**Implementing Data Security**

**Assignment 3**

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**Assignment 3**

**Setup:**

For setting up a database, please download the sample schema found [here](https://github.com/oracle/db-sample-schemas). We are going to continue to use the “HR: Human Resources” database for this assignment.

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**Tasks :**

After setting up your database schema, perform the following actions on your Oracle instance and take screenshots of the command(s) issued as well as the result of the command. Paste each screenshot in a single MS Word document:

**Task 1. Create five users on your Oracle instance – ensure that these users have your exact first and last name along with a counter as follows: {first\_name}\_{last\_name}\_01, {first\_name}\_{last\_name}\_02, {first\_name}\_{last\_name}\_03, etc…**

**Query Used: We have o create user on Oracle user instance**

Create user Basavraj\_Jaliminche\_01 identified by basu;

Create user Basavraj\_Jaliminche\_01 identified by basu;

Create user Basavraj\_Jaliminche\_01 identified by basu;

Create user Basavraj\_Jaliminche\_01 identified by basu;

Create user Basavraj\_Jaliminche\_01 identified by basu;

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**Task 2: Create a role called: secure\_{your\_student\_id}\_admin – where {your\_student\_id} is your seven digit CC student id.**

**----we have to create a role of 7 digit as admin**

**Query:** create secure\_8800149\_admin1 identified using sec\_mgr.secure\_8800149\_admin1\_role\_check;

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For this role, ensure to provide the SELECT, INSERT, UPDATE and DELETE capabilities to a table in your database.

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**Task 3: Create a procedure that would restrict anyone using your role to users who are on particular IP Address range (within five hosts, i.e. 192.168.56.2 and 192.168.56.6) and between the hours of 9 a.m. and 5 p.m**

**Procedure :**

CREATE OR REPLACE PROCEDURE secure\_8800149\_admin1\_role\_check

AUTHID CURRENT\_USER

AS

BEGIN

IF (SYS\_CONTEXT ('userenv','ip\_address')

BETWEEN '192.168.56.2' and '192.168.56.6'

AND

TO\_CHAR (SYSDATE, 'HH24') BETWEEN 9 AND 17)

THEN

EXECUTE IMMEDIATE 'SET ROLE secure\_8800149\_admin1';

END IF;

END;

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**Task 4: Grant two users – the \_03 and \_04 users in particular with the EXECUTE privilege in this role.**

Grant create session to Basavraj\_Jaliminche\_01;

Grant create session to Basavraj\_Jaliminche\_02;

Grant create session to Basavraj\_Jaliminche\_03;

Grant create session to Basavraj\_Jaliminche\_04;

Grant create session to Basavraj\_Jaliminche\_05;

**Granting tow users with execute privileges :**

Grant execute on secure\_8800149\_admin1\_role\_check to Basavraj\_Jaliminche\_03;

Grant execute on secure\_8800149\_admin1\_role\_check to Basavraj\_Jaliminche\_04;

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**Task 5** :**Perform the actions of SELECT, INSERT, UPDATE and DELETE to confirm that the role is functional with users \_03 and \_04. What happens when the other users try to perform these actions?**

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**Task 6 : Test that the IP Address range specified is working properly (be sure to test for inclusion and exclusion).**

Testing the specific work of the IP address range cannot be test from our end.

**Task 7**: **Test that the specified time range is also working properly (be sure to test for inclusion and execlusion)**

Testing the specific work of the IP address range cannot be test from our end.

**Reflection:**

1. The first problem is connecting the database and granting the privileges to user .
2. After setting up the database, I not able to create role from the hr. So, I altered the pluggable database as well as I gave all privileges to hr.
3. When five users tried to perform select, insert, update, and delete actions in hr table, but getting error message frequently.
4. I have not done the last two steps.