061306T4CSC

COMPUTER SCIENCE LEVEL 6

ICT/OS/CS/CR/05/6/A

Demonstrate Database Management Skills

Nov/Dec 2024

TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION

COUNCIL (TVET CDACC)

PRACTICAL ASSESSMENT

Time: 2 HOURS

INSTRUCTIONS TO CANDIDATE:

1. You are required to perform the following tasks :

    i.   Task 1: Creating a Database

    ii. Task 2: Adding Data to the database

    iii. Task 3: Querying Database

    iv. Task 4: Creating indexes and procedures

2. You have been provided with the following resources for the practical tasks:

    a) Computer with the following software installed;

    -   Microsoft SQL server, SQL Server

    -   Management Studio (SSMS) installed

    b) Two plain pieces of paper

Task 1: Creating a Database **(15 marks)**

a) Create a database called BIRD.
b) Design and create the following tables in the database created in (a) above

Employee table

EmployeeID	FirstName	LastName	DateOfBirth	Gender	DepartmentID

Department table

DepartmentID	DepartmentName

Work Table

EmployeeID	Hours	Rate

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Task 2: Adding Data to the database **(10 marks)**

Enter the data below into their respective tables

Employee Table

EmployeeID	FirstName	LastName	DateOfBirth	Gender	DepartmentID
002	Greg	Bil	11/12/1990	M	3
003	Sue	Kay	10/09/1989	F	3
007	Sam	Lee	08/09/1991	M	4
004	Ray	Quo	11/08/1988	M	3
009	Jil	May	12/10/1994	F	4

Department table

DepartmentID	DepartmentName
3	Marketing

| 4 | Maintenance |
| 5 | Human Resource |

Work Table

EmployeeID	Hours	Rate
002	300	500
003	400	500
007	250	900
004	50	900
009	700	1000

Task 3: Querying Database   **(15 marks)**

In this task, screenshot after every activity, paste in a word document and save in your folder.

Write SQL queries to accomplish the following:

a) Retrieve the names of employees in marketing department

b) Gross pay is calculated by multiplying no of hours by rate. Retrieve information from the database that contains employeeID, EmployeeName, Department, and Gross pay

c) All employees pay 13% tax to the govern. Generate a list of employees that includes EmployeeID, EmployeeName, Gross pay, Tax Paid, Net pay

d) Generate a list of all employees whose last name contain letter "a"

Task 4: Creating Indexes and Procedures   **(10 marks)**

a) Create an index on the FirstName column of the Employee table to improve search performance.

b) Write a stored procedure named Salary that accepts an EmployeeID and returns hours worked, rate, and gross pay for that employee.

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