COSC 4606 Project 2

Report

Darrel Asare

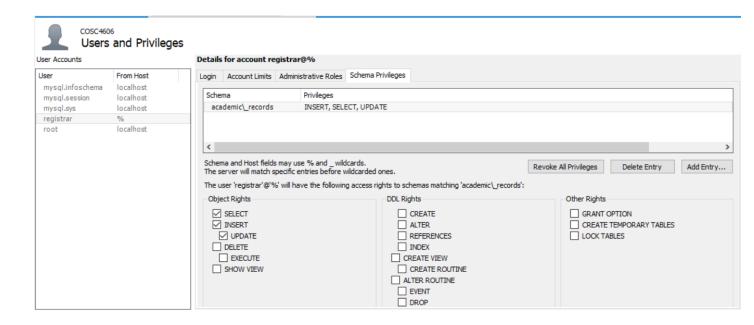
Screenshots for Functional Requirements

Testing_java_code for database administrators using root.

Academic staff

```
231 Kakashi Hatake Kakashi@mail.com 2021-09-07 2021-12-18 1958 R S Regina 306-533-7822 1980-03-12 3506 Fall 3706
232 Minato Namikaze Minato@mail.com 2022-01-12 2022-04-26 563 F D Neustadt 519-799-6367 1984-05-04 3707 Winter 2707
233 John Zao John@mail.com 2021-09-07 2021-12-18 1819 D P Coniston 705-694-0503 1986-11-15 3596 Fall 3706
234 Ryu Effron ryu@mail.com 2022-01-12 2022-04-26 193 C H Montreal 514-265-8268 1981-02-20 2056 Winter null
235 Floyd Lawton floyed@mail.com 2021-09-07 2021-12-18 29 L A Brantford 519-755-8613 1978-03-11 3506 Fall null
236 Oliver King oliver@mail.com 2022-01-12 2022-04-26 3992 A Edmonton 780-604-6789 1990-06-16 2707 Winter null
```

Registrar privileges



Original students table

	StudentID	FirstName	LastName	Email	DateOfBirth	Address	City	MobilePhone	Course_Enroll_ID	StartDate	EndDate
•	121	Ichigo	Kuro	ichigo@mail.com	1998-09-24 00:00:00	2864 Rd	San Jose	408-363-8840	3506	2021-09-08 00:00:00	2021-12-17 00:00:00
	122	Boruto	Uzumaki	boruto@mail.com	2001-03-22 00:00:00	4041 L A	New York	718-572-2644	3707	2022-01-13 00:00:00	2022-04-25 00:00:00
	123	Renji	Abari	renji@mail.com	1998-02-17 00:00:00	1556 V P	Kinuso	780-775-8665	3706	2021-09-08 00:00:00	2021-12-17 00:00:00
	124	Matt	Murdock	matt@mail.com	2000-06-16 00:00:00	911 K Rd	North Vancouver	604-981-8242	2707	2022-01-13 00:00:00	2022-04-25 00:00:00
	125	Shawn	Rollins	shawn@mail.com	1999-07-09 00:00:00	1299 I A	Toronto	416-259-7500	3596	2021-09-08 00:00:00	2021-12-17 00:00:00
	126	Seth	Rogan	seth@mail.com	2000-01-12 00:00:00	2626 P B	Dorval	514-403-3403	2056	2022-01-13 00:00:00	2022-04-25 00:00:00

Testing java code for registrar inserting values

```
Insert complete

Process finished with exit code 0
```

Students table after insert

	StudentID	FirstName	LastName	Email	DateOfBirth	Address	City	MobilePhone	Course_Enroll_ID	StartDate	EndDate
•	121	Ichigo	Kuro	ichigo@mail.com	1998-09-24 00:00:00	2864 Rd	San Jose	408-363-8840	3506	2021-09-08 00:00:00	2021-12-17 00:00:00
	122	Boruto	Uzumaki	boruto@mail.com	2001-03-22 00:00:00	4041 L A	New York	718-572-2644	3707	2022-01-13 00:00:00	2022-04-25 00:00:00
	123	Renji	Abari	renji@mail.com	1998-02-17 00:00:00	1556 V P	Kinuso	780-775-8665	3706	2021-09-08 00:00:00	2021-12-17 00:00:00
	124	Matt	Murdock	matt@mail.com	2000-06-16 00:00:00	911 K Rd	North Vancouver	604-981-8242	2707	2022-01-13 00:00:00	2022-04-25 00:00:00
	125	Shawn	Rollins	shawn@mail.com	1999-07-09 00:00:00	1299 I A	Toronto	416-259-7500	3596	2021-09-08 00:00:00	2021-12-17 00:00:00
	126	Seth	Rogan	seth@mail.com	2000-01-12 00:00:00	2626 PB	Dorval	514-403-3403	2056	2022-01-13 00:00:00	2022-04-25 00:00:00
	127	Brock	Rain	brock@mail.com	1998-02-26 00:00:00	1565 FD	Harrow	519-738-5371	3506	2021-09-08 00:00:00	2021-12-17 00:00:00

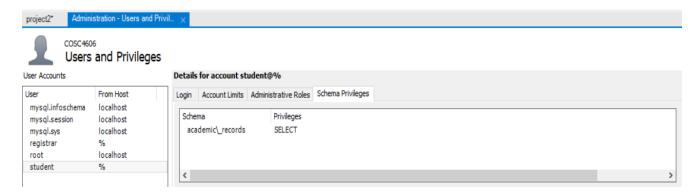
Java code for Registrar update to students table

```
Update complete

Process finished with exit code 0
```

Students table after updating email to brock@gmail.com instead of brock@mail.com

	StudentID	FirstName	LastName	Email	DateOfBirth	Address	City	MobilePhone	Course_Enroll_ID	StartDate	EndDate
•	121	Ichigo	Kuro	ichigo@mail.com	1998-09-24 00:00:00	2864 Rd	San Jose	408-363-8840	3506	2021-09-08 00:00:00	2021-12-17 00:00:00
	122	Boruto	Uzumaki	boruto@mail.com	2001-03-22 00:00:00	4041 L A	New York	718-572-2644	3707	2022-01-13 00:00:00	2022-04-25 00:00:00
	123	Renji	Abari	renji@mail.com	1998-02-17 00:00:00	1556 V P	Kinuso	780-775-8665	3706	2021-09-08 00:00:00	2021-12-17 00:00:00
	124	Matt	Murdock	matt@mail.com	2000-06-16 00:00:00	911 K Rd	North Vancouver	604-981-8242	2707	2022-01-13 00:00:00	2022-04-25 00:00:00
	125	Shawn	Rollins	shawn@mail.com	1999-07-09 00:00:00	1299 I A	Toronto	416-259-7500	3596	2021-09-08 00:00:00	2021-12-17 00:00:00
	126	Seth	Rogan	seth@mail.com	2000-01-12 00:00:00	2626 P B	Dorval	514-403-3403	2056	2022-01-13 00:00:00	2022-04-25 00:00:00
	127	Brock	Rain	brock@gmail.com	1998-02-26 00:00:00	1565 FD	Harrow	519-738-5371	3506	2021-09-08 00:00:00	2021-12-17 00:00:00

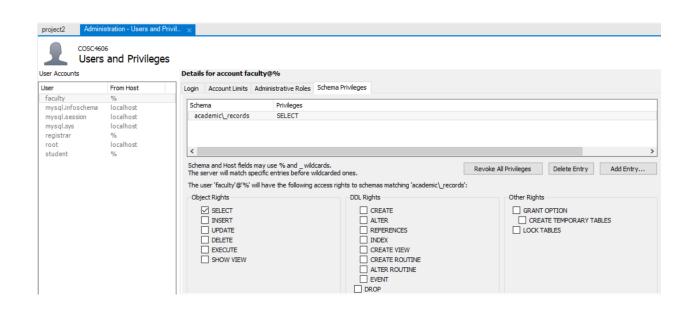


Java code for student to check academic summary

```
121 2021 75 79 3707 Systems Analysis Winter
Process finished with exit code 0
```

Academic_summary table view

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StudentID	Year	Final_Grades	GPA	CourseID	Course_Names	Term
121	2021	75	79	3707	Systems Analysis	Winter
121	2021	75	79	3706	Project Management	Fall
121	2021	75	79	3596	Mobile Development	Fall
121	2021	75	79	3506	Software Engineering	Fall
121	2021	75	79	2707	E-Business Architect	Winter
121	2021	75	79	2056	Discrete Math	Winter
125	2021	90	82	3707	Systems Analysis	Winter
125	2021	90	82	3706	Project Management	Fall
125	2021	90	82	3596	Mobile Development	Fall
125	2021	90	82	3506	Software Engineering	Fall
125	2021	90	82	2707	E-Business Architect	Winter
125	2021	90	82	2056	Discrete Math	Winter
122	2022	70	77	3707	Systems Analysis	Winter
122	2022	70	77	3706	Project Management	Fall
122	2022	70	77	3596	Mobile Development	Fall
122	2022	70	77	3506	Software Engineering	Fall
122	2022	70	77	2707	E-Business Architect	Winter
122	2022	70	77	2056	Discrete Math	Winter
126	2022	68	72	3707	Systems Analysis	Winter
126	2022	68	72	3706	Project Management	Fall
126	2022	68	72	3596	Mobile Development	Fall
126	2022	68	72	3506	Software Engineering	Fall
126	2022	68	72	2707	E-Business Architect	Winter
126	2022	68	72	2056	Discrete Math	Winter
123	2021	74	78	3707	Systems Analysis	Winter
123	2021	74	78	3706	Project Management	Fall
123	2021	74	78	3596	Mobile Development	Fall
123	2021	74	78	3506	Software Engineering	Fall
123	2021	74	78	2707	E-Business Architect	Winter
123	2021	74	78	2056	Discrete Math	Winter
124	2022	88	80	3707	Systems Analysis	Winter
124	2022	88	80	3706	Project Management	Fall
124	2022	88	80	3596	Mobile Development	Fall
124	2022	88	80	3506	Software Engineering	Fall
124	2022	88	80	2707	E-Business Architect	Winter
124	2022	88	80	2056	Discrete Math	Winter
	+	+	+	+	+	+



Java code for faculty to check course list he is teaching

```
| Jober | John |
```

Course_list table view

	CourseID	Course_Names	Term	sections	Faculty_Teaching_Course	FacultyID	Team_Teaching
•	2056	Discrete Math	Winter	5	Mr.Effron	234	0
	2707	E-Business Architect	Winter	8	Mr.Namikaze	232	0
	3506	Software Engineering	Fall	2	Mr.Hatake	231	1
	3596	Mobile Development	Fall	1	Mr.Zao	233	1
	3706	Project Management	Fall	10	Mr.Lawton	235	0
	3707	Systems Analysis	Winter	4	Mr.Namikaze	232	1

Forms, Reports and Deliverables

User Manual

This report will explain the project of an academic record system using pictures and paragraphs. This time the tables and forms will be shown from SQL Workbench working with SQL Server.

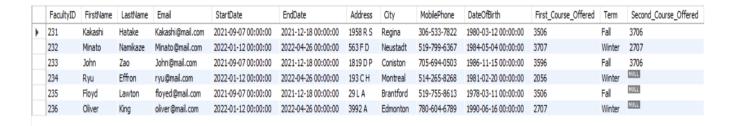
Evidence of normalized tables

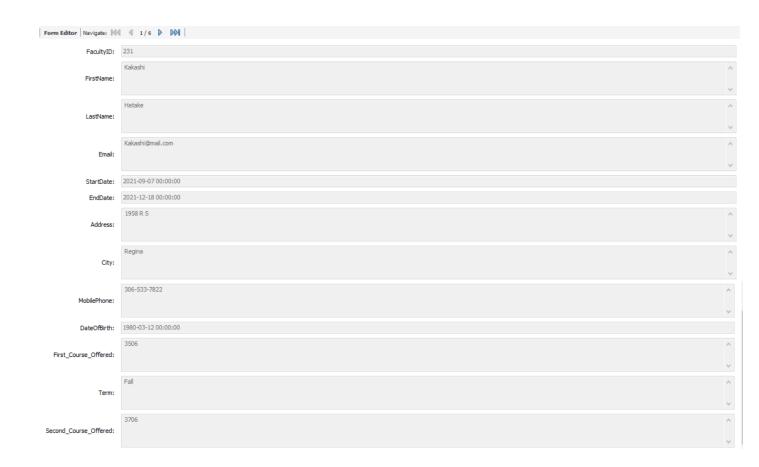
All the tables are in 1NF because each attribute in a relation has atomic single values. In the Coop table, the student name attribute also has the student first names underscore last names. We also have a student course deletion table which is in 2NF because we moved fields from the courses table which means they do not have to be fully dependent on the primary key. This makes it easier to see which student has deleted a course instead of adding that information to the courses table, which will cause the table to increase in size.

<u>Printouts of test runs for forms and reports with table and query</u> <u>structures</u>

Forms

1. add a faculty member to the academic staff





2. register a student in the university

	StudentID	FirstName	LastName	Email	DateOfBirth	Address	City	MobilePhone	Course_Enroll_ID	StartDate	EndDate
•	121	Ichigo	Kuro	ichigo@mail.com	1998-09-24 00:00:00	2864 Rd	San Jose	408-363-8840	3506	2021-09-08 00:00:00	2021-12-17 00:00:00
	122	Boruto	Uzumaki	boruto@mail.com	2001-03-22 00:00:00	4041 L A	New York	718-572-2644	3707	2022-01-13 00:00:00	2022-04-25 00:00:00
	123	Renji	Abari	renji@mail.com	1998-02-17 00:00:00	1556 V P	Kinuso	780-775-8665	3706	2021-09-08 00:00:00	2021-12-17 00:00:00
	124	Matt	Murdock	matt@mail.com	2000-06-16 00:00:00	911 K Rd	North Vancouver	604-981-8242	2707	2022-01-13 00:00:00	2022-04-25 00:00:00
	125	Shawn	Rollins	shawn@mail.com	1999-07-09 00:00:00	1299 I A	Toronto	416-259-7500	3596	2021-09-08 00:00:00	2021-12-17 00:00:00
	126	Seth	Rogan	seth@mail.com	2000-01-12 00:00:00	2626 P B	Dorval	514-403-3403	2056	2022-01-13 00:00:00	2022-04-25 00:00:00
	127	Brock	Rain	brock@gmail.com	1998-02-26 00:00:00	1565 FD	Harrow	519-738-5371	3506	2021-09-08 00:00:00	2021-12-17 00:00:00

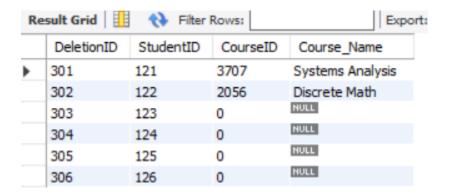


3. assign a faculty member to teach a given section of a given course in a given term, permitting the possibility of "team teaching" with more than one faculty member for a given section

	CourseID	Course_Names	Term	sections	Faculty_Teaching_Course	FacultyID	Team_Teaching
•	2056	Discrete Math	Winter	5	Mr.Effron	234	0
	2707	E-Business Architect	Winter	8	Mr.Namikaze	232	0
	3506	Software Engineering	Fall	2	Mr.Hatake	231	1
	3596	Mobile Development	Fall	1	Mr.Zao	233	1
	3706	Project Management	Fall	10	Mr.Lawton	235	0
	3707	Systems Analysis	Winter	4	Mr.Namikaze	232	1

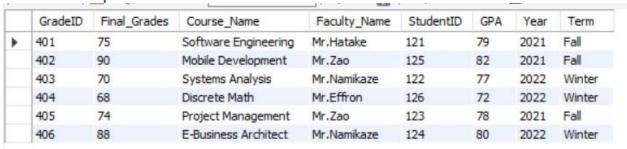


- 4. enroll a student in a particular course Shown in the students table with course enroll id.
- 5. delete a student from a particular course





6. alter a student record to permit, for example, entering a grade for a completed course



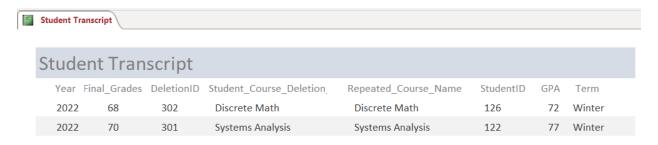


Reports and Information from project 1

1. display a class list, given a course id, term and section id, sorted by student name. Indicate whether each student is full-time or part-time that term and whether the student is in the co-op program.

F	Co-op Information									
	Co-op Infor	matior	า							
	StudentName	CourseID	Courses_Term	sections	Co-op_ID	StudentID	Full_Time	Part_Time	Co-op_Progr	am
	Boruto_Uzumaki	3707	Winter	4	642	122		ightharpoons	\checkmark	į
	Ichigo_Kuro	3506	Fall	2	641	121	$ lap{\checkmark}$			
	Matt_Murdock	2707	Winter	8	644	124	ightharpoons		\checkmark	
	Renji_Abari	3706	Fall	10	643	123	☑			
	Seth_Rogan	2056	Winter	5	646	126	✓			
	Shawn_Rollins	3596	Fall	1	645	125		✓	✓	
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2. display a student transcript, given a student id. Show all courses enrolled, including failed courses and dropped courses, with an average grade displayed for each academic term and the average overall, using in the latter case only the best mark for repeated courses. The transcript should be ordered by academic year, earliest to latest, and within a given year by course id.



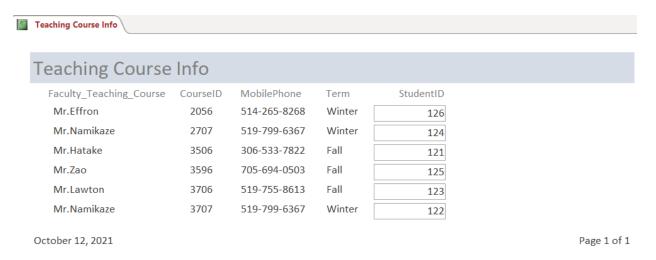
Final grades after they repeated the deleted course.

3. display a table of all students (name, id and contact phone number) currently enrolled in a given degree program (eg. B.Sc.4

COSC), sorted by student name. (Provide sufficient data to be able to run several tests)

Degree Program						
Degree Progr	am					
StudentName	ProgramID	StudentID	BSC	COSC	MobileNumber	
Boruto_Uzumaki	722	122	✓		718-572-2644	
Ichigo_Kuro	721	121		✓	408-363-8840	
Matt_Murdock	724	124		\checkmark	604-981-8242	
Renji_Abari	723	123	✓		780-775-8665	
Seth_Rogan	726	126		✓	514-403-3403	
Shawn_Rollins	725	125	✓		416-259-7500	
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4. display the instructor name, course id and home phone number of all instructors teaching a course to some student in a given term, given the student id and term.



5. display a list of all courses taught by a faculty member, grouped by term (earliest to latest) and sorted by course id, given an instructor id and either a term, a range of

List Courses Taught				
List Course	es Taught			
Term	CourseID	Course_Names	FacultyID	Faculty_Teaching_Course
Fall	3506	Software Engineering	231	Mr.Hatake
	3596	Mobile Development	233	Mr.Zao
	3706	Project Management	235	Mr.Lawton
Winter	2056	Discrete Math	234	Mr.Effron
	2707	E-Business Architect	232	Mr.Namikaze
	3707	Systems Analysis	232	Mr.Namikaze
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Database design for ER diagrams and database schemas

