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Lesson 5: Joins and Unions

For Joins problems Use this tutorial if needed :

https://www.w3schools.com/sql/sql\_join.asp

1. Join the film to the film\_actor table.

select \* from film

left join film\_actor

on film.film\_id=film\_actor.film\_id;

1 "Academy Dinosaur" "A Epic Drama of a Feminist And a Mad Scientist who must Battle a Teacher in The Canadian Rockies" 2006 1 6 0.99 86 20.99 "PG" "2013-05-26 14:50:58.951" "{""Deleted Scenes"",""Behind the Scenes""}" "'academi':1 'battl':15 'canadian':20 'dinosaur':2 'drama':5 'epic':4 'feminist':8 'mad':11 'must':14 'rocki':21 'scientist':12 'teacher':17" 1 1 "2006-02-15 10:05:03"

23 "Anaconda Confessions" "A Lacklusture Display of a Dentist And a Dentist who must Fight a Girl in Australia" 2006 1 3 0.99 92 9.99 "R" "2013-05-26 14:50:58.951" "{Trailers,""Deleted Scenes""}" "'anaconda':1 'australia':18 'confess':2 'dentist':8,11 'display':5 'fight':14 'girl':16 'lacklustur':4 'must':13" 1 23 "2006-02-15 10:05:03"

25 "Angels Life" "A Thoughtful Display of a Woman And a Astronaut who must Battle a Robot in Berlin" 2006 1 3 2.99 74 15.99 "G" "2013-05-26 14:50:58.951" "{Trailers}" "'angel':1 'astronaut':11 'battl':14 'berlin':18 'display':5 'life':2 'must':13 'robot':16 'thought':4 'woman':8" 1 25 "2006-02-15 10:05:03"

1. Join the actor table to the film\_actor table.

select \* from actor

left join film\_actor

on actor.actor\_id=film\_actor.actor\_id;

1 "Penelope" "Guiness" "2013-05-26 14:47:57.62" 1 1 "2006-02-15 10:05:03"

1 "Penelope" "Guiness" "2013-05-26 14:47:57.62" 1 23 "2006-02-15 10:05:03"

1 "Penelope" "Guiness" "2013-05-26 14:47:57.62" 1 25 "2006-02-15 10:05:03"

1 "Penelope" "Guiness" "2013-05-26 14:47:57.62" 1 106 "2006-02-15 10:05:03"

1 "Penelope" "Guiness" "2013-05-26 14:47:57.62" 1 140 "2006-02-15 10:05:03"

1. Try to join the actor, film\_actor, and film table together (3 joins!)

SELECT \*from film

left join film\_actor

on film.film\_id=film\_actor.film\_id

JOIN actor

on actor.actor\_id=film\_actor.actor\_id

1 "Academy Dinosaur" "A Epic Drama of a Feminist And a Mad Scientist who must Battle a Teacher in The Canadian Rockies" 2006 1 6 0.99 86 20.99 "PG" "2013-05-26 14:50:58.951" "{""Deleted Scenes"",""Behind the Scenes""}" "'academi':1 'battl':15 'canadian':20 'dinosaur':2 'drama':5 'epic':4 'feminist':8 'mad':11 'must':14 'rocki':21 'scientist':12 'teacher':17" 1 1 "2006-02-15 10:05:03" 1 "Penelope" "Guiness" "2013-05-26 14:47:57.62"

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25 "Angels Life" "A Thoughtful Display of a Woman And a Astronaut who must Battle a Robot in Berlin" 2006 1 3 2.99 74 15.99 "G" "2013-05-26 14:50:58.951" "{Trailers}" "'angel':1 'astronaut':11 'battl':14 'berlin':18 'display':5 'life':2 'must':13 'robot':16 'thought':4 'woman':8" 1 25 "2006-02-15 10:05:03" 1 "Penelope" "Guiness" "2013-05-26 14:47:57.62"

1. Using the following Link <https://github.com/niteen11/cuny_lagcc_micro_credential_data_analytics/tree/main/Track%20A/Unit%205%20-%20SQL_%20Relational%20Databases/guided%20exercise>

And attached data set (Student\_data and Student\_marks ) answer the following questions :

Students with the highest marks in Unit 4

select \* from student\_data

full outer join student\_marks

on student\_data.student\_id=student\_marks.student\_id

order by unit\_4 desc

"Wittie" "Reinard" "wreinardjj@ebay.com" "Male" "498-923-5460" false 704 1556 704 90 100 100

"Garrik" "Brussels" "gbrusselsqx@example.com" "Male" "987-447-7964" true 970 1822 970 90 98 100

"Kacie" "Kiddle" "kkiddle30@4shared.com" "Female" "428-291-5863" false 109 961 109 96 97 100

"Tadeas" "McDavitt" "tmcdavittbv@jugem.jp" "Male" "314-274-3658" true 428 1280 428 89 96 100

"Thomasin" "Melmoth" "tmelmoth1b@google.com.au" "Female" "727-843-8729" false 48 900 48 87 97 100

"Boothe" "Vonderdell" "bvonderdell1c@taobao.com" "Male" "122-164-1529" false 49 901 49 86 95 100

"Anette" "Polding" "apolding4e@tinypic.com" "Female" "789-519-2896" true 159 1011 159 87 92 100

"Ramsey" "Figgess" "rfiggessq5@so-net.ne.jp" "Male" "734-790-6648" false 942 1794 942 88 96 100

"Caritta" "Janek" "cjanek3k@netvibes.com" "Female" "956-716-5298" false 129 981 129 92 92 100

"Vinson" "Castiblanco" "vcastiblancoc9@facebook.com" "Male" "181-534-1861" true 442 1294 442 87 91 100

"Georgie" "Elcom" "gelcombp@wiley.com" "Female" "469-890-2321" false 422 1274 422 94 96 100

"Leeann" "Vynarde" "lvynardekb@psu.edu" "Female" "914-807-8827" true 732 1584 732 99 97 100

"Huntlee" "Clopton" "hclopton6c@craigslist.org" "Male" "215-531-0766" true 229 1081 229 94 100 100

"Cinda" "Chittie" "cchittieh2@paginegialle.it" "Female" "481-670-3098" false 615 1467 615 94 97 100

"Edee" "Marnes" "emarnesop@blog.com" "Female" "336-783-7559" false 890 1742 890 87 98 100

"Clarey" "Riceards" "criceardsmj@xinhuanet.com" "Female" "189-719-2438" false 812 1664 812 97 100 100

"Brynne" "Astill" "bastillj7@miitbeian.gov.cn" "Female" "327-544-9907" true 692 1544 692 88 98 100

"Clareta" "Wallett" "cwallettb9@cafepress.com" "Female" "384-340-4012" false 406 1258 406 97 94 100

"Marcia" "Yeomans" "myeomans9z@themeforest.net" "Female" "493-906-2255" false 360 1212 360 96 100 100

"Shara" "Prattington" "sprattingtonav@scribd.com" "Female" "809-236-2932" false 392 1244 392 88 100 100

|  |
| --- |
|  |  |
|  | -- Find students scored between 89 and 100 unit4 |
|  | select \* from student\_data  full outer join student\_marks  on student\_data.student\_id=student\_marks.student\_id  where unit\_4 between 89 and 100  "Ree" "Cornish" "rcornish2@jugem.jp" "Female" "968-480-8790" true 3 855 3 86 95 99 95  "Shina" "Freund" "sfreund3@sbwire.com" "Female" "860-203-9233" true 4 856 4 98 98 89 100  "Nero" "Vigours" "nvigours5@digg.com" "Male" "431-510-3535" true 6 858 6 97 91 93 88  "Emmet" "Valencia" "evalencia6@angelfire.com" "Male" "597-265-3781" true 7 859 7 92 97 97 98  "Koenraad" "Dugdale" "kdugdale7@ezinearticles.com" "Male" "527-450-6922" true 8 860 8 86 97 92 88  "Kenneth" "Frankish" "kfrankish9@google.pl" "Male" "958-128-3229" true 10 862 10 96 96 96 90  "Kelci" "Fone" "kfoneqo@npr.org" "Female" "140-593-4922" true 961 1813 961 85 99 99 97  "Fraser" "Epp" "feppqr@yolasite.com" "Male" "281-608-8306" false 964 1816 964 85 98 91 94  "Cirstoforo" "Fader" "cfaderqv@google.es" "Male" "324-970-7744" false 968 1820 968 98 94 100 88  "Ingrid" "Luney" "iluneyqw@themeforest.net" "Female" "445-948-5615" true 969 1821 969 93 100 94 92  "Garrik" "Brussels" "gbrusselsqx@example.com" "Male" "987-447-7964" true 970 1822 970 90 98 100 89  "Blinnie" "Caban" "bcabanr1@photobucket.com" "Female" "628-115-5678" false 974 1826 974 87 94 94 94  "Raynor" "Aldwick" "raldwickr3@github.com" "Male" "940-917-0232" true 976 1828 976 91 96 90 96  "Nomi" "Shurville" "nshurviller4@naver.com" "Female" "393-229-1884" true 977 1829 977 85 91 89 100  "Minna" "Dawdry" "mdawdryr5@jugem.jp" "Female" "285-923-7932" false 978 1830 978 85 96 92 96  "Stewart" "Pherps" "spherpsr8@gnu.org" "Male" "207-217-5510" true 981 1833 981 92 100 90 88  "Gavin" "Atkyns" "gatkynsr9@51.la" "Male" "437-909-5764" true 982 1834 982 98 96 89 92  "Olympia" "Philippon" "ophilipponra@wp.com" "Female" "862-893-2362" true 983 1835 983 95 90 96 97  "Madella" "Gear" "mgearrd@posterous.com" "Female" "450-720-3156" true 986 1838 986 92 94 96 95  "Gabe" "Inchley" "ginchleyre@cbc.ca" "Male" "561-732-9340" true 987 1839 987 98 90 94 89  "Barnard" "Crellim" "bcrellimrf@twitter.com" "Male" "445-843-7261" false 988 1840 988 94 94 98 100  "Sharona" "Letcher" "sletcherrh@cnbc.com" "Female" "657-823-1894" true 990 1842 990 86 90 91 92  "Bastien" "Barkus" "bbarkusri@reddit.com" "Male" "213-174-5123" false 991 1843 991 93 91 94 97  "Layne" "Beneteau" "lbeneteaurj@blog.com" "Female" "234-787-4858" false 992 1844 992 92 93 94 89  "Cybil" "Swainston" "cswainstonrk@purevolume.com" "Female" "254-549-4202" false 993 1845 993 96 99 91 95  "Chryste" "Oakland" "coaklandrl@wired.com" "Female" "324-544-8580" false 994 1846 994 96 93 94 93  "Brynn" "Starten" "bstartenrm@hubpages.com" "Female" "732-792-2013" false 995 1847 995 94 94 98 92  "Trevor" "Hamlyn" "thamlynrn@hexun.com" "Male" "501-997-9129" false 996 1848 996 100 93 92 96  "Morlee" "Lappin" "mlappinro@princeton.edu" "Male" "206-296-8562" false 997 1849 997 91 94 94 95  "Gaylord" "Cocozza" "gcocozzarr@cbslocal.com" "Male" "862-162-4225" true 1000 1852 1000 96 98 89 91 |
|  | Open ended questions: |
|  | -- Take a closer look at the tables that you created and come up with 10 different scenarios/ questions and form SQL |
|  | 1. Select all students that prefer hard copy books   select \* from student\_data  full outer join student\_marks  on student\_data.student\_id=student\_marks.student\_id  where book\_prefference\_hardcopy=’True’   1. Select all male students   select \* from student\_data  full outer join student\_marks  on student\_data.student\_id=student\_marks.student\_id  where gender=’Male’   1. Select all students that got an A in unit 3   select \* from student\_data  full outer join student\_marks  on student\_data.student\_id=student\_marks.student\_id  where unit\_3 between 89 and 100   1. Select all students that got a B in unit 2.   select \* from student\_data  full outer join student\_marks  on student\_data.student\_id=student\_marks.student\_id  where unit\_2 between 79 and 89   1. Select the worst performing students in Unit\_2   select \* from student\_data  full outer join student\_marks  on student\_data.student\_id=student\_marks.student\_id  order by unit\_2 asc   1. Select all students whose first names start with A   select \* from student\_data  full outer join student\_marks  on student\_data.student\_id=student\_marks.student\_id  where first\_name like “A%”   1. Select all students whose last names start with B   select \* from student\_data  full outer join student\_marks  on student\_data.student\_id=student\_marks.student\_id  where last\_name like “B%”   1. Select all students with a Harvard email address   select \* from student\_data  full outer join student\_marks  on student\_data.student\_id=student\_marks.student\_id  where email like “%@harvard%”   1. Select all students with a dropbox email address   select \* from student\_data  full outer join student\_marks  on student\_data.student\_id=student\_marks.student\_id  where email like “%@dropbox”  10. Arrange the students by last name in alphabetic order  select \* from student\_data  full outer join student\_marks  on student\_data.student\_id=student\_marks.student\_id  order by last\_name desc |