



程序代写代做 CS编程辅导

Week 2



candidate
content
help
still
lot need everything
provide foreign definitions
give learning
concept questions
give nice
integrity helpful suggestions
clearly confused learn
database part definition
only SQL easy student
part constraints time now new labs
quiz about table feedback
material hard little great week
about table like
schema short many bit primary keys hope
please reading relation between
reading relation first pre-recorded
on-campus slides explain
really far data any course knowledge
its maybe after
clear smile lab
understanding key Thank

WeChat: cstutors
Assignment Project Exam Help
more online
Email: tutorcs@163.com
QQ: 749389476 example
<https://tutorcs.com>

concepts



程序代写代做 CS编程辅导 Housekeeping

- ① Please attend the lab session you had registered for on MyTimeTable. Lab swaps are not allowed. There is a special consideration and an approval.
- ② From Week 2 to Week 11, weekly online quiz is always due 23:59 Wednesday after you watch the online lectures.
- ③ After Lab 1, If you still have any questions or issues about the lab environment, please bring your questions to the online drop-in sessions (Thu 5pm-7pm and Fri 10am-12pm) in Week 2.
- ④ An optional exercise website is available for our course

Assignment Project Exam Help

Email: tutorcs@163.com

<https://cs.anu.edu.au/dab/beach/dl-exercises/>

QQ: 749389476

- ⑤ Make effective use of Wattle discussion forum.

<https://tutorcs.com>

- We strongly encourage you to ask your questions on the forum, and everyone in the class can benefit from the discussions and answers.
- You should not post any solutions/results/ideas/interpretations related to assessment items (including assignments, quizzes, tests, exams).





程序代写代做 CS编程辅导
Thanks for your feedback!





程序代写代做 CS编程辅导

(1) Set, Tuple, Cartes



Set of sets and Relation

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>

<https://maths.anu.edu.au/news-events/news/australian-women-mathematics-exhibition>



程序代写代做 CS编程辅导 Set – Example



- A set is a **collection** of elements.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导 Set – Example



- A set is a **collection** of elements.

- **Collection:** the elements in a set have no order.

e.g., $\{A, B\} = \{B, A\}$

WeChat: cstutorcs
Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导 Set – Example



- A set is a **collection** of elements.

- **Collection:** the elements in a set have no order.

e.g., $\{A, B\} = \{B, A\}$

WeChat: cstutorcs
Assignment Project Exam Help

- **Distinct:** each element can not be in the set more than once.

e.g., $\{A, A, B\}$ is Not a set.

Note that **multisets** allow to have duplicate elements.

Email: tutors@163.com
QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导 Set – Example



- A set is a **collection** of elements.

- **Collection:** the elements in a set have no order.

e.g., $\{A, B\} = \{B, A\}$

WeChat: cstutorcs

Assignment Project Exam Help

- **Distinct:** each element can not be in the set more than once.

e.g., $\{A, A, B\}$ is Not a set.

Note that **multisets** allow to have duplicate elements.

Email: tutors@163.com

QQ: 749389476

- **Cardinality:** the cardinality of a set is the number of elements of the set.

<https://tutorcs.com>



程序代写代做 CS编程辅导 Tuple – Example



- A tuple is an **ordered** list of n elements.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导
Tuple – Example



- A tuple is an **ordered** list of n elements.

WeChat: cstutorcs

- **ordered**: the elements in a tuple have an order

e.g., $(A, B) \neq (B, A)$

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导 Tuple – Example



- A tuple is an **ordered** list of n elements.

WeChat: cstutorcs

- **ordered**: the elements in a tuple have an order.

e.g., $(A, B) \neq (B, A)$

Email: tutorcs@163.com

- The same element can be in a tuple **more than once**.

e.g., (A, A, B) is a tuple.

QQ: 749389476
<https://tutorcs.com>



程序代写代做 CS编程辅导 A Set of Tuples – Example



- A set of tuples is a collection of distinct tuples.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导 A Set of Tuples – Example



- A set of tuples is a collection of distinct tuples.
- **Set:**

WeChat: cstutorcs

- the tuples in this set have no order.
- each tuple can not be in the set more than once.

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导 A Set of Tuples – Example



- A set of tuples is a collection of distinct tuples.

- **Set:**

WeChat: cstutorcs

- the tuples in this set have no order.
- each tuple can not be in the set more than once.

Assignment Project Exam Help

- **Tuple:**

- the elements in a tuple have an order

Email: tutors@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导 A Set of Tuples – Example



- A set of tuples is a collection of distinct tuples.

- **Set:**

WeChat: cstutorcs

- the tuples in this set have no order.
- each tuple can not be in the set more than once.

Assignment Project Exam Help

- **Tuple:**

- the elements in a tuple have an order.

Email: tutors@163.com

- Question 1: $\{(A,B),(A,C)\} = \{(A,C),(A,B)\}$?

QQ: 749389476
<https://tutorcs.com>



程序代写代做 CS编程辅导 A Set of Tuples – Example



- A set of tuples is a collection of distinct tuples.

- **Set:**

WeChat: cstutorcs

- the tuples in this set have no order.
- each tuple can not be in the set more than once.

Assignment Project Exam Help

- **Tuple:**

- the elements in a tuple have an order.

Email: tutors@163.com

- Question 1: $\{(A,B),(A,C)\} = \{(A,C),(A,B)\}$?

QQ: 749389476
<https://tutorcs.com>



程序代写代做 CS编程辅导 A Set of Tuples – Example



- A set of tuples is a collection of distinct tuples.
- **Set:**
 - the tuples in this set have no order.
 - each tuple can not be in the set more than once.
- **Tuple:**
 - the elements in a tuple have an order
- Question 1: $\{(A,B),(A,C)\} = \{(A,C),(A,B)\}$? Yes!

<https://tutorcs.com>



程序代写代做 CS编程辅导 A Set of Tuples – Example



- A set of tuples is a collection of distinct tuples.
 - **Set:**
 - the tuples in this set have no order.
 - each tuple can not be in the set more than once.
 - **Tuple:**
 - the elements in a tuple have an order
- WeChat: cstutorcs
Assignment Project Exam Help
Email: tutors@163.com
- QQ: 749389476
<https://tutorcs.com>
- Question 1: $\{(A,B),(A,C)\} = \{(A,C),(A,B)\}$? Yes!
 - Question 2: $\{(A,B),(A,C)\} = \{(B,A),(A,C)\}$?



程序代写代做 CS编程辅导 A Set of Tuples – Example



- A set of tuples is a collection of distinct tuples.
 - **Set:**
 - the tuples in this set have no order.
 - each tuple can not be in the set more than once.
 - **Tuple:**
 - the elements in a tuple have an order
- WeChat: cstutorcs
Assignment Project Exam Help
Email: tutors@163.com
- QQ: 749389476
<https://tutorcs.com>
- Question 1: $\{(A,B),(A,C)\} = \{(A,C),(A,B)\}$? Yes!
 - Question 2: $\{(A,B),(A,C)\} = \{(B,A),(A,C)\}$?



程序代写代做 CS编程辅导 A Set of Tuples – Example



- A set of tuples is a collection of distinct tuples.
 - **Set:**
 - the tuples in this set have no order.
 - each tuple can not be in the set more than once.
 - **Tuple:**
 - the elements in a tuple have an order
- Assignment Project Exam Help
Email: tutors@163.com
- QQ: 749389476
<https://tutorcs.com>
- Question 1: $\{(A,B),(A,C)\} = \{(A,C),(A,B)\}$? Yes!
 - Question 2: $\{(A,B),(A,C)\} = \{(B,A),(A,C)\}$? No!



程序代写代做 CS编程辅导 Cartesian product – Examples

- Let $Class$ and $Room$:
 - $Class = \{comp100, comp200, comp6240, comp1100\}$
 - $Room = \{RT1, RT2, RT3, RT4\}$
- What is the Cartesian product of $Class \times Room$?



WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导 Cartesian product – Examples

- Let $Class$ and $Room$:

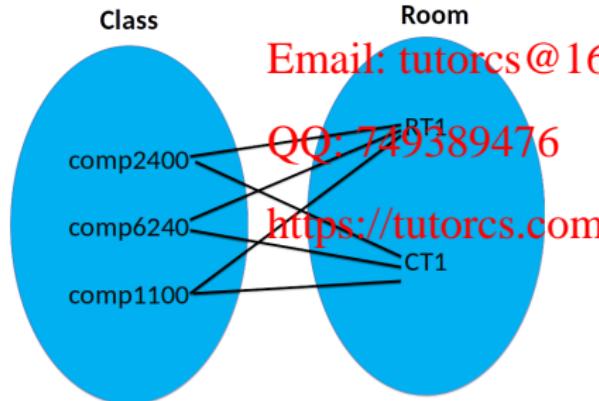
- $Class = \{comp2400, comp6240, comp1100\}$
- $Room = \{RT1, CT1\}$



- What is the Cartesian product of $Class \times Room$?

$$Class \times Room = \{(c, r) | c \in Class, r \in Room\}$$

$$= \{(comp2400, RT1), (comp2400, CT1), (comp6240, RT1), \\ (comp6240, CT1), (comp1100, RT1), (comp1100, CT1)\}$$



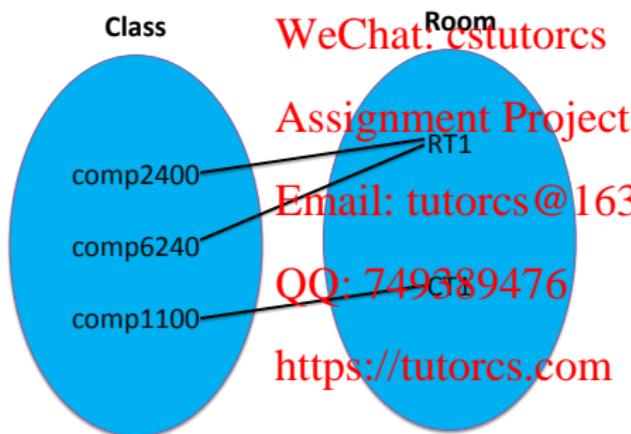
Email: tutorcs@163.com

Class	Room
comp2400	RT1
comp2400	CT1
comp6240	RT1
comp6240	CT1
comp1100	RT1
comp1100	CT1

程序代写代做 CS编程辅导 Relations – Examples



- $R_1 = \{(comp2400, F1), (comp2400, RT1), (comp1100, CT1)\}$

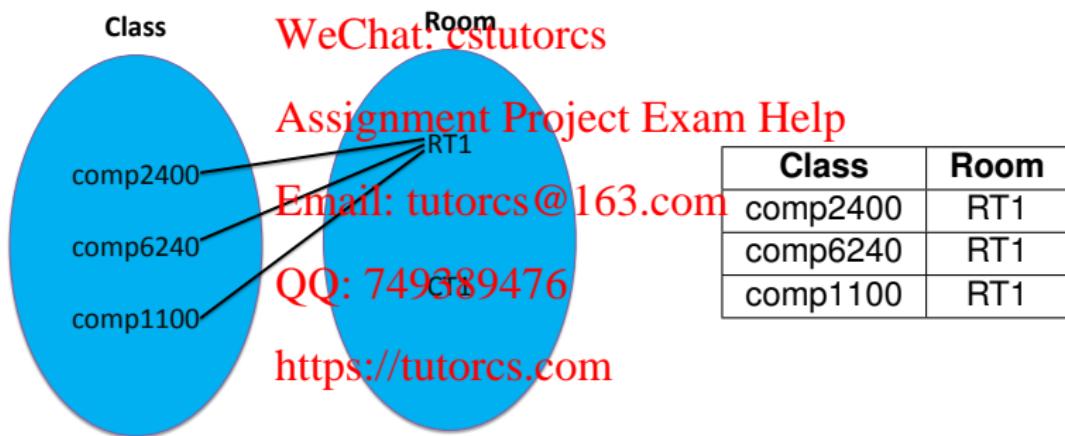


Class	Room
comp2400	RT1
comp6240	RT1
comp1100	CT1

程序代写代做 CS编程辅导 Relations – Examples



- $R_2 = \{(comp2400, F1), (comp2400, RT1), (comp6240, RT1), (comp1100, RT1)\}$





程序代写代做 CS编程辅导 Relations – Examples



- Let $Class$ and $Room$:
 - $Class = \{comp2400, comp6240, comp1100\}$
 - $Room = \{RT1, CT1\}$
- $Class \times Room = \{(c, r) | c \in Class, r \in Room\} = \{(comp2400, RT1), (comp2400, CT1), (comp6240, RT1), (comp6240, CT1), (comp1100, RT1), (comp1100, CT1)\}$
- $R_1 = \{(comp2400, RT1), (comp6240, RT1), (comp1100, CT1)\}$
- $R_2 = \{(comp2400, RT1), (comp6240, RT1), (comp1100, RT1)\}$
- What is the relationship of R_1 and R_2 with $Class \times Room$?
[Https://tutorcs.com](https://tutorcs.com)

WeChat: cstutorcs
Assignment Project Exam Help

Email: tutors@163.com

QQ: 749389476



程序代写代做 CS编程辅导 Relations – Examples



- Let $Class$ and $Room$:
 - $Class = \{comp2400, comp6240, comp1100\}$
 - $Room = \{RT1, CT1\}$
- $Class \times Room = \{(c, r) | c \in Class, r \in Room\} = \{(comp2400, RT1), (comp2400, CT1), (comp6240, RT1), (comp6240, CT1), (comp1100, RT1), (comp1100, CT1)\}$
- $R_1 = \{(comp2400, RT1), (comp6240, RT1), (comp1100, CT1)\}$
- $R_2 = \{(comp2400, RT1), (comp6240, RT1), (comp1100, RT1)\}$
- What is the relationship of R_1 and R_2 with $Class \times Room$?

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutors@163.com

QQ: 749389476

Answer: R_1 , R_2 are the subsets of $Class \times Room$.

R_1 , R_2 and $Class \times Room$ are all sets of tuples.



程序代写代做 CS编程辅导



(2) Relation/Table, Relational Algebra, Relational Schema, Relation Database Schema and Relation Databases





程序代写代做 CS编程辅导
Relation v.s. Table (Example)

		ENROL		
StudentID	C	Semester	Status	EnrolDate
456	C	2016 S2	active	25/05/2016
458	C	2016 S1	active	20/02/2016
459	COMP2400	2016 S2	active	11/06/2016

- Correspondence of informal and formal terms:

INFORMAL TERMS	FORMAL TERMS
Table	Relation
Column	Attribute
Data type	Domain
Row	Tuple
Table definition	Relation schema

<https://tutorcs.com>



程序代写代做 CS编程辅导 Relation v.s. Table (Example)

ENROL				
StudentID	CourseID	Semester	Status	EnrolDate
456	CSC1000	2016 S2	active	25/05/2016
458	CSC1000	2016 S1	active	20/02/2016
459	COMP2400	2016 S2	active	11/06/2016

- Correspondence of informal and formal terms:

INFORMAL TERMS	FORMAL TERMS
Table	Relation
Column	Attribute
Data type	Domain
Row	Tuple
Table definition	Relation schema

- How many tuples and attributes does the table ENROL have?
<https://tutorcs.com>



程序代写代做 CS编程辅导 Relation v.s. Table (Example)

ENROL				
StudentID	CourseID	Semester	Status	EnrolDate
456	CSC1000	2016 S2	active	25/05/2016
458	CSC1000	2016 S1	active	20/02/2016
459	COMP2400	2016 S2	active	11/06/2016

- Correspondence of informal and formal terms:

INFORMAL TERMS	FORMAL TERMS
Table	Relation
Column	Attribute
Data type	Domain
Row	Tuple
Table definition	Relation schema

- How many tuples and attributes does the table ENROL have?
3 tuples and 5 attributes.

<https://tutorcs.com>



程序代写代做 CS编程辅导 Relation v.s. Table (Example)

		ENROL		
StudentID	CourseID	Semester	Status	EnrolDate
456	CSC1000	2016 S2	active	25/05/2016
458	CSC1000	2016 S1	active	20/02/2016
459	COMP2400	2016 S2	active	11/06/2016

- Correspondence of informal and formal terms:

INFORMAL TERMS	FORMAL TERMS
Table	Relation
Column	Attribute
Data type	Domain
Row	Tuple
Table definition	Relation schema

- How many tuples and attributes does the table ENROL have?
<https://tutorcs.com>
3 tuples and 5 attributes.
- In the relational data model, the order of tuples in a relation is not important but the order of the attributes in a relation is important?



程序代写代做 CS编程辅导 Relation v.s. Table (Example)

		ENROL		
StudentID	CourseID	Semester	Status	EnrolDate
456	CSC1000	2016 S2	active	25/05/2016
458	CSC1000	2016 S1	active	20/02/2016
459	COMP2400	2016 S2	active	11/06/2016

- Correspondence of informal and formal terms:

INFORMAL TERMS	FORMAL TERMS
Table	Relation
Column	Attribute
Data type	Domain
Row	Tuple
Table definition	Relation schema

- How many tuples and attributes does the table ENROL have?
<https://tutorcs.com>
3 tuples and 5 attributes.
- In the relational data model, the order of tuples in a relation is not important but the order of the attributes in a relation is important?
Yes.



程序代写代做 CS编程辅导 Relation Schema – Example



- Consider a relation schema ENROL
 - ENROL(StudentID: INT, CourseNo: STRING, Semester: STRING, Status: STRING, EnrolDate: DATE)

Email: tutors@163.com				
ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导 Relational Database Schema – Example



- A **relational database schema** S is

- a set of relation schemas $S = \{R_1, \dots, R_m\}$, and
- a set of integrity constraints Δ .

WeChat: `tutorcs`

Assignment Student Exam Help			
StudentID	Name	DoB	Email

Email: `tutorcs@163.com`

COURSE		
No	Course Name	Unit

QQ: `749389476`

<https://tutorcs.com>

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate



程序代写代做 CS编程辅导 Relational Database State – Example

- A **relational database**



S is a set of relations such that

- there is just one relation schema per each relation schema in S , and
- all the relations satisfy integrity constraints IC .

STUDENT				
StudentID	Name	Date	DOB	Email
456	Tom	25/01/1988		tom@gmail.com
458	Peter	23/05/1993		peter@gmail.com
459	Frank	11/09/1987		frankk@gmail.com

WeChat: cstutors
Assignment Project Exam Help

COURSE		
No	Cname	Unit
COMP1130	Introduction to Advanced Computing I	6
COMP2400	Relational Databases	6

Email: tutors@163.com

QQ: 749389476

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
459	COMP2400	2016 S2	active	11/06/2016



程序代写代做 CS编程辅导 Relational Database State – Example



- A **relational database** S is a set of relations such that
 - there is just one relation for each **relation schema** in S

Relation schema

WeChat: cstutorcs

STUDENT			
StudentID	Name	Dob	Email
456	Tom	25/01/1988	tom@gmail.com
458	Peter	23/05/1993	peter@gmail.com
459	Fran	11/09/1987	frankk@gmail.com

Assignment Project Exam Help

Relation

Email: tutorcs@163.com

StudentID	Name	Dob	Email
456	Tom	25/01/1988	tom@gmail.com
458	Peter	23/05/1993	peter@gmail.com
459	Fran	11/09/1987	frankk@gmail.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导 Relational Database State – Example



- A **relational database state** S is a set of relations such that
 - there is just one relation for each relation schema in S

Relation schema

WeChat: cstutorcs

STUDENT			
StudentID	Name	Dob	Email
456	Tom	25/01/1988	tom@gmail.com
458	Peter	23/05/1993	peter@gmail.com
459	Fran	11/09/1987	frankk@gmail.com

Assignment Project Exam Help

Relation

STUDENT			
StudentID	Name	Dob	Email
456	Tom	25/01/1988	tom@gmail.com
458	Peter	23/05/1993	peter@gmail.com
459	Fran	11/09/1987	frankk@gmail.com

QQ: 749389476

- Can there be multiple relations that correspond to the same relation schema in a relational database state?

<https://tutorcs.com>



程序代写代做 CS编程辅导 Relational Database State – Example



- A **relational database state** S is a set of relations such that
 - there is just one relation for each relation schema in S

Relation schema

WeChat: cstutorcs

STUDENT			
StudentID	Name	Dob	Email
456	Tom	25/01/1988	tom@gmail.com
458	Peter	23/05/1993	peter@gmail.com
459	Fran	11/09/1987	frankk@gmail.com

Assignment Project Exam Help

Relation

STUDENT			
StudentID	Name	Dob	Email
456	Tom	25/01/1988	tom@gmail.com
458	Peter	23/05/1993	peter@gmail.com
459	Fran	11/09/1987	frankk@gmail.com

Email: tutorcs@163.com

QQ: 749389476

- Can there be multiple relations that correspond to the same relation schema in a relational database state?

No.

<https://tutorcs.com>



程序代写代做 CS编程辅导



(2) Superkey, Candidate key, Primary key and Foreign key



(Ashmolean Museum @ the University of Oxford www.ashmolean.org/)



程序代写代做 CS编程辅导
A Bunch of Keys



WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导 A Bunch of Keys

- A *subset of the attributes* of a relation schema R is a **superkey** if it uniquely identifies any tuple in R .



WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导 A Bunch of Keys

- A *subset of the attributes* of a relation schema R is a **superkey** if it uniquely identifies any tuple in R .
- A superkey K is called a **candidate key** if no proper subset of K is a superkey.



WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导 A Bunch of Keys

- A *subset of the attributes* in a relation schema R is a **superkey** if it uniquely identifies any tuple in R .
- A superkey K is called a **candidate key** if no proper subset of K is a superkey. That is, if you take any of the attributes out of K , then it is not enough to uniquely identify tuples.



WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导 A Bunch of Keys

- A *subset of the attributes* in a relation schema R is a **superkey** if it uniquely identifies any tuple in R .
- A superkey K is called a **candidate key** if no proper subset of K is a superkey. That is, if you take any of the attributes out of K , then it is not enough to uniquely identify tuples.
- The **primary key** is chosen from the candidate keys and the primary key is one of the candidate keys.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>

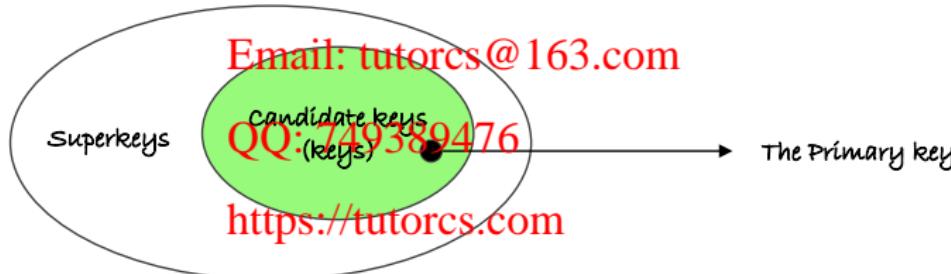


程序代写代做 CS编程辅导 A Bunch of Keys

- A *subset of the attributes* in a relation schema R is a **superkey** if it uniquely identifies any tuple in R .
- A superkey K is called a **candidate key** if no proper subset of K is a superkey. That is, if you take any of the attributes out of K , then it is not enough to uniquely identify tuples.
- The **primary key** is chosen from the candidate keys and the primary key is one of the candidate keys.

WeChat: cstutorcs

Assignment Project Exam Help



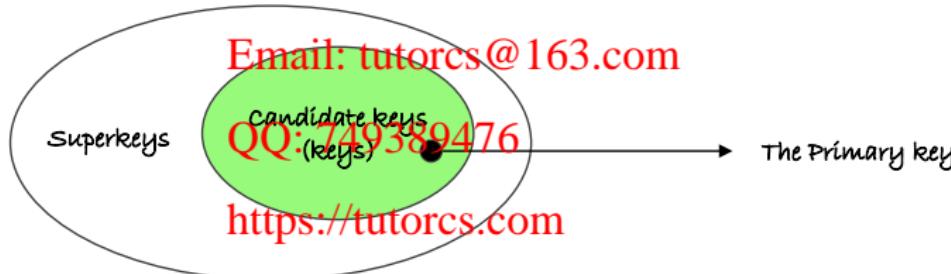


程序代写代做 CS编程辅导 A Bunch of Keys

- A *subset of the attributes* in a relation schema R is a **superkey** if it uniquely identifies any tuple in R .
- A superkey K is called a **candidate key** if no proper subset of K is a superkey. That is, if you take any of the attributes out of K , then it is not enough to uniquely identify tuples.
- The **primary key** is chosen from the candidate keys and the primary key is one of the candidate keys.

WeChat: cstutorcs

Assignment Project Exam Help



- Every candidate key must be a superkey in the same relation schema?

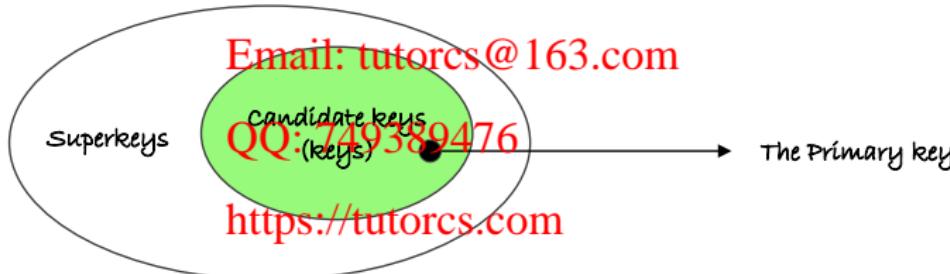


程序代写代做 CS编程辅导 A Bunch of Keys

- A *subset of the attributes* in a relation schema R is a **superkey** if it uniquely identifies any tuple in R .
- A superkey K is called a **candidate key** if no proper subset of K is a superkey. That is, if you take any of the attributes out of K , then it is not enough to uniquely identify tuples.
- The **primary key** is chosen from the candidate keys and the primary key is one of the candidate keys.

WeChat: cstutorcs

Assignment Project Exam Help



- Every candidate key must be a superkey in the same relation schema?
Yes.



程序代写代做 CS编程辅导 **Superkey – Example**

- No two courses have



No $\Rightarrow \{\text{No}\}$ is a superkey (**SK**) of COURSE.

COURSE			
No		Cname	Unit
COMP1130		Introduction to Advanced Computing I	6
COMP2400	WeChat: tutorcs	Relational Databases	6
...	

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导 Superkey – Example

- No two courses have



$\Rightarrow \{No\}$ is a superkey (**SK**) of COURSE.

COURSE			
No		Cname	Unit
COMP1130		Introduction to Advanced Computing I	6
COMP2400	WeChat: cstutorcs	Relational Databases	6
...	

- No two students have the same **StudentID** $\Rightarrow \{\text{StudentID}\}$ is a **SK** of STUDENT.
- No two students have the same **Email** $\Rightarrow \{\text{Email}\}$ is a **SK** of STUDENT.

Email: tutorcs@163.com

STUDENT			
StudentID	Name	DoB	Email
456	Tom	25/07/1988	tom@gmail.com
458	Peter	23/05/1993	peter@gmail.com
459	Fran	11/09/1987	frankk@gmail.com
...



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Example

- {StudentID} is a **SK** of STUDENT and {Email} is also a **SK** of STUDENT.



Student	STUDENT		
	DoB	Email	
456	Tom	25/01/1988	tom@gmail.com
458	Peter	23/05/1993	peter@gmail.com
...

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Example

- {StudentID} is a **SK** of STUDENT and {Email} is also a **SK** of STUDENT.



STUDENT			
Student		DoB	Email
456	Tom	25/01/1988	tom@gmail.com
458	Peter	23/05/1993	peter@gmail.com
...

- What are all **SKs** of STUDENT?

Assignment Project Exam Help
Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Example

- {StudentID} is a **SK** of STUDENT and {Email} is also a **SK** of STUDENT.



STUDENT			
Student		DoB	Email
456	Tom	25/01/1988	tom@gmail.com
458	Peter	23/05/1993	peter@gmail.com
...

- What are all **SKs** of STUDENT?

For STUDENT, a SK can be any subset of attributes which includes StudentID or any subset of attributes which includes Email, e.g., {StudentID}, {StudentID, Name}, {StudentID, Email}, ...

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Example

- {StudentID} is a **SK** of STUDENT and {Email} is also a **SK** of STUDENT.



STUDENT			
Student		DoB	Email
456	Tom	25/01/1988	tom@gmail.com
458	Peter	23/05/1993	peter@gmail.com
...

- What are all **SKs** of STUDENT?

For STUDENT, a SK can be any subset of attributes which includes StudentID or any subset of attributes which includes Email, e.g., {StudentID}, {StudentID, Name}, {StudentID, Email}, ...

- What are **candidate keys** of STUDENT?

<https://tutorcs.com>

QQ: 749389476

Email: tutorcs@163.com



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Example

- {StudentID} is a **SK** of STUDENT and {Email} is also a **SK** of STUDENT.



STUDENT			
Student		DoB	Email
456	Tom	25/01/1988	tom@gmail.com
458	Peter	23/05/1993	peter@gmail.com
...

- What are all **SKs** of STUDENT?

For STUDENT, a SK can be any subset of attributes which includes StudentID or any subset of attributes which includes Email, e.g., {StudentID}, {StudentID, Name}, {StudentID, Email}, ...

QQ: 749389476

- What are **candidate keys** of STUDENT?

For STUDENT, {StudentID} and {Email} are two candidate keys.

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Example

- {StudentID} is a **SK** of STUDENT and {Email} is also a **SK** of STUDENT.



Student	STUDENT		
	DoB	Email	
456	Tom	25/01/1988	tom@gmail.com
458	Peter	23/05/1993	peter@gmail.com
...

- What are all **SKs** of STUDENT?

For STUDENT, a SK can be any subset of attributes which includes StudentID or any subset of attributes which includes Email, e.g., {StudentID}, {StudentID, Name}, {StudentID, Email}, ...

QQ: 749389476

- What are **candidate keys** of STUDENT?

For STUDENT, {StudentID} and {Email} are two candidate keys.

- What about the **primary key** of STUDENT?

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Example

- {StudentID} is a **SK** of STUDENT and {Email} is also a **SK** of STUDENT.



Student	STUDENT		
	DoB	Email	
456	Tom	25/01/1988	tom@gmail.com
458	Peter	23/05/1993	peter@gmail.com
...

- What are all **SKs** of STUDENT?

For STUDENT, a SK can be any subset of attributes which includes StudentID or any subset of attributes which includes Email, e.g., {StudentID}, {StudentID, Name}, {StudentID, Email}, ...

QQ: 749389476

- What are **candidate keys** of STUDENT?

For STUDENT, {StudentID} and {Email} are two candidate keys.

- What about the **primary key** of STUDENT?

For STUDENT, the primary key can be chosen as either {StudentID} or {Email}.



程序代写代做 CS编程辅导 Superkey – Example



- No two enrolments have the same **StudentID**, the same **CourseNo** in the same **Semester** $\Rightarrow \{StudentID, CourseNo, Semester\}$ is a SK of ENROL.

WeChat: cstutorcs

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1300	2016 S1	active	20/02/2016
459	COMP2400	2016 S2	active	11/06/2016
...	QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Example

- {StudentID , CourseID} is a SK of ENROL.



ENROL				
StudentID	Semester	Status	EnrolDate	
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
...

WeChat: cstutorcs
Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Example

- {StudentID , CourseID} is a SK of ENROL.



ENROL				
StudentID	Semester	Status	EnrolDate	
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
...

WeChat: cstutorcs Assignment Project Exam Help

- What are all **SKs** of ENROL?

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Example

- {StudentID , CourseNo, Semester} is a SK of ENROL.



ENROL				
StudentID	Semester	Status	EnrolDate	
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
...

Assignment Project Exam Help

- What are all **SKs** of ENROL?

For ENROL, a SK can be any subset of attributes which includes all StudentID, CourseNo and Semester, e.g., {StudentID , CourseNo, Semester}, {StudentID, CourseNo, Semester, Status}, ...

<https://tutorcs.com>

QQ 749389476

Email: tutorcs@163.com



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Example

- {StudentID , CourseNo , Semester} is a SK of ENROL.



ENROL				
StudentID	Semester	Status	EnrolDate	
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
...

Assignment Project Exam Help

- What are all **SKs** of ENROL?

For ENROL, a SK can be any subset of attributes which includes all StudentID, CourseNo and Semester, e.g., {StudentID , CourseNo, Semester}, {StudentID , CourseNo, Semester, Status}, ...

- What are **candidate keys** of ENROL?

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Example

- {StudentID , CourseNo, Semester} is a SK of ENROL.



ENROL				
StudentID	Semester	Status	EnrolDate	
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
...

Assignment Project Exam Help

- What are all **SKs** of ENROL?

For ENROL, a SK can be any subset of attributes which includes all StudentID, CourseNo and Semester, e.g., {StudentID , CourseNo, Semester}, {StudentID, CourseNo, Semester, Status}, ...

Email: tutorcs@163.com

QQ: 749389476

- What are **candidate keys** of ENROL?

<https://tutorcs.com>

For ENROL, {StudentID , CourseNo, Semester} is the only candidate key.



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Example

- {StudentID , CourseNo, Semester} is a SK of ENROL.



ENROL				
StudentID	Semester	Status	EnrolDate	
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
...

Assignment Project Exam Help

- What are all **SKs** of ENROL?

For ENROL, a SK can be any subset of attributes which includes all StudentID, CourseNo and Semester, e.g., {StudentID , CourseNo, Semester}, {StudentID, CourseNo, Semester, Status}, ...

QQ 749389476

- What are **candidate keys** of ENROL?

<https://tutorcs.com>

For ENROL, {StudentID , CourseNo, Semester} is the only candidate key.

- What about the **primary key** of ENROL?



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Example

- {StudentID , CourseNo, Semester} is a SK of ENROL.



ENROL				
StudentID	Semester	Status	EnrolDate	
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
...

Assignment Project Exam Help

- What are all **SKs** of ENROL?

For ENROL, a SK can be any subset of attributes which includes all StudentID, CourseNo and Semester, e.g., {StudentID , CourseNo, Semester}, {StudentID, CourseNo, Semester, Status}, ...

Email: tutorcs@163.com

QQ: [749389476](https://tutorcs.com)

- What are **candidate keys** of ENROL?

<https://tutorcs.com>

For ENROL, {StudentID , CourseNo, Semester} is the only candidate key.

- What about the **primary key** of ENROL?

For ENROL, the primary key can only be {StudentID , CourseNo, Semester}.



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- Find out candidate keys and primary key for BOOKING from the following schema of an ACCOMMODATION database and implement it in a relational DBMS:

- HOTEL(hotelNo, hotelName, city) with the primary key {hotelNo},
- ROOM(roomNo, hotelNo, type, price) with the primary key {roomNo, hotelNo},
- GUEST(guestNo, guestName, guestAddress) with the primary key {guestNo},
- BOOKING(guestNo, hotelNo, date, roomNo).

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- Find out candidate keys and primary key for BOOKING from the following schema of an ACCOMMODATION database and implement it in a relational DBMS:
 - HOTEL(hotelNo, hotelName, city) with the primary key {hotelNo},
 - ROOM(roomNo, hotelNo, type, price) with the primary key {roomNo, hotelNo},
 - GUEST(guestNo, guestName, guestAddress) with the primary key {guestNo},
 - BOOKING(guestNo, hotelNo, date, roomNo).
- Some additional constraints are as follows:

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- Find out candidate keys and primary key of BOOKING from the following schema of an ACCOMMODATION database and implement it in a relational DBMS:
 - HOTEL(hotelNo, hotelName, city) with the primary key {hotelNo},
 - ROOM(roomNo, hotelNo, type, price) with the primary key {roomNo, hotelNo},
 - GUEST(guestNo, guestName, guestAddress) with the primary key {guestNo},
 - BOOKING(guestNo, hotelNo, date, roomNo).
- Some additional constraints are as follows:
 - ① A booking can be made for one day only.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- Find out candidate keys and primary key of BOOKING from the following schema of an ACCOMMODATION database and implement it in a relational DBMS:
 - HOTEL(hotelNo, hotelName, city) with the primary key {hotelNo},
 - ROOM(roomNo, hotelNo, type, price) with the primary key {roomNo, hotelNo},
 - GUEST(guestNo, guestName, guestAddress) with the primary key {guestNo},
 - BOOKING(guestNo, hotelNo, date, roomNo).
- Some additional constraints are as follows:
 - 1 A booking can be made for one day only.
 - 2 A guest can make several bookings in a hotel for different days.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- Find out candidate keys and primary key of BOOKING from the following schema of an ACCOMMODATION database and implement it in a relational DBMS:
 - HOTEL(hotelNo, hotelName, city) with the primary key {hotelNo},
 - ROOM(roomNo, hotelNo, type, price) with the primary key {roomNo, hotelNo},
 - GUEST(guestNo, guestName, guestAddress) with the primary key {guestNo},
 - BOOKING(guestNo, hotelNo, date, roomNo).
- Some additional constraints are as follows:
 - 1 A booking can be made for one day only.
 - 2 A guest can make several bookings in a hotel for different days.
 - 3 A guest cannot make two or more bookings in the same hotel for the same day.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise



- Find out candidate keys and primary key in BOOKING from the following schema of an ACCOMMODATION database and implement it in a relational DBMS:
 - HOTEL(hotelNo, hotelName, city) with the primary key {hotelNo},
 - ROOM(roomNo, hotelNo, type, price) with the primary key {roomNo, hotelNo},
 - GUEST(guestNo, guestName, guestAddress) with the primary key {guestNo},
 - BOOKING(guestNo, hotelNo, date, roomNo).
- Some additional constraints are as follows:
 - ① A booking can be made for one day only.
 - ② A guest can make several bookings in a hotel for different days.
 - ③ A guest cannot make two or more bookings in the same hotel for the same day.
 - ④ A guest can make two or more bookings in different hotels for the same day.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise



- Find out candidate keys and primary key in BOOKING from the following schema of an ACCOMMODATION database and implement it in a relational DBMS:
 - HOTEL(hotelNo, hotelName, city) with the primary key {hotelNo},
 - ROOM(roomNo, hotelNo, type, price) with the primary key {roomNo, hotelNo},
 - GUEST(guestNo, guestName, guestAddress) with the primary key {guestNo},
 - BOOKING(guestNo, hotelNo, date, roomNo).
- Some additional constraints are as follows:
 - ① A booking can be made for one day only.
 - ② A guest can make several bookings in a hotel for different days.
 - ③ A guest cannot make two or more bookings in the same hotel for the same day.
 - ④ A guest can make two or more bookings in different hotels for the same day.
 - ⑤ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- BOOKING(guestNo, hotelName, checkInDate, checkOutDate, roomNo).
 - ① A booking can be made in one hotel for one day only.
 - ② A guest can make two or more bookings in a hotel for different days.
 - ③ A guest cannot make two or more bookings in the same hotel for the same day.
 - ④ A guest can make two or more bookings in different hotels for the same day.
 - ⑤ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be made for one day only.
 - ② A guest can make two or more bookings in a hotel for different days.
 - ③ A guest cannot make two or more bookings in the same hotel for the same day.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?.

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- BOOKING(guestNo, hotelNo, date, roomNo).
 - 1 A booking can be held in one day only.
 - 2 A guest can make two or more bookings in a hotel for different days.
 - 3 A guest cannot make two or more bookings in the same hotel for the same day.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?
 - Is {guestNo, hotelNo, date} is a SK?

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- BOOKING(guestNo, hotelNo, date, roomNo).
 - 1 A booking can be held in one hotel for one day only.
 - 2 A guest can make two or more bookings in a hotel for different days.
 - 3 A guest cannot make two or more bookings in the same hotel for the same day.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?
 - Is {guestNo, hotelNo, date} a SK? Yes because of (3).

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be made in one hotel for one day only.
 - ② A guest can make two or more bookings in a hotel for different days.
 - ③ A guest cannot make two or more bookings in the same hotel for the same day.
 - ④ A guest can make two or more bookings in different hotels for the same day.
 - ⑤ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?
 - Is {guestNo, hotelNo, date} is a SK? Yes because of (3).
 - Is {guestNo, hotelNo} a SK?

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- BOOKING(guestNo, hotelNo, date, roomNo).
 - 1 A booking can be made in one hotel for one day only.
 - 2 A guest can make two or more bookings in a hotel for different days.
 - 3 A guest cannot make two or more bookings in the same hotel for the same day.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?
 - Is {guestNo, hotelNo, date} is a SK? Yes because of (3).
 - Is {guestNo, hotelNo} a SK? No because of (2).

<https://tutorcs.com>

QQ: 749389476



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be held in one hotel for one day only.
 - ② A guest can make two or more bookings in a hotel for different days.
 - ③ A guest cannot make two or more bookings in the same hotel for the same day.
 - ④ A guest can make two or more bookings in different hotels for the same day.
 - ⑤ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?
 - Is {guestNo, hotelNo, date} is a SK? Yes because of (3).
 - Is {guestNo, hotelNo} a SK? No because of (2).
 - Is {guestNo, date} a SK?

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- BOOKING(guestNo, hotelNo, date, roomNo).
 - 1 A booking can be made in one hotel for one day only.
 - 2 A guest can make two or more bookings in a hotel for different days.
 - 3 A guest cannot make two or more bookings in the same hotel for the same day.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?
 - Is {guestNo, hotelNo, date} a SK? Yes because of (3).
 - Is {guestNo, hotelNo} a SK? No because of (2).
 - Is {guestNo, date} a SK? No because of (4).

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- BOOKING(guestNo, hotelNo, date, roomNo).



- 1 A booking can be held in one day only.
- 2 A guest can make two or more bookings in a hotel for different days.
- 3 A guest cannot make two or more bookings in the same hotel for the same day.
- 4 A guest can make two or more bookings in different hotels for the same day.
- 5 A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?
 - Is {guestNo, hotelNo, date} a SK? Yes because of (3).
 - Is {guestNo, hotelNo} a SK? No because of (2).
 - Is {guestNo, date} a SK? No because of (4).
 - Is {hotelNo, date} a SK?

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be held in one hotel for one day only.
 - ② A guest can make two or more bookings in a hotel for different days.
 - ③ A guest cannot make two or more bookings in the same hotel for the same day.
 - ④ A guest can make two or more bookings in different hotels for the same day.
 - ⑤ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?
 - Is {guestNo, hotelNo, date} a SK? Yes because of (3).
 - Is {guestNo, hotelNo} a SK? No because of (2).
 - Is {guestNo, date} a SK? No because of (4).
 - Is {hotelNo, date} a SK? No because a hotel usually has multiple rooms (indicated by the fact that ROOM(roomNo, hotelNo, type, price) has the primary key {roomNo, hotelNo}).

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise



- BOOKING(guestNo, hotelNo, date, roomNo).
 - 1 A booking can be held in one day only.
 - 2 A guest can make two or more bookings in a hotel for different days.
 - 3 A guest cannot make two or more bookings in the same hotel for the same day.
 - 4 A guest can make two or more bookings in different hotels for the same day.
 - 5 A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?
 - Is {guestNo, hotelNo, date} is a SK? Yes because of (3).
 - Is {guestNo, hotelNo} a SK? No because of (2).
 - Is {guestNo, date} a SK? No because of (4).
 - Is {hotelNo, date} a SK? No because a hotel usually has multiple rooms (indicated by the fact that ROOM(roomNo, hotelNo, type, price) has the primary key {roomNo, hotelNo}).
- Thus {guestNo, hotelNo, date} a minimal SK and hence a candidate key.

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise



- BOOKING(guestNo, hotelNo, roomNo).
 - ① A booking can be made in one hotel for one day only.
 - ② A guest can make bookings in a hotel for different days.
 - ③ A guest cannot make two or more bookings in the same hotel for the same day.
 - ④ A guest can make two or more bookings in different hotels for the same day.
 - ⑤ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, roomNo} a candidate key?

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise



- BOOKING(guestNo, hotelNo, roomNo).
 - ① A booking can be made in one hotel for one day only.
 - ② A guest can make bookings in a hotel for different days.
 - ③ A guest cannot make two or more bookings in the same hotel for the same day.
 - ④ A guest can make two or more bookings in different hotels for the same day.
 - ⑤ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutors@163.com

- Is {guestNo, hotelNo, roomNo} a candidate key?

No, it is not even a SK because of (2).

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise



- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be held in one hotel for one day only.
 - ② A guest can make bookings in a hotel for different days.
 - ③ A guest cannot make two or more bookings in the same hotel for the same day.
 - ④ A guest can make two or more bookings in different hotels for the same day.
 - ⑤ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, roomNo} a candidate key?
No, it is not even a SK because of (2)
QQ: 749389476
- Is {guestNo, date, roomNo} a candidate key?
<https://tutorcs.com>

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutors@163.com



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise



- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be held in one hotel for one day only.
 - ② A guest can make bookings in a hotel for different days.
 - ③ A guest cannot make two or more bookings in the same hotel for the same day.
 - ④ A guest can make two or more bookings in different hotels for the same day.
 - ⑤ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, roomNo} a candidate key?
No, it is not even a SK because of (2)
QQ: 749389476
- Is {guestNo, date, roomNo} a candidate key?
No, it is not even a SK because of (4).
<https://tutors.cs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise



- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be held in one hotel for one day only.
 - ② A guest can make bookings in a hotel for different days.
 - ③ A guest cannot make two or more bookings in the same hotel for the same day.
 - ④ A guest can make two or more bookings in different hotels for the same day.
 - ⑤ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, roomNo} a candidate key?
No, it is not even a SK because of (2)
QQ: 749389476
- Is {guestNo, date, roomNo} a candidate key?
No, it is not even a SK because of (4).
https://tutors.com
- Is {hotelNo, date, roomNo} a candidate key?



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise



- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be held in one hotel for one day only.
 - ② A guest can make bookings in a hotel for different days.
 - ③ A guest cannot make two or more bookings in the same hotel for the same day.
 - ④ A guest can make two or more bookings in different hotels for the same day.
 - ⑤ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, roomNo} a candidate key?
No, it is not even a SK because of (2).
QQ: 749389476
- Is {guestNo, date, roomNo} a candidate key?
No, it is not even a SK because of (4).
https://tutors.com
- Is {hotelNo, date, roomNo} a candidate key?
Yes, it is a SK because of (3) and (5) and no proper subset of {hotelNo, date, roomNo} is a SK, hence {hotelNo, date, roomNo} is a candidate key.



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise



- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be held in one hotel for one day only.
 - ② A guest can make bookings in a hotel for different days.
 - ③ A guest cannot make two or more bookings in the same hotel for the same day.
 - ④ A guest can make two or more bookings in different hotels for the same day.
 - ⑤ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, roomNo} a candidate key?
No, it is not even a SK because of (2).
QQ: 749389476
- Is {guestNo, date, roomNo} a candidate key?
No, it is not even a SK because of (4).
https://tutors.com
- Is {hotelNo, date, roomNo} a candidate key?
Yes, it is a SK because of (3) and (5) and no proper subset of {hotelNo, date, roomNo} is a SK, hence {hotelNo, date, roomNo} is a candidate key.



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be made in one hotel only.
 - ② A guest can make multiple bookings in a hotel for different days.
 - ③ **A guest is not allowed to make more than one booking for the same day even in the different hotels.**
 - ④ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be made in one hotel only.
 - ② A guest can make multiple bookings in a hotel for different days.
 - ③ **A guest is not allowed to make more than one booking for the same day even in the different hotels.**
 - ④ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?
 - Is {guestNo, hotelNo, date} is a SK?

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be made in one hotel only.
 - ② A guest can make multiple bookings in a hotel for different days.
 - ③ **A guest is not allowed to make more than one booking for the same day even in the different hotels.**
 - ④ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?.
 - Is {guestNo, hotelNo, date} is a SK? Yes because of (3).

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be made in one hotel only.
 - ② A guest can make multiple bookings in a hotel for different days.
 - ③ **A guest is not allowed to make more than one booking for the same day even in the different hotels.**
 - ④ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?.
 - Is {guestNo, hotelNo, date} a SK? Yes because of (3).
 - Is {guestNo, hotelNo} a SK?

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be held in one hotel only.
 - ② A guest can make multiple bookings in a hotel for different days.
 - ③ **A guest is not allowed to make more than one booking for the same day even in the different hotels.**
 - ④ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?.
 - Is {guestNo, hotelNo, date} a SK? Yes because of (3).
 - Is {guestNo, hotelNo} a SK? No because of (2).

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise



- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be held in one hotel only.
 - ② A guest can make multiple bookings in a hotel for different days.
 - ③ **A guest is not allowed to make more than one booking for the same day even in the different hotels.**
 - ④ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?.
 - Is {guestNo, hotelNo, date} a SK? Yes because of (3).
 - Is {guestNo, hotelNo} a SK? No because of (2).
 - Is {guestNo, date} a SK?

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise



- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be held in one hotel only.
 - ② A guest can make multiple bookings in a hotel for different days.
 - ③ **A guest is not allowed to make more than one booking for the same day even in the different hotels.**
 - ④ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?.
 - Is {guestNo, hotelNo, date} a SK? Yes because of (3).
 - Is {guestNo, hotelNo} a SK? No because of (2).
 - Is {guestNo, date} a SK? Yes because of (3).

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise



- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be held in one hotel only.
 - ② A guest can make multiple bookings in a hotel for different days.
 - ③ **A guest is not allowed to make more than one booking for the same day even in the different hotels.**
 - ④ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?.
 - Is {guestNo, hotelNo, date} a SK? Yes because of (3).
 - Is {guestNo, hotelNo} a SK? No because of (2).
 - Is {guestNo, date} a SK? Yes because of (3).

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise



- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be held in one hotel only.
 - ② A guest can make many bookings in a hotel for different days.
 - ③ **A guest is not allowed to make more than one booking for the same day even in the different hotels.**
 - ④ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?.
 - Is {guestNo, hotelNo, date} a SK? Yes because of (3).
 - Is {guestNo, hotelNo} a SK? No because of (2).
 - Is {guestNo, date} a SK? Yes because of (3).
- Thus {guestNo, hotelNo, date} is no longer a **minimal** SK and hence cannot be a candidate key.

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

Yes because of (3).

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise



- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be made in one hotel only.
 - ② A guest can make multiple bookings in a hotel for different days.
 - ③ **A guest is not allowed to make more than one booking for the same day even in the different hotels.**
 - ④ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?.
 - Is {guestNo, hotelNo, date} a SK? Yes because of (3).
 - Is {guestNo, hotelNo} a SK? No because of (2).
 - Is {guestNo, date} a SK? Yes because of (3).
- Thus {guestNo, hotelNo, date} is no longer a **minimal** SK and hence cannot be a candidate key.
- Now {guestNo, date} is a minimal SK and hence a candidate key.

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

Yes because of (3).

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise



- BOOKING(guestNo, hotelNo, date, roomNo).
 - ① A booking can be made in one hotel only.
 - ② A guest can make multiple bookings in a hotel for different days.
 - ③ **A guest is not allowed to make more than one booking for the same day even in the different hotels.**
 - ④ A booking cannot be in joint names. In other words a booking can only be held in the name of one guest.
- Is {guestNo, hotelNo, date} a minimal SK and hence a candidate key?.
 - Is {guestNo, hotelNo, date} a SK? Yes because of (3).
 - Is {guestNo, hotelNo} a SK? No because of (2).
 - Is {guestNo, date} a SK? Yes because of (3).
- Thus {guestNo, hotelNo, date} is no longer a **minimal** SK and hence cannot be a candidate key.
- Now {guestNo, date} is a minimal SK and hence a candidate key.
- Note that {hotelNo, date, roomNo} is also a minimal SK and hence a candidate key.

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

Yes because of (3).

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- Assume that a relation R(A, B, C, D) has only two candidate keys {A,B} and {C}.



WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- Assume that a relation R(A, B, C, D) has only two candidate keys {A,B} and {C}.



- Is it possible that {A} is a Superkey?

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- Assume that a relation $R(A, B, C, D)$ has only two candidate keys $\{A,B\}$ and $\{C\}$.



- Is it possible that $\{A\}$ is a SK?

Answer: Impossible, otherwise $\{A,B\}$ is not a candidate key (minimal SK).

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- Assume that a relation R(A, B, C, D) has only two candidate keys {A,B} and {C}.



- Is it possible that {A} is a SK?

Answer: Impossible, otherwise {A,B} is not a candidate key (minimal SK).
Assignment Project Exam Help

- Is it possible that {B, C} is a SK?

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- Assume that a relation R(A, B, C, D) has only two candidate keys {A,B} and {C}.



- Is it possible that {A} is a SK?

Answer: Impossible, otherwise {A,B} is not a candidate key (minimal SK).
Assignment Project Exam Help

- Is it possible that {B, C} is a SK?

Answer: {B, C} must be a SK because {C} is a candidate key.
QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- Assume that a relation $R(A, B, C, D)$ has only two candidate keys $\{A, B\}$ and $\{C\}$.



- Is it possible that $\{A\}$ is a SK?

Answer: Impossible, otherwise $\{A, B\}$ is not a candidate key (minimal SK).
Assignment Project Exam Help

Email: tutorcs@163.com

- Is it possible that $\{B, C\}$ is a SK?

Answer: $\{B, C\}$ must be a SK because $\{C\}$ is a candidate key.
QQ: 749389476

<https://tutorcs.com>

- If it possible that $\{B, D\}$ is a SK? (tricky)



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- Assume that a relation $R(A, B, C, D)$ has only two candidate keys $\{A, B\}$ and $\{C\}$.



- Is it possible that $\{A\}$ is a SK?

Answer: Impossible, otherwise $\{A, B\}$ is not a candidate key (minimal SK).
Assignment Project Exam Help

Email: tutorcs@163.com

- Is it possible that $\{B, C\}$ is a SK?

Answer: $\{B, C\}$ must be a SK because $\{C\}$ is a candidate key.
QQ: 749389476

<https://tutorcs.com>

- If it possible that $\{B, D\}$ is a SK? (tricky)

Answer: $\{B, D\}$ cannot be a SK because $\{B, D\}$ does not has any candidate key as its subset.



程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- Assume that a relation $R(A, B, C, D)$ has only two candidate keys $\{A, B\}$ and $\{C\}$.



- Is it possible that $\{A\}$ is a SK?

Answer: Impossible, otherwise $\{A, B\}$ is not a candidate key (minimal SK).
Assignment Project Exam Help

Email: tutorcs@163.com

- Is it possible that $\{B, C\}$ is a SK?

Answer: $\{B, C\}$ must be a SK because $\{C\}$ is a candidate key.
QQ: 749389476

<https://tutorcs.com>

- If it possible that $\{B, D\}$ is a SK? (tricky)

Answer: $\{B, D\}$ cannot be a SK because $\{B, D\}$ does not has any candidate key as its subset.



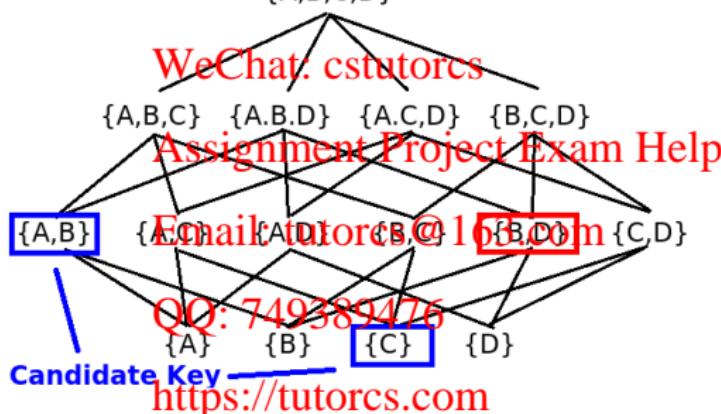
程序代写代做 CS编程辅导

Superkey, Candidate key and Primary key – Exercise

- Assume that a relation $R(A, B, C, D)$ has only two candidate keys $\{A, B\}$ and $\{C\}$.



$\{A, B, C, D\}$



- If it possible that $\{B, D\}$ is a SK? (tricky)

Answer: $\{B, D\}$ cannot be a SK because $\{B, D\}$ does not have any candidate key as its subset.



程序代写代做 CS编程辅导



(4) Domain constraints, Entity integrity constraints and Referential integrity constraints.

WeChat: cstutorcs





程序代写代做 CS编程辅导

Domain constraints, Key constraints and Entity integrity



straints

- **Domain constraints:** every value in a tuple must be from the **domain of its attribute.**

e.g., INT, VARCHAR, DATE, NOT NULL, etc.

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Domain constraints, Key constraints and Entity integrity



straints

- **Domain constraints:** every value in a tuple must be from the **domain of its attribute.**

e.g., INT, VARCHAR, DATE, NOT NULL, etc.

Assignment Project Exam Help

- **Key constraints:** a bunch of keys (superkey, candidate key and primary key).

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Domain constraints, Key constraints and Entity integrity



straints

- **Domain constraints:** every value in a tuple must be from the **domain of its attribute.**

e.g., INT, VARCHAR, DATE, NOT NULL, etc.

WeChat: estutorcs
Assignment Project Exam Help

- **Key constraints:** a bunch of keys (superkey, candidate key and primary key).

Email: tutorcs@163.com

QQ: 749389476

- **Entity integrity constraints:** no primary key value can be NULL.

<https://tutorcs.com>



程序代写代做 CS编程辅导

Domain constraints, Key constraints and Entity integrity



straints

- **Domain constraints:** every value in a tuple must be from the **domain of its attribute.**

e.g., INT, VARCHAR, DATE, NOT NULL, etc.

WeChat: estutorcs
Assignment Project Exam Help

- **Key constraints:** a bunch of keys (superkey, candidate key and primary key).

Email: tutorcs@163.com

QQ: 749389476

- **Entity integrity constraints:** no primary key value can be NULL.

<https://tutorcs.com>



程序代写代做 CS编程辅导

Referential integrity constraints – Example

- Identify **foreign keys** relations.



HOTEL, ROOM, BOOKING and GUEST

- HOTEL(hotelNo, hotelName, city) with the primary key {hotelNo},
- ROOM(roomNo, hotelNo, type, price) with the primary key {roomNo, hotelNo},
- GUEST(guestNo, guestName, guestAddress) with the primary key {guestNo},
- BOOKING(guestNo, hotelNo, date, roomNo).

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Referential integrity constraints – Example



- Identify **foreign keys** HOTEL, ROOM, BOOKING and GUEST relations.

- HOTEL(hotelNo, hotelName, city) with the primary key {hotelNo},
- ROOM(roomNo, hotelNo, type, price) with the primary key {roomNo, hotelNo},
- GUEST(guestNo, guestName, guestAddress) with the primary key {guestNo},
- BOOKING(guestNo, hotelNo, date, roomNo).

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

- Answer:**

QQ: 749389476

- Room: $[\text{hotelNo}] \subseteq \text{HOTEL}[\text{hotelNo}]$;

<https://tutorcs.com>



程序代写代做 CS编程辅导

Referential integrity constraints – Example



- Identify **foreign keys** HOTEL, ROOM, BOOKING and GUEST relations.

- HOTEL(hotelNo, hotelName, city) with the primary key {hotelNo},
- ROOM(roomNo, hotelNo, type, price) with the primary key {roomNo, hotelNo},
- GUEST(guestNo, guestName, guestAddress) with the primary key {guestNo},
- BOOKING(guestNo, hotelNo, date, roomNo).

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

- Answer:**

QQ: 749389476

- Room: $[\text{hotelNo}] \subseteq \text{HOTEL}[\text{hotelNo}]$;
- BOOKING: $[\text{hotelNo}] \subseteq \text{HOTEL}[\text{hotelNo}]$,
 $[\text{guestNo}] \subseteq \text{GUEST}[\text{guestNo}]$,
 $[\text{roomNo}, \text{hotelNo}] \subseteq \text{ROOM}[\text{roomNo}, \text{hotelNo}]$.

<https://tutorcs.com>



程序代写代做 CS编程辅导

Referential integrity constraints – Example



- Identify **foreign keys** HOTEL, ROOM, BOOKING and GUEST relations.

- HOTEL(hotelNo, hotelName, city) with the primary key {hotelNo},
- ROOM(roomNo, hotelNo, type, price) with the primary key {roomNo, hotelNo},
- GUEST(guestNo, guestName, guestAddress) with the primary key {guestNo},
- BOOKING(guestNo, hotelNo, date, roomNo).

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

- Answer:**

QQ: 749389476

- Room: $[\text{hotelNo}] \subseteq \text{HOTEL}[\text{hotelNo}]$;
- BOOKING: $[\text{hotelNo}] \subseteq \text{HOTEL}[\text{hotelNo}]$,
 $[\text{guestNo}] \subseteq \text{GUEST}[\text{guestNo}]$,
 $[\text{roomNo}, \text{hotelNo}] \subseteq \text{ROOM}[\text{roomNo}, \text{hotelNo}]$.

<https://tutorcs.com>



程序代写代做 CS编程辅导
Foreign Key (referential integrity) – Example

- Room: $[\text{hotelNo}] \subseteq \text{Hotels}[\text{No}]$;



WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导
Foreign Key (referential integrity) – Example

- Room: [hotelNo] \subseteq HOTEL[hotelNo];
- BOOKING: [hotelNo] \subseteq HOTEL[hotelNo], [guestNo] \subseteq GUEST[guestNo],
[roomNo, hotelNo] \subseteq ROOM[roomNo, hotelNo].



WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导 Foreign Key (referential integrity) – Example

- Room: $[\text{hotelNo}] \subseteq \text{HOTEL}[\text{hotelNo}]$;
- BOOKING: $[\text{hotelNo}] \subseteq \text{HOTEL}[\text{hotelNo}], [\text{guestNo}] \subseteq \text{GUEST}[\text{guestNo}], [\text{roomNo}, \text{guestNo}] \subseteq \text{ROOM}[\text{roomNo}, \text{hotelNo}]$.
- Is it possible to make a booking in the BOOKING relation in the name of a person who is not listed in the GUEST relation?



Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Foreign Key (referential integrity) – Example

- Room: [hotelNo] \subseteq HOTEL[hotelNo];
- BOOKING: [hotelNo] \subseteq HOTEL[hotelNo], [guestNo] \subseteq GUEST[guestNo],
[roomNo, hotelNo] \subseteq ROOM[roomNo, hotelNo].
- Is it possible to make a booking in the BOOKING relation in the name of a person who is not listed in the GUEST relation?

WeChat: estutores

Answer: Impossible because in BOOKING, [guestNo] \subseteq GUEST[guestNo], i.e., the guestNo value of Bookings must exist as a guestNo value of GUEST.

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Foreign Key (referential integrity) – Example

- Room: [hotelNo] \subseteq HOTEL[hotelNo];
- BOOKING: [hotelNo] \subseteq HOTEL[hotelNo], [guestNo] \subseteq GUEST[guestNo],
[roomNo, hotelNo] \subseteq ROOM[roomNo, hotelNo].
- Is it possible to make a booking in the BOOKING relation in the name of a person who is not listed in the GUEST relation?

WeChat: estutores

Answer: Impossible because in BOOKING, [guestNo] \subseteq GUEST[guestNo], i.e., the guestNo value of Bookings must exist as a guestNo value of GUEST.

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Foreign Key (referential integrity) – Example

- Room: $[hotelNo] \subseteq HOTEL[hotelNo]$;
- BOOKING: $[hotelNo] \subseteq HOTEL[hotelNo], [guestNo] \subseteq GUEST[guestNo], [roomNo, hotelNo] \subseteq ROOM[roomNo, hotelNo]$.
- Is it possible to make a booking in the BOOKING relation in the name of a person who is not listed in the GUEST relation?

WeChat: estutores

Answer: Impossible because in BOOKING, $[guestNo] \subseteq GUEST[guestNo]$, i.e., the guestNo value of Booking must exist as a guestNo value of GUEST.

Email: tutors@163.com

- Is it possible to add a new room in the ROOM relation to a hotel that is not listed in the HOTEL relation?

QQ: 749389476

Answer: Impossible because in ROOM, $[hotelNo] \subseteq HOTEL[hotelNo]$, i.e., the hotelNo value of Room must exist as a hotelNo value of HOTEL.

<https://tutorcs.com>



程序代写代做 CS编程辅导

Foreign Key (referential integrity) – Example

- Room: $[hotelNo] \subseteq HOTEL[hotelNo]$;
- BOOKING: $[hotelNo] \subseteq HOTEL[hotelNo], [guestNo] \subseteq GUEST[guestNo], [roomNo, hotelNo] \subseteq ROOM[roomNo, hotelNo]$.
- Is it possible to make a booking in the BOOKING relation in the name of a person who is not listed in the GUEST relation?

WeChat: estutores

Assignment Project Exam Help

Answer: Impossible because in BOOKING, $[guestNo] \subseteq GUEST[guestNo]$, i.e., the guestNo value of BOOKING must exist as a guestNo value of GUEST.

- Is it possible to add a new room in the ROOM relation to a hotel that is not listed in the HOTEL relation?
[Email: tutors@163.com](mailto:tutors@163.com)
- Is it possible to add a new hotel without any bookings or room information to the ACCOMMODATION database?
<QQ: 749389476>
<https://tutorcs.com>



程序代写代做 CS编程辅导

Foreign Key (referential integrity) – Example

- Room: [hotelNo] \subseteq HOTEL[hotelNo];
- BOOKING: [hotelNo] \subseteq HOTEL[hotelNo], [guestNo] \subseteq GUEST[guestNo], [roomNo, hotelNo] \subseteq ROOM[roomNo, hotelNo].



- Is it possible to make a booking in the BOOKING relation in the name of a person who is not listed in the GUEST relation?

Answer: Impossible because in BOOKING, [guestNo] \subseteq GUEST[guestNo], i.e., the guestNo value of Booking must exist as a guestNo value of GUEST.

WeChat: estutores

Assignment Project Exam Help

- Is it possible to add a new room in the ROOM relation to a hotel that is not listed in the HOTEL relation?

Answer: Impossible because in ROOM, [hotelNo] \subseteq HOTEL[hotelNo], i.e., the hotelNo value of Room must exist as a hotelNo value of HOTEL.

QQ: 749389476

- Is it possible to add a new hotel without any bookings or room information to the ACCOMMODATION database?

Answer: Possible because none of the attributes in HOTEL(hotelNo, hotelName, city) references to any attribute in Room, GUEST and BOOKING.

https://tutorcs.com



程序代写代做 CS编程辅导

Foreign Key (referential integrity) – Example

- Room: [hotelNo] \subseteq HOTEL[hotelNo];
- BOOKING: [hotelNo] \subseteq HOTEL[hotelNo], [guestNo] \subseteq GUEST[guestNo], [roomNo, hotelNo] \subseteq ROOM[roomNo, hotelNo].



- Is it possible to make a booking in the BOOKING relation in the name of a person who is not listed in the GUEST relation?

Answer: Impossible because in BOOKING, [guestNo] \subseteq GUEST[guestNo], i.e., the guestNo value of BOOKING must exist as a guestNo value of GUEST.

- Is it possible to add a new room in the ROOM relation to a hotel that is not listed in the HOTEL relation?

Answer: Impossible because in ROOM, [hotelNo] \subseteq HOTEL[hotelNo], i.e., the hotelNo value of ROOM must exist as a hotelNo value of HOTEL.

- Is it possible to add a new hotel without any bookings or room information to the ACCOMMODATION database?

Answer: Possible because none of the attributes in HOTEL(hotelNo, hotelName, city) references to any attribute in Room, GUEST and BOOKING.



程序代写代做 CS编程辅导 Foreign Key (referential integrity) – Example

- In ENROL, [CourseNo] references [CourseNo] and [StudentID] references [StudentID].



STUDENT			
StudentID	Name	DoB	Email
456	Tom	25/01/1988	tom@gmail.com
458	Peter	23/05/1993	peter@gmail.com
459	Fran	11/09/1987	frankk@gmail.com

WeChat: estutorcs Assignment Project Exam Help

COURSE			
No	Email: tutorcs@163.com	Date	Unit
COMP1130	Introduction to Advanced Computing I		6
COMP2400	Relational Databases		6

QQ: 749389476

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate
456	COMP2400	2016 S2	active	25/05/2016
456	COMP1130	2016 S1	active	20/02/2016
459	COMP2400	2016 S2	active	11/06/2016



程序代写代做 CS编程辅导 Foreign Key (referential integrity) – Example



STUDENT		
Student	DoB	Email
456	25/01/1988	tom@gmail.com
458	23/05/1993	peter@gmail.com
459	Fran	frankk@gmail.com

WeChat: cstutorcs

COURSE		
No	Cname	Unit
COMP1130	Introduction to Advanced Computing	6
COMP2400	Relational Databases	6

Assignment Project Exam Help

Email: tutorcs@163.com

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
458	COMP2400	2016 S2	active	11/06/2016

https://tutorcs.com

QQ: 749389476

Question: Does the above database satisfy the foreign key of ENROL:
 $[StudentID] \subseteq STUDENT[StudentID]$?



程序代写代做 CS编程辅导 Foreign Key (referential integrity) – Example



STUDENT		
StudentID	DoB	Email
456	25/01/1988	tom@gmail.com
458	23/05/1993	peter@gmail.com
459	Fran	frankk@gmail.com

WeChat: cstutorcs

COURSE		
No	Cname	Unit
COMP1130	Introduction to Advanced Computing	6
COMP2400	Relational Databases	6

Assignment Project Exam Help

Email: tutorcs@163.com

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
458	COMP2400	2016 S2	active	11/06/2016

https://tutorcs.com

Question: Does the above database satisfy the foreign key of ENROL:
 $[StudentID] \subseteq STUDENT[StudentID]$?

Yes.



程序代写代做 CS编程辅导 Foreign Key (referential integrity) – Example



STUDENT		
Student	DoB	Email
456	25/01/1988	tom@gmail.com
458	23/05/1993	peter@gmail.com
459	Fran	frankk@gmail.com

WeChat: cstutorcs

COURSE		
No	Cname	Unit
COMP1130	Introduction to Advanced Computing	6
COMP2400	Relational Databases	6

Assignment Project Exam Help

Email: tutorcs@163.com

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
458	COMP3600	2016 S2	active	11/06/2016

https://tutorcs.com

Question: Does the above database satisfy the foreign key of ENROL:
[CourseNo] ⊆ COURSE[No]?



程序代写代做 CS编程辅导 Foreign Key (referential integrity) – Example



STUDENT		
Student	DoB	Email
456	25/01/1988	tom@gmail.com
458	23/05/1993	peter@gmail.com
459	Fran	frankk@gmail.com

WeChat: cstutorcs

COURSE		
No	Cname	Unit
COMP1130	Introduction to Advanced Computing	6
COMP2400	Relational Databases	6

Assignment Project Exam Help

Email: tutorcs@163.com

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
458	COMP3600	2016 S2	active	11/06/2016

https://tutorcs.com

Question: Does the above database satisfy the foreign key of ENROL:
[CourseNo] ⊆ COURSE[No]?

No, because COMP3600 does not exist as a No value in COURSE.



程序代写代做 CS编程辅导 Foreign Key (referential integrity) – Example



STUDENT		
StudentID	DoB	Email
456	25/01/1988	tom@gmail.com
458	23/05/1993	peter@gmail.com
459	Fran	frankk@gmail.com

WeChat: cstutorcs

COURSE		
No	Cname	Unit
COMP1130	Introduction to Advanced Computing	6
COMP2400	Relational Databases	6

Email: tutorcs@163.com

StudentID	CourseNo	Semester	Status	EnrolDate
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
458	COMP2400	2016 S2	active	11/06/2016

https://tutorcs.com

Question: Can we delete the first tuple in STUDENT?



程序代写代做 CS编程辅导 Foreign Key (referential integrity) – Example



STUDENT		
	DoB	Email
456	25/01/1988	tom@gmail.com
458	23/05/1993	peter@gmail.com
459	Fran	frankk@gmail.com

WeChat: cstutorcs

COURSE		
No	Cname	Unit
COMP1130	Introduction to Advanced Computing	6
COMP2400	Relational Databases	6

Assignment Project Exam Help

Email: tutorcs@163.com

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
458	COMP2400	2016 S2	active	11/06/2016

https://tutorcs.com

Question: Can we delete the first tuple in STUDENT?

No, because it will violate the foreign key of ENROL: $[StudentID] \subseteq STUDENT[StudentID]$



程序代写代做 CS编程辅导 Foreign Key (referential integrity) – Example

Student	DoB	Email
456	25/01/1988	tom@gmail.com
458	23/05/1993	peter@gmail.com
459	Fran	frankk@gmail.com

WeChat: estutores		
No	Cname	Unit
COMP1130	Introduction to Advanced Computing I	6
COMP2400	Relational Databases	6

Email: tutors@163.com				
StudentID	CourseNo	Semester	Status	EnrolDate
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
458	COMP2400	2016 S2	active	11/06/2016

<https://tutorcs.com>

Question: Can we delete the first tuple in ENROL?



程序代写代做 CS编程辅导 Foreign Key (referential integrity) – Example

STUDENT		
Student	DoB	Email
456	25/01/1988	tom@gmail.com
458	23/05/1993	peter@gmail.com
459	Fran	frankk@gmail.com

COURSE		
No	Cname	Unit
COMP1130	Introduction to Advanced Computing I	6
COMP2400	Relational Databases	6

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
458	COMP2400	2016 S2	active	11/06/2016

https://tutorcs.com

Question: Can we delete the first tuple in ENROL?

Yes.



程序代写代做 CS编程辅导 Foreign Key (referential integrity) – Example



STUDENT		
StudentID	DoB	Email
456	25/01/1988	tom@gmail.com
458	23/05/1993	peter@gmail.com
459	Fran	frankk@gmail.com

WeChat: cstutorcs

COURSE		
No	Cname	Unit
COMP1130	Introduction to Advanced Computing	6
COMP2400	Relational Databases	6

Email: tutorcs@163.com

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
458	COMP2400	2016 S2	active	11/06/2016

<https://tutorcs.com>

Question: Can we update COMP2400 to be COMP6240 in COURSE?



程序代写代做 CS编程辅导 Foreign Key (referential integrity) – Example



STUDENT		
Student	DoB	Email
456	25/01/1988	tom@gmail.com
458	23/05/1993	peter@gmail.com
459	Fran	frankk@gmail.com

WeChat: cstutorcs

COURSE		
No	Cname	Unit
COMP1130	Introduction to Advanced Computing	6
COMP2400	Relational Databases	6

Assignment Project Exam Help

Email: tutorcs@163.com

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
458	COMP2400	2016 S2	active	11/06/2016

QQ: 749389476

<https://tutorcs.com>

Question: Can we update COMP2400 to be COMP6240 in COURSE?

No, because it will violate the foreign key of ENROL: [CourseNo] ⊂ COURSE[No].



程序代写代做 CS编程辅导 Foreign Key (referential integrity) – Example



STUDENT		
Student	DoB	Email
456	25/01/1988	tom@gmail.com
458	23/05/1993	peter@gmail.com
459	Fran	frankk@gmail.com

WeChat: cstutorcs

COURSE		
No	Cname	Unit
COMP1130	Software Engineering	4
COMP2400	Relational Databases	6

Assignment Project Exam Help

Email: tutorcs@163.com

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
458	COMP2400	2016 S2	active	11/06/2016

QQ: 749389476

<https://tutorcs.com>

Question: Can we insert a new course COMP3600 Algorithms with 6 units in COURSE?



程序代写代做 CS编程辅导 Foreign Key (referential integrity) – Example



STUDENT		
Student	DoB	Email
456	25/01/1988	tom@gmail.com
458	23/05/1993	peter@gmail.com
459	Fran	frankk@gmail.com

WeChat: cstutorcs

COURSE		
No	Cname	Unit
COMP1130	Introduction to Algorithms	6
COMP2400	Relational Databases	6

Assignment Project Exam Help

Email: tutorcs@163.com

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
458	COMP2400	2016 S2	active	11/06/2016

https://tutorcs.com

Question: Can we insert a new course COMP3600 Algorithms with 6 units in COURSE?

Yes.



程序代写代做 CS编程辅导 Foreign Key (referential integrity) – Example



STUDENT		
Student	DoB	Email
456	25/01/1988	tom@gmail.com
458	23/05/1993	peter@gmail.com
459	Fran	frankk@gmail.com

WeChat: cstutorcs

COURSE		
No	Cname	Unit
COMP1130	Introduction to Advanced Computing	6
COMP2400	Relational Databases	6

Assignment Project Exam Help

Email: tutorcs@163.com

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
458	COMP2400	2016 S2	active	11/06/2016

https://tutorcs.com

Question: The foreign key StudentID in Enrol references StudentID in Student. The StudentID values in Enrol must be distinct?



程序代写代做 CS编程辅导 Foreign Key (referential integrity) – Example



STUDENT		
Student	DoB	Email
456	25/01/1988	tom@gmail.com
458	23/05/1993	peter@gmail.com
459	Fran	frankk@gmail.com

WeChat: cstutorcs

COURSE		
No	Cname	Unit
COMP1130	Introduction to Advanced Computing	6
COMP2400	Relational Databases	6

Assignment Project Exam Help

Email: tutorcs@163.com

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate
456	COMP2400	2016 S2	active	25/05/2016
458	COMP1130	2016 S1	active	20/02/2016
458	COMP2400	2016 S2	active	11/06/2016

https://tutorcs.com

Question: The foreign key StudentID in Enrol references StudentID in Student. The StudentID values in Enrol must be distinct?

No.



程序代写代做 CS编程辅导

Foreign Key (referential integrity) – A Common Pitfall



- Consider the following schemas:

- ROOM(roomNo, hotelName, type, price) with the primary key {roomNo, hotelName},
- BOOKING(guestNo, date, roomNo, hotelName).

Room			
roomNo	hotelName	type	price
01	Sydney	twin	200
02	Sydney	single	100
01	Canberra	single	150

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>

Booking			
guestNo	date	roomNo	hotelName
P1	30/07/2018	02	Sydney
P2	31/07/2018	01	Canberra



程序代写代做 CS编程辅导

Foreign Key (referential integrity) – A Common Pitfall



- Consider the following schemas:

- ROOM(roomNo, hotelName, type, price) with the primary key {roomNo, hotelName},
- BOOKING(guestNo, date, roomNo, hotelName).

Room			
roomNo	hotelName	type	price
01	Sydney	twin	200
02	Sydney	single	100
01	Canberra	single	150

Assignment Project Exam Help

Email: tutorcs@163.com

Booking			
guestNo	date	roomNo	hotelName
P1	30/07/2018	02	Sydney
P2	31/07/2018	01	Canberra

Now we add the following foreign key constraint:

- BOOKING[roomNo, hotelName] ⊂ ROOM[roomNo, hotelName]

<https://tutorcs.com>



程序代写代做 CS编程辅导

Foreign Key (referential integrity) – A Common Pitfall



- Consider the following schemas:

- ROOM(roomNo, hotelName, type, price) with the primary key {roomNo, hotelName},
- BOOKING(guestNo, date, roomNo, hotelName).

Room			
roomNo	hotelName	type	price
01	Sydney	twin	200
02	Sydney	single	100
01	Canberra	single	150

Assignment Project Exam Help

Email: tutorcs@163.com

Booking			
guestNo	date	roomNo	hotelName
P1	30/07/2018	02	Sydney
P2	31/07/2018	01	Canberra

Now we add the following foreign key constraint:

- BOOKING[roomNo, hotelName] ⊆ ROOM[roomNo, hotelName]
- Is the above equivalent to:
BOOKING[roomNo] ⊆ ROOM[roomNo], and
BOOKING[hotelName] ⊆ ROOM[hotelName] ?

<https://tutorcs.com>



程序代写代做 CS编程辅导

Foreign Key (referential integrity) – A Common Pitfall



room	ROOM		
	Name	type	price
01	Sydney	twin	200
02	Sydney	single	100
01	Canberra	single	150

Assignment Project Exam Help

guestNo	date	roomNo	hotelName
P1	2018/07/31	01	Sydney
P2	31/07/2018	02	Canberra

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Foreign Key (referential integrity) – A Common Pitfall



room	Name	type	price
01	Sydney	twin	200
02	Sydney	single	100
01	Canberra	single	150

Assignment Project Exam Help

guestNo	date	roomNo	hotelName
P1	2018/07/31	01	Sydney
P2	31/07/2018	02	Canberra

- The above relations satisfy the foreign keys:

- $\text{BOOKING}[\text{roomNo}] \subseteq \text{ROOM}[\text{roomNo}]$ and
<https://tutors.cs>
- $\text{BOOKING}[\text{hotelName}] \subseteq \text{ROOM}[\text{hotelName}]$



程序代写代做 CS编程辅导

Foreign Key (referential integrity) – A Common Pitfall



room	name	type	price
01	Sydney	twin	200
02	Sydney	single	100
01	Canberra	single	150

guestNo	date	roomNo	hotelName
P1	2018/07/31	01	Sydney
P2	31/07/2018	02	Canberra

- The above relations satisfy the foreign keys:

- $\text{BOOKING}[\text{roomNo}] \subseteq \text{ROOM}[\text{roomNo}]$ and
<https://tutorcs.com>
- $\text{BOOKING}[\text{hotelName}] \subseteq \text{ROOM}[\text{hotelName}]$

but does not satisfy the foreign key:

- $\text{BOOKING}[\text{roomNo}, \text{hotelName}] \subseteq \text{ROOM}[\text{roomNo}, \text{hotelName}]$



程序代写代做 CS编程辅导



(5) SQL: Data Definition Language
(v.s. Relation Schema + Integrity Constraints)

WeChat: cstutorcs

It's not that difficult to create a
Assignment Project Exam Help
Table

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>





程序代写代做 CS编程辅导

Data Definition Language – Relation Schema



- Create a relation sch

- **Enrol**(StudentID: INT, CourseNo: STRING, Semester: STRING,
Status: STRING, EnrolData: DATE)

Assignment Project Exam Help

StudentID	CourseNo	Semester	Status	EnrolDate
-----------	----------	----------	--------	-----------

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – Relation Schema



- Create a relation schema

- **Enrol**(**StudentID**: INT, **CourseNo**: STRING, **Semester**: STRING,
Status: STRING, **EnrolDate**: DATE)

Assignment Project Exam Help

StudentID	CourseNo	Semester	Status	EnrolDate
-----------	----------	----------	--------	-----------

Email: tutorcs@163.com

- The **CREATE TABLE** statement is used to create a new relation schema by specifying its name, its attributes and *optionally*, its constraints.

QQ: 749389476

```
CREATE TABLE Enrol(StudentID INT, CourseNo VARCHAR(20),  
Semester VARCHAR(50), Status VARCHAR(50), EnrolDate DATE);
```

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – CREATE TABLE



- Create a relation sch

- **Enrol**(StudentID, CourseNo, Semester, Status, EnrolData)
WeChat: cstutorcs

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate

Assignment Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – CREATE TABLE



- Create a relation sch

- **Enrol**(StudentID, CourseNo, Semester, Status, EnrolData)
WeChat: cstutorcs

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate

- Can we use the following **CREATE TABLE** statement to create the above relation schema?

Email: tutorcs@163.com

CREATE TABLE **Enrol**(**StudentID**, **CourseNo**, **Semester**, **Status**,
EnrolDate);

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – CREATE TABLE



- Create a relation schema

- **Enrol**(StudentID, CourseNo, Semester, Status, EnrolDate)
WeChat: cstutorcs

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate

- Can we use the following **CREATE TABLE** statement to create the above relation schema?

Email: tutorcs@163.com

CREATE TABLE **Enrol**(**StudentID**, **CourseNo**, **Semester**, **Status**,
EnrolDate);

<https://tutorcs.com>

- **No** because the data type is required for each attribute.



程序代写代做 CS编程辅导

Data Definition Language – CREATE TABLE



- Create a relation sch

- **Enrol**(StudentID: INT, CourseNo: STRING, Semester: STRING,
Status: STRING, EnrolData: DATE)

WeChat: cstutorcs

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – CREATE TABLE



- Create a relation sch

- **Enrol**(**StudentID**: INT, **CourseNo**: STRING, **Semester**: STRING,
Status: STRING, **EnrolDate**: DATE)

WeChat: cstutorcs

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate

- Which of the following CREATE TABLE statements is/are correct?

Email: tutors@163.com

- ① CREATE TABLE **Enrol**(**StudentID** INT; **CourseNo** VARCHAR(20);
Semester VARCHAR(50), **Status** VARCHAR(50); **EnrolDate** DATE);
- ② CREATE TABLE **Enrol**(**StudentID** INT, **CourseNo** VARCHAR(20),
Semester VARCHAR(50), **Status** VARCHAR(50), **EnrolDate** DATE,);
- ③ CREATE TABLE **Enrol**(**StudentID** INT, **CourseNo** VARCHAR(20),
Semester VARCHAR(50), **Status** VARCHAR(50), **EnrolDate** DATE),



程序代写代做 CS编程辅导

Data Definition Language – CREATE TABLE

- Create a relation sch



- **Enrol**(StudentID: STRING, CourseNo: STRING, Semester: STRING, Status: STRING, EnrolDate: DATE)

WeChat: cstutorcs

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – CREATE TABLE

- Create a relation sch



- **Enrol**(StudentID: STRING, CourseNo: STRING, Semester: STRING, Status: STRING, EnrolDate: DATE)

WeChat: cstutorcs

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate

Assignment Project Exam Help

- None of the following **CREATE TABLE** statements is correct.
Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – CREATE TABLE

- Create a relation sch



- **Enrol**(StudentID: INT, CourseNo: STRING, Semester: STRING,
Status: STRING, EnrolDate: DATE)

WeChat: cstutorcs

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate

Assignment Project Exam Help

- None of the following **CREATE TABLE** statements is correct.

Email: tutorcs@163.com

- 1 CREATE TABLE Enrol(StudentID INT; CourseNo VARCHAR(20);
Semester VARCHAR(50); Status VARCHAR(50); EnrolDate DATE);
QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – CREATE TABLE



- Create a relation sch

- **Enrol**(StudentID: INT, CourseNo: STRING, Semester: STRING, Status: STRING, EnrolDate: DATE)

WeChat: cstutorcs

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate

Assignment Project Exam Help

- None of the following **CREATE TABLE** statements is correct.

Email: tutorcs@163.com

- ① CREATE TABLE **Enrol**(StudentID INT; CourseNo VARCHAR(20); Semester VARCHAR(50); Status VARCHAR(50); EnrolDate DATE);
~~QQ: 749389476~~
- ② CREATE TABLE **Enrol**(StudentID INT, CourseNo VARCHAR(20), Semester VARCHAR(50), Status VARCHAR(50), EnrolDate DATE,);
~~https://tutors.com~~



程序代写代做 CS编程辅导

Data Definition Language – CREATE TABLE



- Create a relation sch

- **Enrol**(StudentID: INT, CourseNo: STRING, Semester: STRING, Status: STRING, EnrolDate: DATE)

WeChat: cstutorcs

ENROL				
StudentID	CourseNo	Semester	Status	EnrolDate

Assignment Project Exam Help

- None of the following **CREATE TABLE** statements is correct.

Email: tutorcs@163.com

- ① CREATE TABLE **Enrol**(StudentID INT; CourseNo VARCHAR(20); Semester VARCHAR(50); Status VARCHAR(50); EnrolDate DATE);
- ② CREATE TABLE **Enrol**(StudentID INT, CourseNo VARCHAR(20), Semester VARCHAR(50), Status VARCHAR(50), EnrolDate DATE,);
- ③ CREATE TABLE **Enrol**(StudentID INT, CourseNo VARCHAR(20), Semester VARCHAR(50), Status VARCHAR(50), EnrolDate DATE,);

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – CREATE TABLE

- Create a relation schema

- **Enrol**(StudentID: INT, CourseNo: STRING, Semester: STRING, Status: STRING, EnrolDate: DATE)

WeChat: cstutorcs

Assignment Project Exam Help

StudentID	CourseNo	Semester	Status	EnrolDate
-----------	----------	----------	--------	-----------

- The correct **CREATE TABLE** statement

```
CREATE TABLE Enrol (StudentID INT, CourseNo VARCHAR(20),  
Semester VARCHAR(50), Status VARCHAR(50), EnrolDate DATE);
```

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – CREATE TABLE

- Create a relation sch

- **Enrol**(StudentID



CourseNo: STRING, Semester: STRING,
Status: STRING, EnrolDate: DATE)

WeChat: cstutores

StudentID	CourseNo	Semester	Status	EnrolDate
-----------	----------	----------	--------	-----------

- The correct **CREATE TABLE** statement

CREATE TABLE **Enrol**(~~Student ID INT~~ CourseNo VARCHAR(20),
Semester VARCHAR(50), Status VARCHAR(50), EnrolDate DATE);

- What about the following two **CREATE TABLE** statements?

create table **Enrol**(~~studentID int~~ CourseNo varchar(20),
Semester varchar(50), Status varchar(50), EnrolDate date);

CREATE TABLE **enrol**(~~studentID INT~~, ~~courseNo~~ VARCHAR(20),
semester VARCHAR(50), status VARCHAR(50), enroldate DATE);



程序代写代做 CS编程辅导

Data Definition Language – CREATE TABLE

- Create a relation sch



- **Enrol**(StudentID: INTEGER, CourseNo: STRING, Semester: STRING, Status: STRING, EnrolData: DATE)

WeChat: cstutorcs				
StudentID	CourseNo	Semester	Status	EnrolDate

- PostgreSQL switches **CREATE TABLE** statements to lower case **unless we use double quotes**.

Email: tutorcs@163.com

```
create table enrol(studentid int, courseno varchar(20),  
semester varchar(50), status varchar(50), enroldate date);
```

```
u1024708=> \d enrol  
           Table "public.enrol"  
 Column | Type | Format | Modifiers  
-----+-----+-----+-----  
 studentid | integer | |  
 courseno | character varying(20) | |  
 semester | character varying(50) | |  
 status | character varying(50) | |  
 enroldate | date | |
```

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – CREATE TABLE



- Can we create two relations with the same name in the same database?

WeChat: cstutorcs
Assignment Project Exam Help
Email: tutors@163.com

```
CREATE TABLE Enrol(StudentID INT, CourseNo VARCHAR(20),
Semester VARCHAR(50), Status VARCHAR(50), EnrolDate DATE);
create table enrol(studentid int, courseno varchar(20),
semester varchar(50), status varchar(50), enroldate date);
```

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – CREATE TABLE



- Can we create two relations with the same name in the same database?

WeChat: cstutorcs
Assignment Project Exam Help
Email: tutors@163.com

```
CREATE TABLE Enrol(StudentID INT, CourseNo VARCHAR(20),
Semester VARCHAR(50), Status VARCHAR(50), EnrolDate DATE);
create table enrol(studentid int, courseno varchar(20),
semester varchar(50), status varchar(50), enroldate date);
```

- No with the following error message.

QQ: 749389476

```
u1024708=> create table enrol(studentid int, courseno varchar(20),
u1024708(> semester varchar(50), status varchar(50), enroldate date);
ERROR: relation "enrol" already exists
```

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – CREATE TABLE



- Can we create the following relation schemas in the same database?

```
u1024708=> CREATE TABLE Enrol(StudentID INT, CourseNo VARCHAR(20),  
Semester VARCHAR(50), Status VARCHAR(50), EnrolDate DATE);  
CREATE TABLE  
u1024708=> CREATE TABLE "Enrol"(StudentID INT, CourseNo VARCHAR(20),  
Semester VARCHAR(50), Status VARCHAR(50), EnrolDate DATE);  
CREATE TABLE
```

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – CREATE TABLE



- Can we create the following relation schemas in the same database?

```
u1024708=> CREATE TABLE Enrol(StudentID INT, CourseNo VARCHAR(20),  
Semester VARCHAR(50), Status VARCHAR(50), EnrolDate DATE);  
CREATE TABLE  
u1024708=> CREATE TABLE "Enrol"(StudentID INT, CourseNo VARCHAR(20),  
Semester VARCHAR(50), Status VARCHAR(50), EnrolDate DATE);  
CREATE TABLE
```

Email: tutorcs@163.com

- Yes. Enrol and "Enrol" are different.

```
u1024708=> \dt  
QQ 749389476  
      List of relations  
 Schema | Name   | Type | Owner  
-----+-----+-----+-----  
 public | Enrol  | table | u1024708  
 public | enrol  | table | u1024708
```



程序代写代做 CS编程辅导

Data Definition Language – Relational Database Schema



- A **relational database schema** S is

- a set of relation schemas $S = \{R_1, \dots, R_m\}$, and
- a set of integrity constraints I/C .

WeChat: cstutorcs

STUDENT			
StudentID	Name	DoB	Email

Email: tutorcs@163.com

COURSE		
No	Cname	Unit

QQ: 749389476

ENROL				
StudentID	CourseNO	Semester	Status	EnrolDate

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – Domain Constraints



StudentID	CourseNo	Semester	Status	EnrolDate

Assignment Project Exam Help

Email: tutorcs@163.com
CREATE TABLE STUDENT(StudentID INT, Name VARCHAR(50), DoB Date,
Email VARCHAR(100));

QQ: 749389476

CREATE TABLE COURSE(No VARCHAR(20), Cname VARCHAR(50), Unit SMALLINT);
<https://tutorcs.com>

CREATE TABLE ENROL(StudentID INT, CourseNo VARCHAR(20),
Semester VARCHAR(50), Status VARCHAR(50));



程序代写代做 CS编程辅导 Data Definition Language – Key Constraints



Email: tutorcs@163.com

- **UNIQUE:** uniquely identify each tuple in a table.

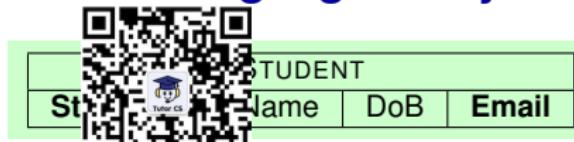
QQ: 749389476
Every superkey is UNIQUE. Should we specify UNIQUE for every superkey?

<https://tutorcs.com>

STUDENT			
StudentID	Name	DoB	Email



程序代写代做 CS编程辅导 Data Definition Language – Key Constraints



```
CREATE TABLE STUDENT
  (StudentID INT,
   Name VARCHAR(50),
   DoB Date,
   Email VARCHAR(100),
   UNIQUE(StudentID),
   UNIQUE>Email: tutorcs@163.com
   UNIQUE(StudentID, Email),
   UNIQUE(StudentID, Name),
   UNIQUE(StudentID, DoB),
   ...
   UNIQUE(StudentID, Name, DoB, Email));
```

WeChat: cstutorcs
Assignment Project Exam Help
Email: tutorcs@163.com
QQ: 749389476
<https://tutorcs.com>



程序代写代做 CS编程辅导 Data Definition Language – Candidate Key



- **UNIQUE:** uniquely identify each tuple in a table.
Specify UNIQUE for every candidate key.
- For example, {StudentID} and {Email} are two candidate keys for STUDENT.

CREATE TABLE STUDENT

(StudentID INT,
Name VARCHAR(50),
DoB Date,
Email VARCHAR(100),
UNIQUE(StudentID),
UNIQUE>Email));



程序代写代做 CS编程辅导
Data Definition Language – Candidate Key



		ENROL		
StudentID	CourseNo	Semester	Status	EnrolDate

- {StudentID, CourseNo, Semester} is a candidate key of ENROL.

WeChat: cstutorcs
Assignment Project Exam Help

CREATE TABLE ENROL

(StudentID INT ,
CourseNo VARCHAR(20),

Semester VARCHAR(50),

Status VARCHAR(50),

EnrolDate DATE,

UNIQUE(StudentID, CourseNo, Semester));

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导
Data Definition Language – Primary Key



- **PRIMARY KEY:** Specify PRIMARY KEY the primary key.
- For example, {StudentID} and {Email} are two candidate keys for STUDENT, and {StudentID} is selected as the primary key.

CREATE TABLE STUDENT
(StudentID INT,
Name VARCHAR(50),
DoB Date,
Email VARCHAR(100))
PRIMARY KEY(StudentID),
UNIQUE>Email);

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导
Data Definition Language – Primary Key



		ENROL		
StudentID	CourseNo	Semester	Status	EnrolDate

- {StudentID, CourseNo, Semester} is the primary key of ENROL.

WeChat: cstutorcs
Assignment Project Exam Help

CREATE TABLE ENROL
(StudentID INT ,
CourseNo VARCHAR(20) ,
Semester VARCHAR(50) ,
Status VARCHAR(50) ,
EnrolDate DATE ,
PRIMARY KEY(StudentID, CourseNo, Semester));

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导
Data Definition Language – Primary Key



STUDENT			
StudentID	Name	DoB	Email
Jame			

- Can we select multiple primary keys for the same relation schema?

CREATE TABLE STUDENT

(StudentID INT,

Name VARCHAR(50),

DoB Date,

Email VARCHAR(100),

PRIMARY KEY(StudentID),

PRIMARY KEY(Email);

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导 Data Definition Language – Primary Key



- Can we select multiple primary keys for the same relation schema?

CREATE TABLE STUDENT

(StudentID INT,

Name VARCHAR(50),

DoB Date,

Email VARCHAR(100),

PRIMARY KEY(StudentID),

PRIMARY KEY>Email);

QQ: 749389476

PRIMARY KEY(StudentID),

PRIMARY KEY>Email);

https://tutorcs.com

- No because multiple primary keys for the same relation schema are not allowed.



程序代写代做 CS编程辅导

Data Definition Language – Candidate Key



STUDENT			
StudentID	Name	DoB	Email
Jame			

- Can we add multiple UNIQUE constraints for the same relation schema?

CREATE TABLE STUDENT

Assignment Project Exam Help

(StudentID INT,

Name VARCHAR(50),

DoB Date,

Email VARCHAR(100),

QQ: 749389476

UNIQUE(StudentID),

UNIQUE>Email);

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – Candidate Key



STUDENT			
StudentID	Name	DoB	Email
St	Jame	DoB	Email

- Can we add multiple UNIQUE constraints for the same relation schema?

CREATE TABLE STUDENT

Assignment Project Exam Help

(StudentID INT,

Name VARCHAR(50),

DoB Date,

Email VARCHAR(100),

QQ: 749389476

UNIQUE(StudentID),

UNIQUE>Email);

<https://tutorcs.com>

- Yes because multiple candidate keys (or superkeys) for the same relation schema are allowed.



程序代写代做 CS编程辅导

Data Definition Language – Entity Integrity Constraints



- Entity integrity constraint: primary key value can be NULL.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – Entity Integrity Constraints



- Entity integrity constraint: primary key value can be NULL.
- Can the StudentID value be NULL?

CREATE TABLE ENROL

WeChat: cstutorcs

(StudentID INT ,
CourseNo VARCHAR(20),
Semester VARCHAR(50),
Status VARCHAR(50),
EnrolDate DATE,
PRIMARY KEY (StudentID, CourseNo, Semester));

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

Primary Key

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – Entity Integrity Constraints



- Entity integrity constraint: No primary key value can be NULL.
- Can the StudentID value be NULL?

CREATE TABLE ENROL

(StudentID INT,
CourseNo VARCHAR(20),
Semester VARCHAR(50),
Status VARCHAR(50),
EnrolDate DATE,
PRIMARY KEY (StudentID, CourseNo, Semester));

<https://tutorcs.com>

- No. None of the columns listed in the primary key can be NULL.



程序代写代做 CS编程辅导

Data Definition Language – Entity Integrity Constraints

- What about UNIQUE ?



WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – Entity Integrity Constraints

- What about UNIQUE constraints?
- Can the StudentID value be null?



CREATE TABLE STUDENT

(StudentID INT,

Name VARCHAR(50),

DoB Date,

Email VARCHAR(100),

UNIQUE(StudentID),

UNIQUE>Email);

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

Data Definition Language – Entity Integrity Constraints

- What about UNIQUE constraints?
- Can the StudentID value be null?



CREATE TABLE STUDENT

(StudentID INT,
Name VARCHAR(50),

DoB Date,
Email VARCHAR(100),

UNIQUE(StudentID),
UNIQUE>Email

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

- In PostgreSQL, two NULL values are not considered equal. That means even in the presence of a unique constraint it is possible to store duplicate rows that contain a null value in at least one of the constrained columns.
But other SQL databases might not follow this rule and be careful when developing applications that are intended to be portable.



程序代写代做 CS编程辅导

Data Definition Language – Referential Integrity Constraints



- Referential integrity constraints ensure the values in a column (or a group of columns) in one table match the values appearing in some row of another table.

WeChat: cstutorcs

CREATE TABLE STUDENT(StudentID INT PRIMARY KEY, Name VARCHAR(50),
DoB Date, Email VARCHAR(100));

Assignment Project Exam Help

CREATE TABLE COURSE(No VARCHAR(20) PRIMARY KEY, Cname VARCHAR(50),
Unit SMALLINT);

QQ: 749389476

CREATE TABLE ENROL(StudentID INT, CourseNo VARCHAR(20),
Semester VARCHAR(50), Status VARCHAR(50));

<https://tutorcs.com>

- Every StudentID appearing in ENROL must exist in STUDENT.
- Every CourseNo appearing in ENROL must exist in COURSE.



程序代写代做 CS编程辅导
Data Definition Language – Foreign Key

```
CREATE TABLE STUDEN
(
    StudentID INT PRIMARY KEY,
    Name VARCHAR(50),
    DoB Date,
    Email VARCHAR(100));
```



WeChat: cstutorcs
CREATE TABLE COURSE

```
(No VARCHAR(20) PRIMARY KEY,
Cname VARCHAR(50),
Unit SMALLINT);
```

Assignment Project Exam Help

Email: tutorcs@163.com

CREATE TABLE ENROL

QQ: 749389476

```
(StudentID INT,
CourseNo VARCHAR(20),
Semester VARCHAR(50),
Status VARCHAR(50),
FOREIGN KEY(StudentID) REFERENCES STUDENT(StudentID),
FOREIGN KEY(CourseNo) REFERENCES COURSE(No));
```

<https://tutorcs.com>



程序代写代做 CS编程辅导 Data Definition Language – Foreign Key

```
CREATE TABLE STUDEN
(
    StudentID INT PRIMARY KEY,
    Name VARCHAR(50),
    DoB Date,
    Email VARCHAR(100));
```



WeChat: cstutorcs Does {StudentID} in STUDENT have to be the primary key of STUDENT?
Assignment Project Exam Help
Email: tutorcs@163.com

```
CREATE TABLE COURSE
(
    No VARCHAR(20) PRIMARY KEY,
    Cname VARCHAR(50),
    Unit SMALLINT);
```

QQ: 749389476
<https://tutorcs.com>

```
CREATE TABLE ENROL
(
    StudentID INT,
    CourseNo VARCHAR(20),
    Semester VARCHAR(50),
    Status VARCHAR(50),
    FOREIGN KEY(StudentID) REFERENCES STUDENT(StudentID),
    FOREIGN KEY(CourseNo) REFERENCES COURSE(No));
```



程序代写代做 CS编程辅导 Data Definition Language – Foreign Key

```
CREATE TABLE STUDEN  
( StudentID PRIMARY KEY,  
  Name VARCHAR(50),  
  DoB Date,  
  Email VARCHAR(100));
```



```
CREATE TABLE COURSE  
( No PRIMARY KEY,  
  Cname VARCHAR(50),  
  Unit SMALLINT);
```

WeChat: cstutorcs Does {StudentID} in STUDENT have to be the primary key of STUDENT?

```
CREATE TABLE ENROL  
( StudentID INT,  
  CourseNo VARCHAR(20),  
  Semester VARCHAR(50),  
  Status VARCHAR(50),  
  FOREIGN KEY(StudentID) REFERENCES STUDENT(StudentID),  
  FOREIGN KEY(CourseNo) REFERENCES COURSE(No));
```

QQ: 749389476

<https://tutorcs.com>

Answer: In PostgreSQL, {StudentID} in STUDENT must be either the primary key or form a unique constraint.



程序代写代做 CS编程辅导 Attribute Constraints – Foreign Key

```
CREATE TABLE ENROL
  ( StudentID  INT PRIMARY KEY,
    CourseNo   VARCHAR(10),
    Semester   VARCHAR(2),
    Status     VARCHAR(50),
    FOREIGN KEY(StudentID) REFERENCES STUDENT(StudentID),
    FOREIGN KEY(CourseNo) REFERENCES COURSE(No));
```

Assignment Project Exam Help

Can we define ENROL before STUDENT and
before COURSE?

```
CREATE TABLE STUDENT
  ( StudentID  INT PRIMARY KEY,
    Email      Email: tutores@163.com,
    Name       VARCHAR(50),
    DoB        Date,
    QQ         QQ: 749389476,
    Email      VARCHAR(100));
```

<https://tutorcs.com>

```
CREATE TABLE COURSE
  ( No        VARCHAR(20) PRIMARY KEY,
    Cname     VARCHAR(50),
    Unit      SMALLINT);
```



程序代写代做 CS编程辅导 Attribute Constraints – Foreign Key

```
CREATE TABLE ENROL
  ( StudentID INT PRIMARY KEY,
    CourseNo VARCHAR(10),
    Semester VARCHAR(2),
    Status VARCHAR(50),
    FOREIGN KEY(StudentID) REFERENCES STUDENT(StudentID),
    FOREIGN KEY(CourseNo) REFERENCES COURSE(No));
```

Assignment Project Exam Help

```
CREATE TABLE STUDENT
  ( StudentID INT PRIMARY KEY,
    Email_email.tutore@163.com VARCHAR(50),
    Name VARCHAR(50),
    DoB Date,
    QQ_QQ: 749389476 VARCHAR(100));
    Email VARCHAR(100));
```

<https://tutorcs.com>

```
CREATE TABLE COURSE
  ( No VARCHAR(20) PRIMARY KEY,
    Cname VARCHAR(50),
    Unit SMALLINT);
```

Can we define ENROL before STUDENT and COURSE?

Answer: No. ENROL has the foreign keys that reference STUDENT and COURSE.



程序代写代做 CS编程辅导

Create Index (optional reading, will not be accessed)

CREATE INDEX cons... index on the specified column(s) of the specified table.



In PostgreSQL, the index methods include B-tree, hash and others.

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

STUDENT		
StudentID	Name	Age
111	Ava	30
222	Tom	25
333	John	35
444	Emily	35

ENROL		
StudentID	CourseNo	Semester
111	BUSN2011	S2 2020
111	COMP2400	S2 2020
111	ECON2102	S2 2019
222	BUSN2011	S2 2020
222	COMP2400	S2 2020
333	BUSN2011	S2 2020
333	COMP2400	S2 2020
333	ECON2102	S2 2020

COURSE		
CourseNo	Name	Unit
ECON2102	Economics	6
COMP2400	Databases	6
BUSN2011	Accounting	6

FK (StudentID) references STUDENT(StudentID)

FK (CourseNo) references COURSE(CourseNo)

<https://www.postgresql.org/docs/12/sql-createindex.html>



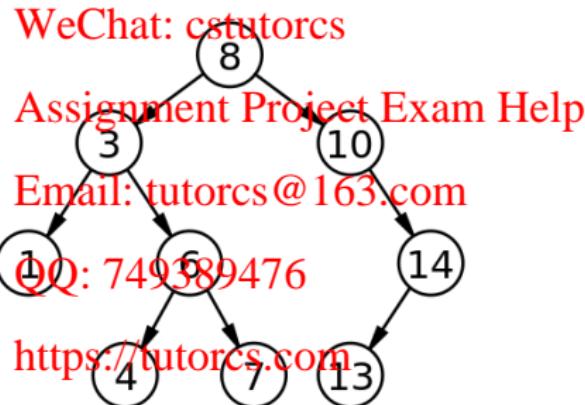
程序代写代做 CS编程辅导

Create Index (optional reading, will not be accessed)

CREATE INDEX cons... index on the specified column(s) of the specified table.



How to use '**B-tree**' (binary search tree) to construct an index?



https://en.wikipedia.org/wiki/Binary_search_tree

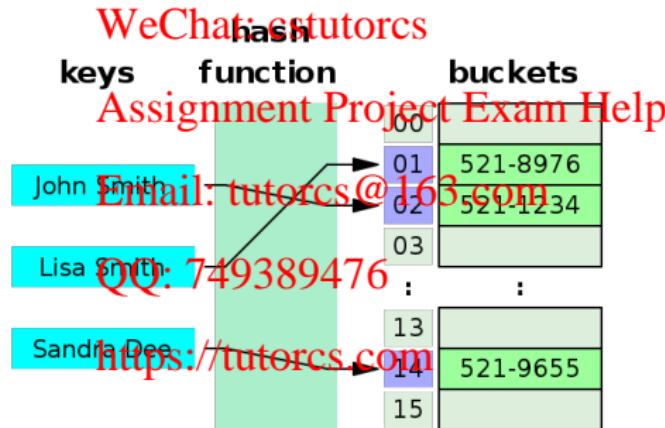


程序代写代做 CS编程辅导

Create Index (optional reading, will not be accessed)

CREATE INDEX constructs an index on the specified column(s) of the specified table.

How to use 'Hash Function' to construct an index?



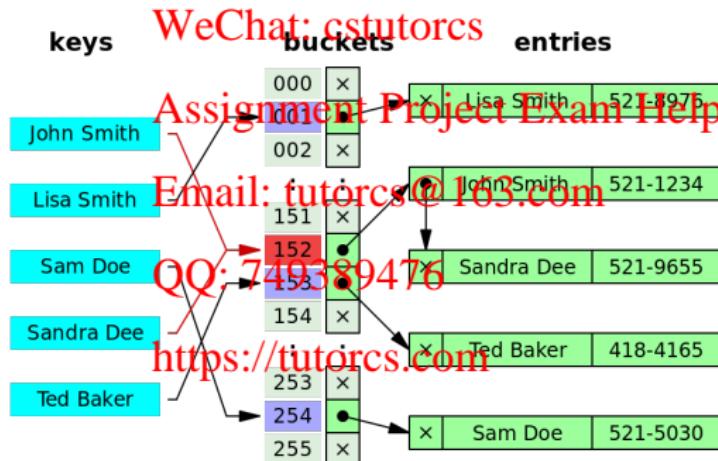


程序代写代做 CS编程辅导

Create Index (optional reading, will not be accessed)

CREATE INDEX constructs an index on the specified column(s) of the specified table.

How to use 'Hash Function' to construct an index?





程序代写代做 CS编程辅导

(credit cookie) René Descartes and the Cartesian Product



WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com> 

https://en.wikipedia.org/wiki/Ren%C3%A9_Descartes



程序代写代做 CS编程辅导
René Descartes

René Descartes (Re



sius, 1596–1650) was a French

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导
René Descartes

René Descartes (Re



nius, 1596–1650) was a French

- **Philosopher:** (

Sum (“I think, therefore I am”)

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>



程序代写代做 CS编程辅导

René Descartes

René Descartes (Re-



natus, 1596–1650) was a French

- **Philosopher:** Cogito, ergo sum (“I think, therefore I am”)
- **Mathematician:** Cartesian coordinate system (Cartesian Product?)

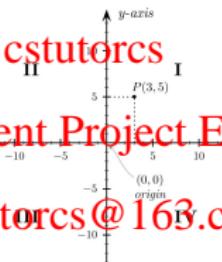
WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

<https://tutorcs.com>





程序代写代做 CS编程辅导

René Descartes

René Descartes (Re-



natus, 1596–1650) was a French

- **Philosopher:** Cogito, ergo sum (“I think, therefore I am”)
- **Mathematician:** Cartesian coordinate system (Cartesian Product?)

WeChat: cstutorcs

Assignment Project Exam Help

Email: tutorcs@163.com

QQ: 749389476

- **Scientist:** “contact” lenses

<https://tutorcs.com>

