. Direct quotations must not exceed 5% of the content of a report, must be enclosed in quotation marks, and must be attributed to the source by a numerical reference citation[1]. Note that engineering reports rarely contain direct quotations.
3. Material paraphrased or taken from a source must be attributed to the source by a numerical reference citation.
4. Text that is inserted from a web site must be enclosed in quotation marks and attributed to the web site by numerical reference citation.
5. Drawings, diagrams, photos, maps or other visual material taken from a source must be attributed to that source by a numerical reference citation.
6. No part of any assignment, lab report or project report submitted for this course can be submitted for any other course.
7. In preparing your submissions, the work of other past or present students cannot be consulted, used, copied, paraphrased or relied upon in any manner whatsoever.
8. Your submissions must consist entirely of your own or your group's ideas, observations, calculations, information and conclusions, except for statements attributed to sources by numerical citation.
9. Your submissions cannot be edited or revised by any other student.
10. For lab reports, the data must be obtained from your own or your lab group's experimental work.
11. For software, the code must be composed by you or by the group submitting the work, except for code that is attributed to its sources by numerical reference.

You must write one of the following statements on each piece of work that you submit:

For individual work: **"I certify that this submission is my original work and meets the Faculty's Expectations of Originality"**, with your signature, I.D. #, and the date.

For group work: **"We certify that this submission is the original work of members of the group and meets the Faculty's Expectations of Originality"**, with the signatures and I.D. #s of all the team members and the date.

A signed copy of this form must be submitted to the instructor at the beginning of the semester in each course.

I certify that I have read the requirements set out on this form, and that I am aware of these requirements. I certify that all the work I will submit for this course will comply with these requirements and with additional requirements stated in the course outline.

Course Number: Comp 353 - X   Instructor: N. Shiri

Name: Kai Nicoll-Griffith   I.D. #: 40012407

Signature: Kainicolgriffith   Date: Wednesday, February 14th 2017 [14-01-17]

[1] Rules for reference citation can be found in "Form and Style" by Patrick MacDonagh and Jack Bordan, fourth edition, May, 2000, available at http://www.encs.concordia.ca/scs/Forms/Form&Style.pdf.

Approved by the ENCS Faculty Council February 10, 2012

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Comp353 Warm-Up Report

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Team kzc353_4

February 15, 2018

1 Assumptions

There are five relations:

i. Students,

ii. Teams,

iii. Members,

iv. Projects,

v. Demos.

Members is the many to one relationship between Students and Teams. The projects entity does not have any relation to the other entities. The underlined attributes are set to not null as they are keys. Many attributes are varchar types since they could vary in length and may contain letters, numbers and symbols.

2 Constraints

– Every student belongs to one and only team.

– Every team has at most 4 members.

– Every team has a unique demo.

– No student can do a demo without being a member of a team

– A project is a distinct entity independent of Students, Members, Teams, Demos.

3 E/R Diagram and Schema

3.1 Enitity Relationship Diagram
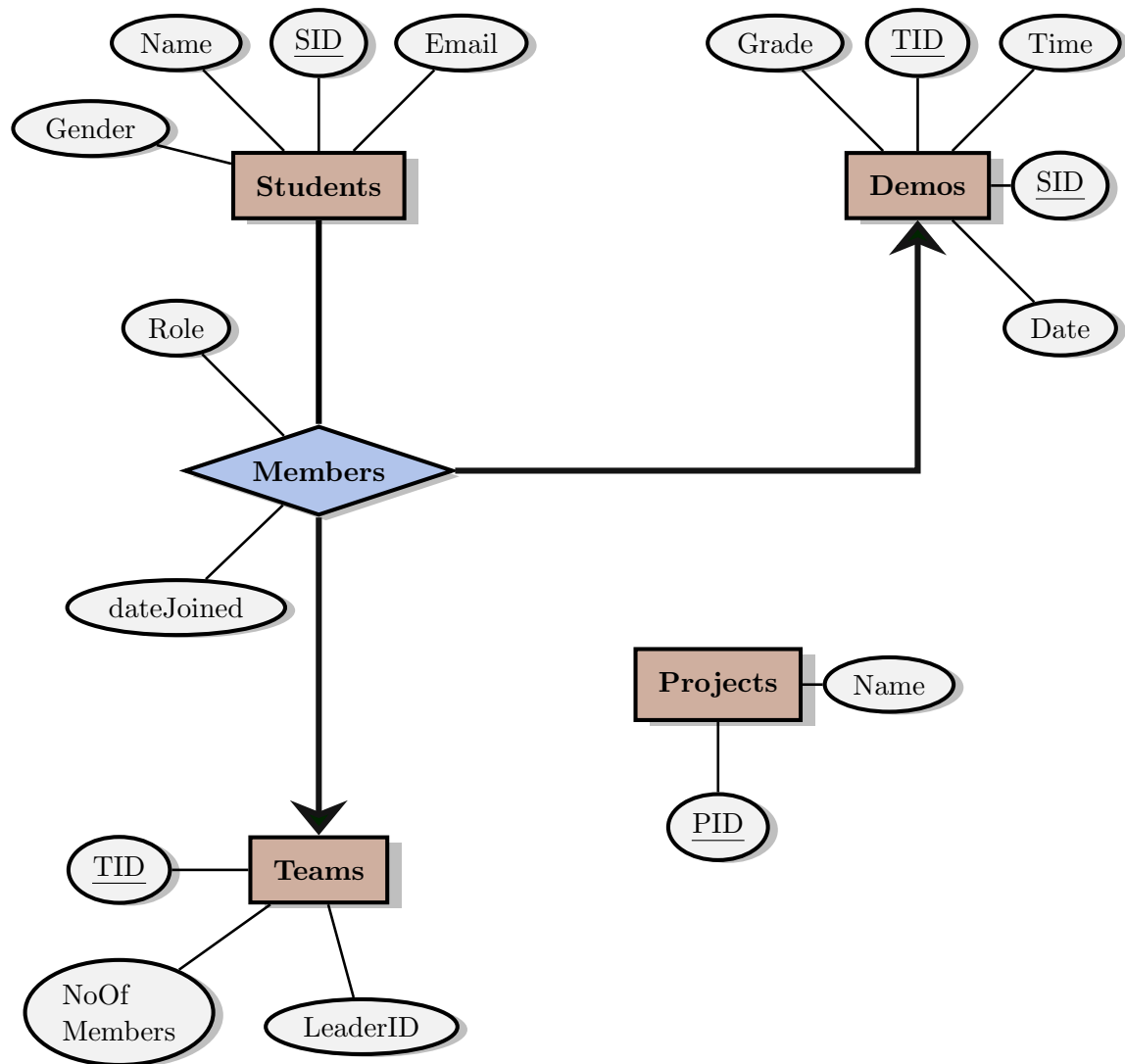
3.2 Schema

Students (<u>SID</u>, Name, gender, email)
Projects (<u>PID</u>, Name)
Teams (<u>TID</u>, LeaderID, NoOfMembers)
Members (<u>SID</u>, <u>TID</u>, dateJoined, role)
Demos (<u>SID</u>, <u>TID</u>, Date, time, grade)

4 Queries

Queries Below are the 9 queries implemented in SQL and their respective outputs.

The database can be queried at the following url: `https://kzc353.encs.concordia.ca/index.php`.

1. Which student(s) is not a member of any team?

   ```
   SELECT students.sid, students.name
   FROM students
   WHERE students.sid NOT IN (SELECT members.sid FROM members);
   ```

   Output:

sid	name	sid	name
40	Helen-elizabeth Turn	58	Sabrina Woodley
41	Leila Bertot	59	Bridie Hansard
43	Sophronia Bruckner	60	Gertrudis Pykett
44	Eldin Roberds	61	Mord Tipperton
46	Alison Ivakin	62	Helen Hadkins
47	Izabel Dollin	67	Cecilia Ewbanck
48	Sallie Easlea	68	Faun Whales
49	Imogen Berrigan	74	King Cottrell
53	Stanford De Cleyne	75	Lorin De Vere
55	Etta Woolfenden	76	Lavina Wilks
56	Skippie Eglese	77	Arley Escoffer
57	Krissie Loges		

2. For each team, list its members

```
SELECT members.sid, students.name, members.tid
FROM members, students
WHERE students.sid = members.sid;
```

Output:

sid	name	tid	sid	name	tid
1	Natal Gravett	1	98	Khalil Baudrev	7
8	Eal Bevar	1	21	Felita Martinson	8
13	Hadrian Finlaison	1	69	Shaun Bretland	8
34	Marcelline Wardlaw	1	52	Clerkclaude Vellacott	9
66	Camilla Ivanuschka	2	87	Hans Gilstoun	9
85	Ravner Edelston	3	97	Cirstofor Arnaldv	9
90	Daron Kenrat	3	2	Faustine Millsap	10
100	Laurie Emsden	3	10	Prue Primarolo	10
84	Tatum Rehorek	4	15	Maurv Pavinese	10
20	Job Klimsch	5	16	Roz Feavvour	10
95	Cobb Bernardeau	5	3	Evita Willbourne	11
23	Misha Dener	6	11	Lamar Sabbins	11
89	Gregor Paridge	6	37	Lavena Toe	11
99	Andrea Bramont	6	51	Michaelina Rosiello	11
4	Johnette Corkell	7	22	Kerstin Stairmon	12
88	Millard Skeleton	7	82	Phaedra Nyland	12
5	Patty Connett	13	7	Hastie Broggini	19
9	Orville Jarnell	13	38	Benito Jeste	19
17	Rafael Ever	13	54	Derron McGlynn	19
19	Diane-marie Kubasiewicz	13	78	Jase Langridge	19
6	Cozmo Storres	14	27	Marven Hedge	20
12	Eugene Killwick	14	65	Chelsey Kettle	20
18	Berti Yglesia	14	28	Templeton Rickaert	21
45	Ouintana Gidney	14	32	Karen Barens	21
73	Ruthe Coolson	15	29	Pammie Milch	22
64	La verne Officer	16	86	Ilario Hinrich	22
83	Codee Bevn	16	30	Darius Doreward	23
96	Orelie Boullin	16	50	Jeremiah O'Hern	23
25	Smith Pauwel	17	31	Petronia Shoveller	24
72	Milka Bridgnell	17	70	Nathanil Cockerham	24
26	Charlotta Josefsson	18	33	Colas Paff	25
71	Elinor Mottershead	18	39	Robinet Pethybridge	25
81	Konstance Bamburv	26	80	Leslev Stove	28
93	Maison Ciccetti	26	92	Ellene Potzold	28
94	Boony Innes	26	42	Jermaine Ridolfi	29
14	Bonny Brazenor	27	79	Gerrilee Jagson	29
35	Rodina Mebius	27	91	Kendricks Stainburn	29
63	Jackqueline Chant	28	24	Alberto Lathave	30
			36	Jesse Baike	30

3. Who was not present in the demo of a team?

```
SELECT students.sid, students.name, members.tid
FROM students, members
WHERE students.sid = members.sid AND students.sid NOT IN (SELECT demos.sid FROM demos);
```

Output:

sid	name	tid
12	Eugene Killwick	14
18	Berti Yglesia	14
25	Smith Pauwel	17
28	Templeton	21
37	Lavena Toe	11
54	Derron McGlynn	19
79	Gerrilee Jagson	29
89	Gregor Paridge	6
99	Andrea Bramont	6

4. List the teams that have less than 4 members

```
SELECT teams.tid
FROM teams
WHERE teams.no_of_members < 4;
```

Output:

tid	tid
2	18
3	20
4	21
5	22
6	23
7	24
8	25
9	26
12	27
15	28
16	29
17	39

5. Given a TID, list the names of the members

```
SELECT students.name
FROM students, members
WHERE students.sid = members.sid AND members.tid = ??;
```

For this query, the *??* would be replaced with a TID. We expect values between 1 and 30, any other value would not return anything.

Output for the query with a value of *11* (i.e. TID = 11):

name
Evita Willbourne
Lamar Sabbins
Lavena Toe
Michaelina Rosiello

6. Given a date, list all the teams that have demos on that day

```
SELECT DISTINCT demos.tid
FROM demos
WHERE demos.date = 'yyyy-mm-dd';
```

For this query, the *yyyy-mm-dd* would be replaced with a given date. Our schema uses the dates 2018-02-16 and 2018-02-17, any other values would not return anything. We also expect the parameter to be entered in this format. Any other format would result in an error.

Output for the query with a value of *2018-02-16*:

tid
1
10
11
7
5
8
12
6
18
20
22
21
9
17
3

7. For each team that is not complete, list the TID and the capacity to increase

```
SELECT teams.tid, 4 - teams.no_of_members AS 'Capacity to Increase'
FROM teams
WHERE teams.no_of_members < 4;
```

Output:

tid	Capacity to Increase	tid	Capacity to Increase
2	3	18	2
3	1	20	2
4	3	21	2
5	2	22	2
6	1	23	2
7	1	24	2
8	2	25	2
9	1	26	1
12	2	27	2
15	3	28	1
16	1	29	1
17	2	30	2

8. Given a student Name or ID, find his/her team ID

   When given a student ID:

```
SELECT members.tid
FROM members
WHERE members.sid = ??;
```

   For this query, the *??* would be replaced with the student's ID. We expect values between 1 and 100, any other value would not return anything.

   When given a student Name:

```
SELECT members.tid
FROM members, students
WHERE students.sid = members.sid AND students.name = 'Student name';
```

   For this query, *Student name* would be replaced with the student's name.

   Output for the query with a value of *1* or *Natal Gravett*:

tid
1

9. Given a student Name or ID, find the names and SID of his/her teammates

   When given a student ID:

```
SELECT students.sid, students.name
FROM students, members
WHERE students.sid = members.sid
AND members.tid = (SELECT members.tid FROM members WHERE members.sid = ??)
AND students.sid <> ??;
```

For this query, the *??* would be replaced with the student's ID. We expect values between 1 and 100, any other value would not return anything.

When given a student Name:

```
SELECT students.sid, students.name
FROM students, members
WHERE students.sid = members.sid
AND members.tid =
(SELECT members.tid
FROM students, members
WHERE students.sid = members.sid AND students.name = 'Student Name')
AND students.name <> 'Student Name';
```

For this query, *Student name* would be replaced with the student's name.

Output for the query with a value of *14* or *Cozmo Storres*:

sid	name
12	Eugene Killwick
18	Berti Yglesia
45	Ouintana Gidney