

Module	EDB4
Lecturer	FRN / KHST
Supervisor	FRN / KHST
Room	2.40 / 2.70

Distribution of points: See exercises.
Number of pages: 6
Additional aids: **All (non human)**

Remarks:

- All exercises refer to the HR database as described in appendix 1
- You may use a 'print' or 'p' procedure instead of dbms_output.put_line.
- Copy your solution into a text file.
- Name the text file: "**yourstudentnumber_yourname_EDB4**"
- Do not forget to state your name, student number and class **inside** the text file!
- All code must be properly indented. Points will be withdrawn for each solution that isn't indented!

Success!!!

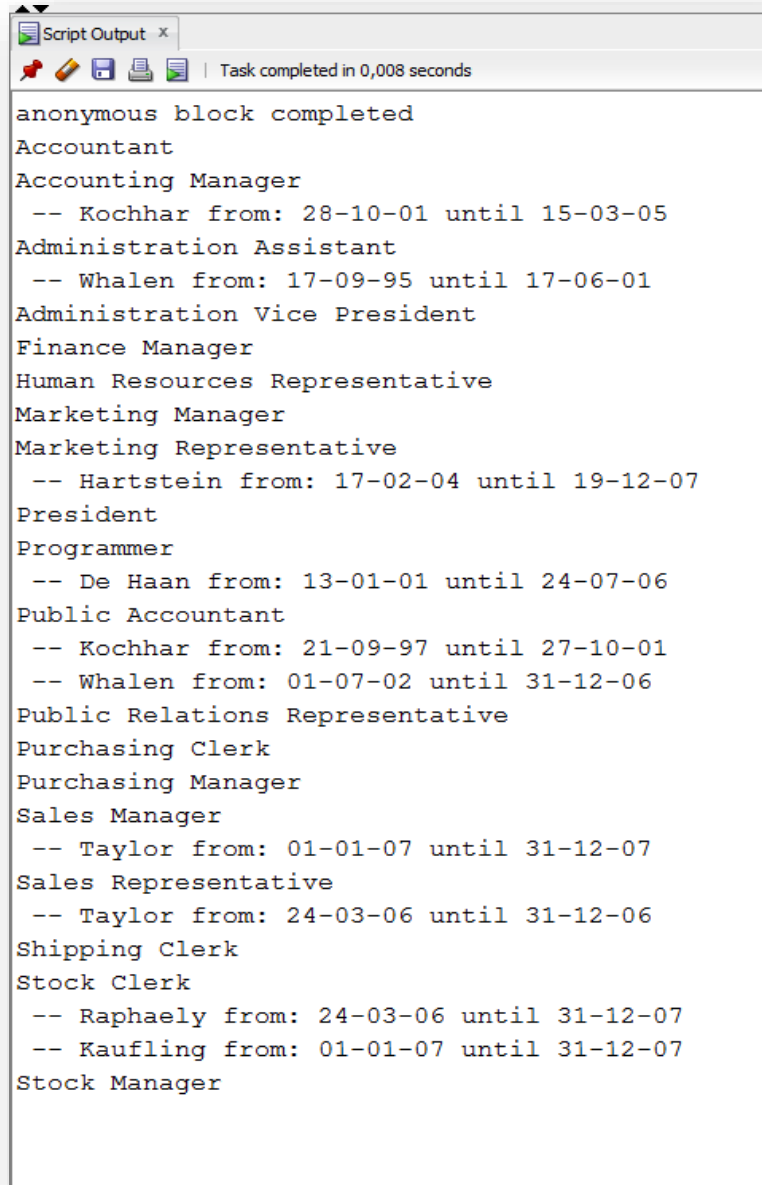
Please Turn Over

Exercise 1a [25 points]

Write an anonymous pl/sql block which writes all the job titles to screen in alphabetical order. For each job write the employees who have a job history in that job with the start and ending dates. This list is ordered by job title and starting date.

The list must look like the example shown below!

Note: the exact format of the date is of no consequence.



```

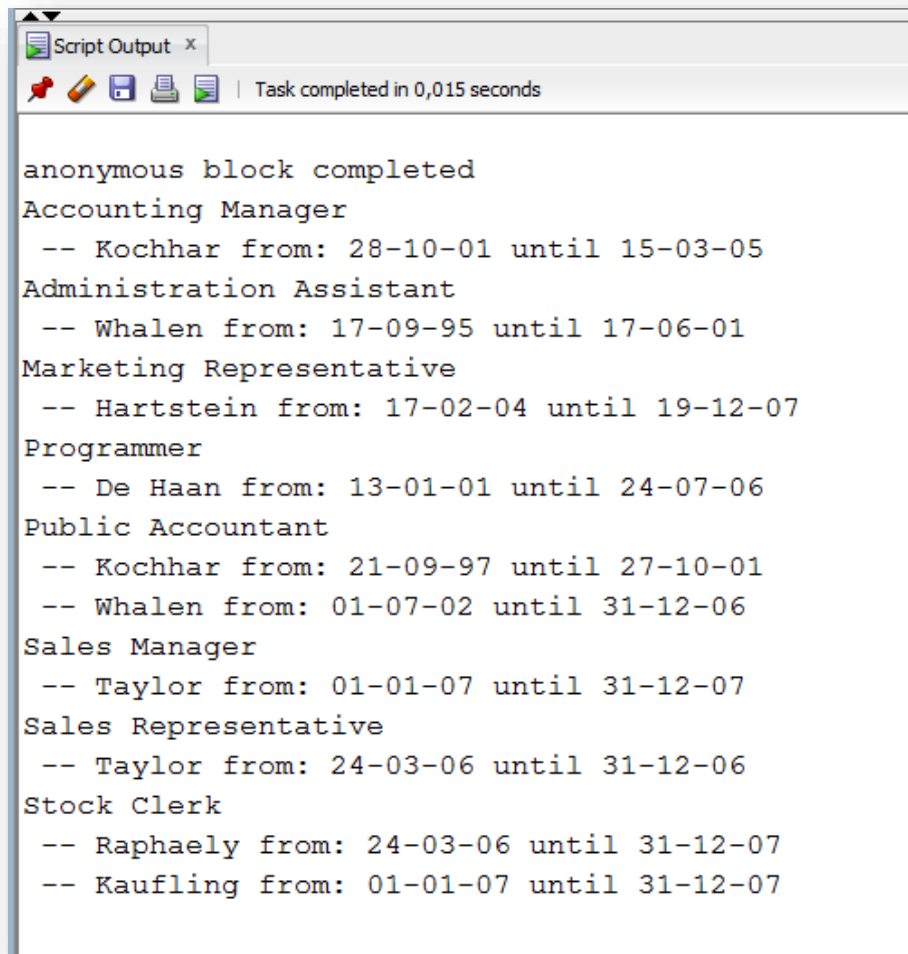
Script Output x
Task completed in 0,008 seconds

anonymous block completed
Accountant
Accounting Manager
  -- Kochhar from: 28-10-01 until 15-03-05
Administration Assistant
  -- Whalen from: 17-09-95 until 17-06-01
Administration Vice President
Finance Manager
Human Resources Representative
Marketing Manager
Marketing Representative
  -- Hartstein from: 17-02-04 until 19-12-07
President
Programmer
  -- De Haan from: 13-01-01 until 24-07-06
Public Accountant
  -- Kochhar from: 21-09-97 until 27-10-01
  -- Whalen from: 01-07-02 until 31-12-06
Public Relations Representative
Purchasing Clerk
Purchasing Manager
Sales Manager
  -- Taylor from: 01-01-07 until 31-12-07
Sales Representative
  -- Taylor from: 24-03-06 until 31-12-06
Shipping Clerk
Stock Clerk
  -- Raphaely from: 24-03-06 until 31-12-07
  -- Kaufling from: 01-01-07 until 31-12-07
Stock Manager
  
```

Exercise 1b [15 points]

Adapt the pl/sql block of exercise 1a (make a copy first!) so it prints only the job titles which have at least 1 job history listed.

The output must look similar to this:



```
anonymous block completed
Accounting Manager
  -- Kochhar from: 28-10-01 until 15-03-05
Administration Assistant
  -- Whalen from: 17-09-95 until 17-06-01
Marketing Representative
  -- Hartstein from: 17-02-04 until 19-12-07
Programmer
  -- De Haan from: 13-01-01 until 24-07-06
Public Accountant
  -- Kochhar from: 21-09-97 until 27-10-01
  -- Whalen from: 01-07-02 until 31-12-06
Sales Manager
  -- Taylor from: 01-01-07 until 31-12-07
Sales Representative
  -- Taylor from: 24-03-06 until 31-12-06
Stock Clerk
  -- Raphaely from: 24-03-06 until 31-12-07
  -- Kaufling from: 01-01-07 until 31-12-07
```

Exercise 2 [25 points]

A stored function can be used to simplify the query to list all the names of the employees and their job title.

For example the query:

```
select first_name,last_name,job_of(job_id)
from employees;
```

Should result in this output:

FIRST_NAME	LAST_NAME	JOB_OF (JOB_ID)
William	Gietz	Public Accountant
Shelley	Higgins	Accounting Manager
Jennifer	Whalen	Administration Assistant
Steven	King	President
Neena	Kochhar	Administration Vice President
Lex	De Haan	Administration Vice President
Daniel	Faviet	Accountant
John	Chen	Accountant
Ismael	Sciarra	Accountant
Jose Manuel	Urman	Accountant
Luis	Popp	Accountant
Nancy	Greenberg	Finance Manager
Susan	Mavris	Human Resources Representative
Alexander	Hunold	Programmer
Bruce	Ernst	Programmer
David	Austin	Programmer
Valli	Pataballa	Programmer
Diana	Lorentz	Programmer
Michael	Hartstein	Marketing Manager
Pat	Fay	Marketing Representative
Hermann	Baer	Public Relations Representative
Alexander	Khoo	Purchasing Clerk
Shelli	Baida	Purchasing Clerk
Sigal	Tobias	Purchasing Clerk

The function takes 1 argument; the `job_id`, and returns the complete job title.
Implement the stored function named ***job_of***.

Exercise 3 [25 points]

One of the business rules which must be implemented is:

No more than 5 Stock Managers (job_id = ST_MAN) are allowed in the whole organisation.

Implement this business rule.

The following exercise is only to be made by students who did not earn the 10 bonus points.

Bonus exercise 4 [10 points]

Another business rules which must be implemented is:

An employee who is going to be a salesman (so his job_id is changed to SA_REP) will get a default commission_pct of 0.5.

Implement this business rule.

END

Appendix 1 – Database description

All exercises refer to this HR database:

