061306T4CPM

COMPUTER PROGRAMMING LEVEL 6

IT/OS/CP/CR/04/6/A

DEMONSTRATE DATABASE DESIGN AND DEVELOPMENT

NOV/DEC 2023

TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION COUNCIL (TVET CDACC)

PRACTICAL ASSESSMENT

Time: 2 Hours

INSTRUCTIONS TO CANDIDATE

1. In this assessment, you will be required to perform the following tasks.
    a) **TASK 1**: Create a company database together with its tables.
    b) **TASK 2:** Retrieve records stored in the created database.
2. Write your name, registration code, date and sign in the practical assessment attendance register.
3. Each task has specific instructions.
4. All tasks carry **50** marks.
5. You have **Ten minutes** to carefully read through the instructions and check availability of resources for the practical.
6. The assessor will record your performance at critical points using audio-visual means

You have been provided with the following resources:

- A computer preferably installed with windows 10 and installed with MS SQL server

Task 1:

Create a company database together with its tables **(40 Marks)**

i. Create a new database named "MaendeleoDB."

ii. Design and create an "Employees" table with the following fields:

EmployeeID (Primary Key)

FirstName

LastName

DateOfBirth

DepartmentID (Foreign Key, referencing the Departments table)

HireDate

iii. Display the “Employees” table

iv. Design and create a "Departments" table with the following fields:

DepartmentID (Primary Key)

DepartmentName

ManagerID (Foreign Key, referencing the Employees table)

v. Display the “Departments” table

vi. Design and create a "Projects" table with the following fields:

ProjectID (Primary Key)

ProjectName

StartDate

EndDate

DepartmentID (Foreign Key, referencing the Departments table)

vii. Display the “Projects” table.

viii. Insert at least five records into each of the created tables.

ix. Display the inserted records for all the tables created.

Task 2:

Retrieve records stored in the created database **(10 Marks)**

i. Write SQL queries to perform the following tasks:

a) Retrieve a list of all employees, including their first name, last name, and department name.

b) Retrieve a list of employees who were born after 1980.

c) Retrieve a list of employees who are currently managing a department (use JOIN).

d) Retrieve a list of projects that are currently active (i.e., EndDate is in the future).

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