

iSQL Junior

Feenix Student Environment

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Enter

Statements:

```
prompt START OF OUTPUT SECTION
-- STUDENT NAMES and IDs
prompt Student 1 ID: 103488515
prompt Student 1 Name: Hai Nam Ngo

prompt Student 2 ID: 104057343
prompt Student 2 Name: Viet Bach Le

prompt Student 3 ID: 104154163
prompt Student 3 Name: Bianca Mathieu
```

Execute

Clear

START OF OUTPUT SECTION

Student 1 ID: 103488515

Student 1 Name: Hai Nam Ngo

Student 2 ID: 104057343

Student 2 Name: Viet Bach Le

Student 3 ID: 104154163

Student 3 Name: Bianca Mathieu

Requirement 1

ENGLISH STATEMENTS (also have comments in the script)

ONE task MAY be allocated to MANY workers.

ONE worker MAY have MANY task allocations.

MANY workers may be allocated to ONE task.

MANY tasks may be allocated to ONE worker.

Requirement 2

DROP ALL TABLES

OK. 0 rows

OK. 0 rows

OK. 0 rows

OK. 0 rows

OK. 0 rows

OK. 0 rows

OK. 0 rows

OK. 0 rows

Requirement 3

CREATE ALL TABLES

OK. 0 rows

OK. 0 rows

OK. 0 rows

Requirement 4

insert worker, task and allocation data

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

Requirement 5

Write a single SQL query statement that lists the work id, worker name, task id, task name and, hourly rate for each row in the allocation table.

select W.wrkid as "Worker Id", w.wrkname as "Worker Name",
t.tskid as "Task Id", t.tskdescription as "Task Name",
a.HourlyRate as "Hourly Rate" from allocation a inner join
worker w on w.wrkid=a.wrkid inner join task t on t.tskid=a.tskid

Worker Id	Worker Name	Task Id	Task Name	Hourly Rate
1	Clyde	151	Web Design	50.75
1	Clyde	163	Sales and Marketing	45.5
2	Sally	165	Testing	25
2	Sally	155	Python Coding	30
3	Imogen	163	Sales and Marketing	65
5	Tara	151	Web Design	25
5	Tara	155	Python Coding	27
5	Tara	165	Testing	30
7	Kerri	163	Sales and Marketing	40

OK. 9 rows selected.

Requirement 6

Testing Primary and foreign key constraints

```
insert into allocation (Wrkid,tskid,HourlyRate) values (1,163,100)
*
```

Error at line 1:

ORA-00001: unique constraint (S103488515.PK_ALLOCATION) violated

```
insert into allocation (Wrkid,tskid,HourlyRate) values (5,155,99)
*
```

Error at line 1:

ORA-00001: unique constraint (S103488515.PK_ALLOCATION) violated

Requirement 7

Testing Check constraints

```
insert into allocation (Wrkid,tskid,HourlyRate) values (1,155,500)
*
```

Error at line 1:

ORA-02290: check constraint (S103488515.CK_ALLOCATION_RATE) violated

```
insert into allocation (Wrkid,tskid,HourlyRate) values (6,171,399)
*
```

Error at line 1:

ORA-02290: check constraint (S103488515.CK_ALLOCATION_RATE) violated

Requirement 8

Querys 8.1

Select count(*)
as "Total
Allocation"
from allocation

Total Allocation
9

OK. 1 rows selected.

Query 8.2

Select categorytype as "Task
Category", count(*) as "Total
Allocation" from task group by
categorytype

Task Category	Total Allocation
A	2
B	1
C	2

OK. 3 rows selected.

Query 8.3

Select Wrkgender as
"Gender", count(*) as

"Total Allocation" from
worker group by
Wrkgender

Gender	Total Allocation
M	3
F	4

OK. 2 rows selected.

Query 8.4

Select status as "Status
Type", Wrkgender as
"Gender", count(*) as
"Count" from worker
group by
status,Wrkgender order by
status, Wrkgender asc

Status Type	Gender	Count
International	F	2
International	M	1
Local	F	2
Local	M	2

OK. 4 rows selected.

Requirement 9

Transferred to the requirement 2

Requirement 10

CREATE TABLES - Timelog

OK. 0 rows

Requirement 11

insert Timelog data

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

Requirement 12

Testing Primary and foreign key constraints

```
insert into timelog (Wrkid,tskid,Weekno,Hrsworked) values  
(1,171,43,5)  
*
```

Error at line 1:

ORA-02291: integrity constraint (S103488515.FK_ALLOCATION) violated -
parent key not found

```
insert into timelog (Wrkid,tskid,Weekno,Hrsworked) values  
(10,163,40,2)
```

*

Error at line 1:

ORA-02291: integrity constraint (S103488515.FK_ALLOCATION) violated -
parent key not found

```
insert into timelog (Wrkid,tskid,Weekno,Hrsworked) values  
(3,155,40,10)
```

*

Error at line 1:

ORA-02291: integrity constraint (S103488515.FK_ALLOCATION) violated -
parent key not found

```
insert into timelog (Wrkid,tskid,Weekno,Hrsworked) values  
(5,188,39,10)
```

*

Error at line 1:

ORA-02291: integrity constraint (S103488515.FK_ALLOCATION) violated -
parent key not found

```
insert into timelog (Wrkid,tskid,Weekno,Hrsworked) values  
(1,163,39,2)
```

*

Error at line 1:

ORA-00001: unique constraint (S103488515.PK_TIMELOG) violated

```
insert into timelog (Wrkid,tskid,Weekno,Hrsworked) values  
(5,151,42,6)
```

*

Error at line 1:

ORA-00001: unique constraint (S103488515.PK_TIMELOG) violated

Requirement 13

Listing Timelog data

```
select W.wrkid as "Worker Id", w.wrkname as "Worker Name", t.tskid  
as "Task Id", t.tskdescription as "Task Name", ti.Weekno as "WeekNo",  
ti.Hrsworked as "HrsWorked" from timelog ti inner join worker w on  
w.wrkid=ti.wrkid inner join task t on t.tskid=ti.tskid
```


Worker Id	Worker Name	Task Id	Task Name	WeekNo	HrsWorked
1	Clyde	151	Web Design	42	5.5
1	Clyde	151	Web Design	41	5
1	Clyde	163	Sales and Marketing	42	6
1	Clyde	163	Sales and Marketing	40	8
1	Clyde	163	Sales and Marketing	39	10
2	Sally	155	Python Coding	41	10
2	Sally	165	Testing	40	20
2	Sally	155	Python Coding	42	10
2	Sally	165	Testing	39	15
2	Sally	155	Python Coding	39	10
5	Tara	151	Web Design	42	11.5
5	Tara	155	Python Coding	41	5
5	Tara	155	Python Coding	40	6
5	Tara	155	Python Coding	39	8

OK. 14 rows selected.

Requirement 14

Query 14.1

Select ti.wrkid as "Worker Id", w.Wrname as "Worker Name", ti.Weekno as "Week Number", ti.tskid as "Task Number", ti.Hrsworked as "Hours Worked", ti.Hrsworked*a.HourlyRate as "Total Pay" from timelog ti inner join worker w on w.Wrkid=ti.Wrkid inner join allocation a on ti.tskid=a.tskid and a.Wrkid=ti.Wrkid order by ti.Wrkid,ti.Weekno,ti.tskid asc

Worker Id	Worker Name	Week Number	Task Number	Hours Worked	Total Pay
1	Clyde	39	163	10	455
1	Clyde	40	163	8	364
1	Clyde	41	151	5	253.75

Worker Id	Worker Name	Week Number	Task Number	Hours Worked	Total Pay
1	Clyde	42	151	5.5	279.125
1	Clyde	42	163	6	273
2	Sally	39	155	10	300
2	Sally	39	165	15	375
2	Sally	40	165	20	500
2	Sally	41	155	10	300
2	Sally	42	155	10	300
5	Tara	39	155	8	216
5	Tara	40	155	6	162
5	Tara	41	155	5	135
5	Tara	42	151	11.5	287.5

OK. 14 rows selected.

Query 14.2

Select w.wrkid as "Worker Id", w.Wrkname as "Worker Name", ti.Weekno as "Week Number", ti.Hrsworked*a.HourlyRate as "Total Pay" from timelog ti inner join worker w on w.wrkid=ti.wrkid inner join allocation a on ti.tskid=a.tskid and a.Wrkid=ti.Wrkid order by ti.Wrkid,ti.Weekno asc

Worker Id	Worker Name	Week Number	Total Pay
1	Clyde	39	455
1	Clyde	40	364
1	Clyde	41	253.75
1	Clyde	42	279.125
1	Clyde	42	273
2	Sally	39	300
2	Sally	39	375
2	Sally	40	500
2	Sally	41	300
2	Sally	42	300
5	Tara	39	216

Worker Id	Worker Name	Week Number	Total Pay
5	Tara	40	162
5	Tara	41	135
5	Tara	42	287.5

OK. 14 rows selected.

Query 14.3

```

Select ti.wrkid as "Worker Id",
w.Wrurname as "Worker Name",
sum(ti.Hrsworked*a.HourlyRate)
as "Total Pay" from timelog ti
inner join worker w on
w.wrkid=ti.wrkid inner join
allocation a on ti.tskid=a.tskid
and a.Wrkid=ti.Wrkid group by
w.Wrurname,ti.wrkid order by
ti.wrkid asc

```

Worker Id	Worker Name	Total Pay
1	Clyde	1624.875
2	Sally	1775
5	Tara	800.5

OK. 3 rows selected.

Query 14.4

```

Select ti.Weekno as "Week
Number",
SUM(ti.Hrsworked*a.HourlyRate)
as "Total Pay" from timelog ti
inner join allocation a on
ti.tskid=a.tskid and
a.Wrkid=ti.Wrkid group by
ti.Weekno order by ti.Weekno
asc

```

Week Number	Total Pay
39	1346
40	1026

Week Number	Total Pay
41	688.75
42	1139.625

OK. 4 rows selected.

Query 14.5

Select ti.tskid as "Task Id", t.tskdescription as "Task Description", ti.HrsWorked as "Total Hours", ti.Hrsworked*a.HourlyRate as "Total Pay" from timelog ti inner join allocation a on ti.tskid=a.tskid and a.Wrkid=ti.Wrkid inner join task t on ti.tskid=t.tskid where ti.HrsWorked>0 group by ti.tskid,t.tskdescription,ti.Hrsworked,a.Hourlyrate order by ti.tskid asc

Task Id	Task Description	Total Hours	Total Pay
151	Web Design	5	253.75
151	Web Design	5.5	279.125
151	Web Design	11.5	287.5
155	Python Coding	5	135
155	Python Coding	6	162
155	Python Coding	8	216
155	Python Coding	10	300
163	Sales and Marketing	6	273
163	Sales and Marketing	8	364
163	Sales and Marketing	10	455
165	Testing	15	375
165	Testing	20	500

OK. 12 rows selected.

Query 14.6

Select w.Wrkid as "Worker Id", w.Wrkname as "Worker name", SUM(ti.HrsWorked) as "Total Hours"

```
from timelog ti right outer join  
worker w on ti.Wrkid=w.Wrkid  
group by w.Wrkid,w.Wrkname order  
by w.Wrkid asc
```

Worker Id	Worker name	Total Hours
1	Clyde	34.5
2	Sally	65
3	Imogen	
4	James	
5	Tara	30.5
6	Mike	
7	Kerri	

OK. 7 rows selected.

Requirement 15

Transferred to the requirement 2

Requirement 16

CREATE TABLES - Manager and other required tables

OK. 0 rows

OK. 0 rows

OK. 0 rows

OK. 0 rows

Requirement 17

insert Manager and other required table data

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

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OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

OK. 1 rows

Requirement 18

Testing Check constraints

```
insert into manager (mgrid,Mgrname,mrgender) values (50, 'Ben',  
'M')  
*
```

Error at line 1:

ORA-02290: check constraint (S103488515.CHK_MANAGER_ID) violated

```
insert into manager (mgrid,Mgrname,mrgender) values (81, 'Kurt',  
'X')  
*
```

Error at line 1:

ORA-02290: check constraint (S103488515.CHK_MANAGER_GENDER) violated

```
insert into manager (mgrid,Mgrname,mrgender) values (82, 'Fred',  
'M')  
*
```

Error at line 1:

ORA-00001: unique constraint (S103488515.UC_MANAGER_NAME) violated

```
insert into manager (mgrid,Mgrname,mrgender) values (83, 'Tara',  
'F')  
*
```

Error at line 1:

ORA-00001: unique constraint (S103488515.UC_MANAGER_NAME) violated

Requirement 19

Query 19.1

Select m.Mgrname as "Manager
Name", count(a.wrkid) as
"Number of Worker" from
manager m inner join taskman ta
on ta.mgrid=m.mgrid inner join
allocation a on ta.tskid=a.tskid
group by m.Mgrname order by
m.Mgrname asc

Manager Name	Number of Worker
Fred	2
Lilly	5
Mike	3
Sue	5
Tara	4

OK. 5 rows selected.

Query 19.2

Select m.Mgrname as "Manager
Name", ex.Expertise as
"Expertise", a.tskid as "Task"
from manager m inner join
expman ex on
ex.mgrid=m.mgrid inner join
taskman ta on
ta.mgrid=m.mgrid inner join
allocation a on ta.tskid=a.tskid
group by m.Mgrname,
ex.Expertise,a.tskid order by
m.Mgrname, ex.Expertise asc

Manager Name	Expertise	Task
--------------	-----------	------

Manager Name	Expertise	Task
Fred	Analysis	151
Lilly	Motivation	163
Lilly	Motivation	165
Lilly	Negotiating	163
Lilly	Negotiating	165
Mike	Analysis	163
Mike	Motivation	163
Sue	Counselling	155
Sue	Counselling	163
Sue	Negotiating	155
Sue	Negotiating	163
Tara	Counselling	151
Tara	Counselling	155
Tara	Motivation	151
Tara	Motivation	155
Tara	Training	151
Tara	Training	155

OK. 17 rows selected.

Query 19.3

Select Wrkid as "Worker Id",
 Wrkname as "Worker Name",
 yearsservice as "Year Service" from
 worker where yearsservice < (Select
 AVG (yearsservice) from worker)
 order by Wrkid asc

Worker Id	Worker Name	Year Service
1	Clyde	2
3	Imogen	4
4	James	3
7	Kerri	5

OK. 4 rows selected.

End of the project

