

Introduction to Database System 1111 CS352A

Homework Assignment 3

Introduction to Database System, CS352, Fall 2022

Class:資工 4B

Name:萬彥君

ID:1081546

1.

a.

select ID

Case

When score < 40 THEN 'F'

When score < 60 THEN 'C'

When score < 80 THEN 'B'

else 'A'

END

From marks;

b.

with *gradenum* as

(

select ID,

Case

When score <40 THEN 'F'

When score <60 THEN 'C'

When score <60 THEN 'B'

else 'A'

END AS grade

From marks

) select grade, count(ID)

from *gradenum* group by grade;

2.

a.

dept_name	avg_salary
Biology	72000
Comp.Sci.	77333
Elec.Eng.	80000
Finance	85000
History	61000
Music	40000
Physics	91000

b.

ID	name	dept_name	salary
10101	Srinivasan	Comp.Sci.	65000
83821	Brandt	Comp.Sci.	92000
12121	Wu	Finance	90000
32343	El Said	History	60000
58583	Califieri	History	62000
15151	Mozart	Music	40000
33456	Gold	Physics	87000
22222	Einstein	Physics	95000

c.

ID	name	dept_name	salary
10101	Srinivasan	Comp.Sci.	65000
83821	Brandt	Comp.Sci.	92000
12121	Wu	Finance	90000
32343	El Said	History	60000
58583	Califieri	History	62000
15151	Mozart	Music	42000
33456	Gold	Physics	87000
22222	Einstein	Physics	95000

d.

ID	name	dept_name	salary
10101	Srinivasan	Comp.Sci.	65000
83821	Brandt	Comp.Sci.	92000
12121	Wu	Finance	90000
32343	El Said	History	60000
58583	Califieri	History	62000
15151	Mozart	Music	42000
33456	Gold	Physics	87000
22222	Einstein	Physics	95000
33333	John	Elec.Eng.	9000

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a.

$\pi_{id,name}(\sigma_{dept_name = 'COMP.SCI'}(student))$

b.

Select name, id From student Where id Not in
(select distinct id From takes Where year < 2017)

c.

select max(salary) from instructor group by department

d.

select min(max_salary) from (
select max(salary) as max_salary
from instructor
group by department)

4.

a.

$\sigma_{\text{length} > 100}(\text{Movie})$

b.

$\pi_{\text{title}, \text{length}}(\sigma_{\text{studioName} = \text{'Disney'} \wedge \text{year} = 1990}(\text{Movie}))$

c.

$\pi_{\text{Movie.title}, \text{Movie.year}, \text{Movie.length}, \text{Movie.inColor}, \text{Movie.studioName}, \text{Movie.producer\#}}(\sigma_{\text{Movie.studioName} = \text{Studio.name} \wedge \text{Studio.city} = \text{'New York'}}(\text{Movie} \times \text{Studio}))$