

程序代写代做 CS编程辅导



Data Manipulation Language (Advanced SQL Queries)

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程序代写代做 CS编程辅导 Advanced SQL Queries – Set Operations

- SQL incorporates se section erations: UNION (set union) and INTERSECT (set intersection), and INTERSECT (set difference / minus).
- Set operations result in return of a relation of tuples (no duplicates).
- Set operations apply to collations at that the same attribute types appearing in the same order, e.g., list all students who have either a gmail or hotmail email accollection in the same order.

```
(SELECT * FROM STUDENT WHERE Email like '%@gmail.com')
UNION

(SELECT * FROM STUDENT WHERE Email like '%@hotmail.com');
```

For example, the following query will not work

```
https://tutorcs.com
(SELECT StudentID, Name FROM STUDENT)
UNION
(SELECT Email FROM STUDENT);
```



Advanced 程序代写代做 CS编程辅导 Advanced SQL Queries – Join Operations

- When we want to ret from more than one relations, we often need to use join operation in the second s
- Consider the following queries, which both need a join operation between two relations:
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 - List the names of all courses which have been enrolled by at least one student. Assignment Project Exam Help
 - List all students, and their enrolled courses if any. Email: tutorcs@163.com

STUDENT		Course	
StudentID Nache: 75683 Email	No	Cname	Unit

https://tutorcs.com					
	ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate	



- Inner Join: tuples at the result only if there is at least one matching in both relationship.
- For the query "list the last one student", we use:

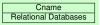
SELECT DISTINCT Charetutores

FROM COURSE c INNER JOIN ENROL e ON c.No=e.CourseNo;

Assign	mentæræject Exam	Help			
No	No Cname				
COMP2400	Relational Databases	6			
COMP3000:	t wad various barabase concepts	6			

OO: 749389#\\						
Studentin	<u>CourseNo</u>	<u>Semester</u>	Status	EnrolDate		
456	COMP1130	2016 S1	active	25/02/2016		
458 htt	neomphilipar	Cc20167871	active	25/02/2016		
456	COMP2400	2016 S2	active	09/03/2016		

Result:





Outer Join includes The Ind Right Join.

• Left/Right Join: all Left/Fight table are included in the result, even if there are no matches in the relations.

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Inner Join Assignment Project Exam Help Left Join Email: tutorcs@163.com

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https://bstores.com



• Left Join: A left join with mows of the left table regardless of whether there is a row that make the right table.

\mathbf{m}	Tutor CS		
ΙŒ	1/20164	ENROL1	
		<u>CourseNo</u>	<u>Semester</u>
т	456	COMP1130	2016 S1
	457	COMP1130	2016 S1
W	eC#st.	CEDMP248Q	2016 S2
- Y V	CIIIII.	OCCUPATION OF THE PERSON OF TH	

Assignment Stylpent Even Help					
Studentin	SName	nt Project	Exam _{hall} ieip		
456	Tom	25/01/1988	tom@gmail.com		
⁴ ₽8ma	11 Peterito	1200200916	2 peter@hotmail.com		

SELECT *

FROM STUDEN S 7447 ENROL1 e

ON s.StudentID=e.StudentID; https://tutorcs.com

StudentID	Name	DoB	Email	StudentID	CourseNo	Semester
456	Tom	25/01/1988	tom@gmail.com	456	COMP1130	2016 S1
456	Tom	25/01/1988	tom@gmail.com	456	COMP2400	2016 S2
458	Peter	20/02/1991	peter@hotmail.com	null	null	null



• Right Join: A right july with all rows of the right table regardless of whether there is a row hes on the left table.

從	Tunker Cs.		
liir	150 年1583年	ENROL1	
	N7830	<u>CourseNo</u>	<u>Semester</u>
ш		COMP1130	2016 S1
	457	COMP1130	2016 S1
XX	C456+ C	COMP2400	2016 S2
- V V	Conat. C	Stutules	

Λ.		STUDENT	and Errore IIal			
Studention						
456	Tom	25/01/1988	tom@gmail.com			
458 🔽	n Peter to	20/02/1987) 1	peter@hotmail.com			

SELECT *

FROM STUDENT SQUITT JOIN ENROL1 e

ON s.StudentID=e.StudentID;

https://tutorcs.com

StudentID	Name	DoB	Email	StudentID	CourseNo	Semester
456	Tom	25/01/1988	tom@gmail.com	456	COMP1130	2016 S1
null	null	null	null	457	COMP1130	2016 S1
456	Tom	25/01/1988	tom@gmail.com	456	COMP2400	2016 S2



• For the query "list all their enrolled courses if any", we can use either of the following innents:

SELECT s.*, "Collecto, e.Semester

FROM STUDENT s LEFT JOIN ENROL1 e

WeChat: cstylogcstudentID=e.StudentID;

SELECT s.*, Assignment Project Exam Help
FROM ENROL1 e RIGHT JOIN STUDENT s
Email: tutoren@153600001D=s.StudentID;

■ If we have 1000 tuple @:SħΦ≧NP,4㎡ the query result should contain at least 1000 tuples (one tuple in STUDENT may occur multiple times) with the following attributes: https://tutorcs.com

StudentID	Name	DoB	Email	CourseNo	Semester



• Motivation: An inne and a sall the data of the two tables for , with duplication

SELECT *

FROM STUDENT S INNER JOIN ENROL1 e

On s.StudentID=e.StudentID;

		Enrol1		
۸	StudentID	CourseNo	Semester	Talm
Н	ssignine	II COMPUISOC	20161811	петр
	457	COMP1130	2016 S1	
\mathbf{T}	456	COMP2400	2016 S2	
н	1112111 11111	$ncs(\omega + n)$	o.com	

STUDENT								
Student D: /Maryes & 940 de Email								
456	Tom	25/01/1988	tom@gmail.com					
458	Peter	20/02/1991	peter@hotmail.com					
HUUS	HILDS://LULOICS.COM							

Result:

StudentID	Name	DoB	Email	StudentID	CourseNo	Semester
456	Tom	25/01/1988	tom@gmail.com	456	COMP1130	2016 S1
456	Tom	25/01/1988	tom@gmail.com	456	COMP2400	2016 S2



Natural Join: A natural Join: A natural Join ins all the data of the two tables for only the matched rows, without the matched rows, without the matched rows, without the matched rows in the matched rows in

SELECT * RELECT *

FROM STUDENT S NATURAL JOIN ENROL1 e;

W	'eChat: c	estutores		
		Enrol1		
	StudentID	CourseNo	Semester	
\mathbf{A}	ssigmme	TCOMFO 180C	20X6IST1	Help
	457	COMP1130	2016 S1	1 1
-	.456	COMP2400	2016 S2]
- 191	maii: iui	orcs@16	5.com	

STUDENT							
StudentD: 7Name X9406 Email							
456	Tom	25/01/1988	tom@gmail.com				
458	Peter	20/02/1991	peter@hotmail.com				
https://tutores.com							

Result:

	StudentID	Name	DoB	Email	CourseNo	Semester
1	456	Tom	25/01/1988	tom@gmail.com	COMP1130	2016 S1
	456	Tom	25/01/1988	tom@gmail.com	COMP2400	2016 S2



- Natural Join: One k
 implicitly by comparitive states of the same names in both relations.
- For the query "list all the student NATURAL JOIN ENROL;

WeChat: cstutages StudentiD CourseNo Semester Status EnrolDate							
457	COMP1130	2016 S1	active	25/02/2016			

ı	Email: tutores (a) 163.com						
	StudentID	Name	DoB	Email			
	469():	74938	Q5 07/4988	tom@gmail.com			
	458	Peter	20/02/1991	peter@hotmail.com			

Result:(STUDENT.StudentID / เรียง เรียง

StudentID	Name	DoB	Email	CourseNo	Semester	Status	EnrolDate
456	Tom	25/01/1988	tom@gmail.com	COMP1130	2016 S1	active	25/02/2016



程序代写代做 CS编程辅导 Advanced SQL Queries – Subqueries

- Subqueries are just *** = 5 t are used where a relation is required.
- with aliases and renaming) to create *inline view* (exist only for the guery) WeChat: cstutores
- Subqueries can also be specified within the WHERE-clause, e.g.,

- Assignment Project Exam Help

 In subquery tests if tuple occurs in the result of the subquery
- EXISTS subquerinests whitemostic subquery results in non-empty relation
- using ALL, SOME of any before a subquery makes subqueries usable in comparison formulae
- in all these cases the condition involving the subquery can be negated using a preceding NOT



程序代写代做 CS编程辅导 Subqueries – In

Recall that, for the quantum students who have enrolled and their courses", we have:

SELECT *

FROM STUDENT NATURAL JOIN ENROL;

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Now if we want to query: "list all students who have enrolled in a course that
has less than 10 students enrolled the CourseNot of the courses", we
have

SELECT s.*, Final: tutores@163.com

FROM STUDENTS NATURAL IDIN ENROL e1
WHERE e1.CoarseNo 1N 894/6

(SELECT e2.CourseNo
https://rworcscop

GROUP BY e2.CourseNo
HAVING COUNT(*)<10);



程序代写代做 CS编程辅导 Subqueries – Exists

SELECT s.*

FROM STUDENT S

WHERE EXISTS (SHAFETCS tutores

FROM ENROL e

Assignment Project IP-east uded pid);

• For the query: "list al Faluation its Who Grave 1.667 en folled in any course", we have

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FROM STUDENTDS://tutorcs.com
WHERE NOT EXISTS (SELECT *

FROM ENROL e
WHERE s.StudentID=e.StudentID);



程序代写代做 CS编程辅导 Subqueries – More Complicated

• For the query: "list the largest number of students enrolled in Semestern en enrolled in Semestern enrolled enro

```
SELECT e.CourseNo

FROM (SELECT e1. CourseNo, County(*) AS NoOfStudents

FROM ENROL e1

WHERE e1. Assignment Project Exam Help

GROUP BY e1. CourseNo) e

WHERE e.NoOfStudentsail: tutorcs@163.com

(SELECT MAX(e2.NoOfStudents)

FROM ENROL e1

https://fineorc.seno.count(*) AS NoOfStudents

FROM ENROL e1

https://fineorc.seno.count(*) e2);
```



程序代写代做 CS编程辅导 Subqueries – More Complicated

• For the query: "list a see that have more students enrolled than at least one other cours a set of the set of 2 2016", we have

```
SELECT e.CourseNo

FROM (SELECT e1. CourseNo, CourseNo) e

WHERE e1. Serignment Project Exam Help

GROUP BY e1. CourseNo) e

WHERE e.NoOfStudEnvail: Anytorcs@163.com

(SELECT e2.NoOfStudents

FROM ENROL e1

https://fixedoccs.series.com/

GROUP BY e1. CourseNo) e2);
```



程序代写代做 CS编程辅导 Views in SQL

- A view in SQL is a view in SQL is a view in the same database or previous the same views.
- How to Create Views?
 - Suppose we alread have table STUDENT (StudentID, Name, DoB, Email) and ENROL (StudentID, CourseNo, Semester, Status, EnrolDate). The westerned length of ENROL Has pollows:

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CREATE VIEW ENROLL 749389476
AS SELECT s.Students; s.Name, e.CourseNo, e.EnrolDate
FROM STUDENT s, ENROL e
WHERE s.StudentID et tudents; s.com