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**Princess Sumaya University for Technology**
**King Hussein Faculty of Computing Sciences**
**Computer Science Department**

**Database System Lab**
**CS 11354**
**Semester: Spring 2022/2023**
**Lab Assignment # 9**

# Lab Exercises:

## Part I: DCL:

1. Create a user; the username is your first letter of your name followed by your student ID and the password is db123.

**CREATE USER M20180358 IDENTIFIED BY db123;**

2. Grant to login, create tables, select on customers, update the customer's name, create synonyms for the created user (use the previously created customers table)

**Grant create session to M20180358;**
**Grant create table to M20180358**
**Grant create synonym to M20180358**
**Grant select on customers to M20180358;**
**Grant update(name) on customers to M20180358;**
**Grant create synonyms to M20180358;**

3. Change the password of the new user to aabbcc.

**ALERT USER M20180358 IDENTIFIED BY aabbcc;**

4. Grant your user the ability to delete any customer and the ability to grant this privilege to any user.

**Grant delete on customers to M20180358 with options;**

## Part II: Synonyms:

1. Connect to the user you created in part 1

**Conn M20180358/aabbcc;**

2. Select all the data from customers

**SELECT * FROM SYSTEM.CUSTOMERS;**

3. Create a synonym for table customers

**CREATE SYNONYMS USERS FOR CUSTOMERS;**

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4. Repeat step 2 (use the synonym only without the owner name)

```
SELECT * FROM USERS;
```

**Part III: PL/SQL:**

Create a PL/SQL program that applies the following (the answer for this part is only one big PL/SQL code):

1. Define two variables c_id with type number with initial value -1, c_name with type varchar2(255) with initial value 'No Name'.

```
DECLARE
c_id NUMBER(-1);
c_name VARCHAR2('No Name');
END;
```

2. Print variable values using the following format:
   Customer Id is <c_id> and customer name is <c_name>

```
dbms_output.Put_line('Customer Id is ' || c_id || ' and customer name is ' || c_name);
```

3. Write a select statement that retrieves the customer id and the customer's name inside the variable defined before for the customer id=100.

```
SELECT CUSTOMER_ID, NAME INTO c_id, c_name FROM EMPLOYEE WHERE CUSTOMER_ID=100;
```

4. Print variable values using the following format:
   Customer Id is <c_id> and customer name is <c_name>

```
dbms_output.Put_line('Customer Id is ' || c_id || ' and customer name is ' || c_name);
```