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| 8. SQL ASSIGNMENTS-stored procedures |
| This assignment is related to created stored procedures in SQL SERVER |

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**PROCEDURE ASSIGNMENTS**

1. Write a PROCEDURE to display a multiplication table for a number. User will enter a number and it should display the multiplication table.
2. Write a PROCEDURE to calculate the area of a rectangle. User will enter the length and breadth and it should display the area.
3. Write a PROCEDURE to check whether the number is prime number or not. User will enter a number and it should display whether it is a prime number or not.
4. Write a procedure which will bifurcate a fullname into firstname and lastname.User will enter fullname like Amit Patil and it should display FirstName : Amit and LastName : Patil
5. Write a PROCEDURE to generate a triangle similar to this.

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**FUNCTION ASSIGNMENTS**

1. Write a function to add two numbers.
2. Write a function to add /sub/mul/div based upon the mode passed. (Eg: user will pass two numbers and mode, (5, 6,”Add”) accordingly it should return value).
3. Write a function to calculate the age in year. User will pass the Date of Birth and it should return the age in terms of number.
4. Write a function to calculate the factorial of a number.
5. Write a Function to calculate the square of a number and return the result.
6. Write a Function to calculate the grade for the percentage enter. User will enter the percentage it should return the GRADE. (DISTINCTION >= 75, FIRSTCLASS>=60, SECONDCLASS>=40, FAIL)

**CREATE A TABLE FOR COMPANY**

|  |  |  |
| --- | --- | --- |
| COLUMN\_NAME | DATATYPE | CONSTRAINT |
| COMPANYID | INT | PRIMARY KEY, IDENTITY(1,1) |
| COMPANYNAME | VARCHAR(100) |  |
| WEBSITE | VARCHAR(100) |  |
| EMAIL | VARCHAR(100) |  |

**Write a Stored procedure to add/insert a row and then display the company row added.**

**Write a Stored Procedure to delete a company by using CompanyId**

**CREATE A TABLE FOR DEPT**

|  |  |  |
| --- | --- | --- |
| COLUMN\_NAME | DATATYPE | CONSTRAINT |
| DEPTID | INT | PRIMARY KEY, IDENTITY(1,1) |
| DEPTNAME | VARCHAR(100) |  |
| DEPTLOCATION | VARCHAR(100) |  |
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**Write a Stored procedure to add/insert a row and then display the department row added.**

**Write a Stored Procedure to delete a department by using DepartmentId**

**CREATE A TABLE FOR DESG**

|  |  |  |
| --- | --- | --- |
| COLUMN\_NAME | DATATYPE | CONSTRAINT |
| DESGID | INT | PRIMARY KEY |
| DESGNAME | VARCHAR(100) |  |
| CREATEDDATE | DATETIME | DEFAULT - GETDATE() |
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**Write a Stored procedure to add/insert a row and then display the desg row added.**

**Write a Stored Procedure to delete a designation by using DesignationId**

**CREATE A TABLE FOR EMPLOYEE**

|  |  |  |
| --- | --- | --- |
| COLUMN\_NAME | DATATYPE | CONSTRAINT |
| EMPID | INT | PRIMARY KEY |
| EMPNAME | VARCHAR(100) | UNIQUE |
| BASICSALARY | FLOAT |  |
| INCENTIVE | FLOAT |  |
| BONUS | FLOAT |  |
| DOB | DATETIME |  |
| DOJ | DATETIME | DEFAULT GETDATE() |
| GENDER | VARCHAR(100) |  |
| EMAIL | VARCHAR(100) | UNIQUE |
| MOBILE | VARCHAR(10) |  |
| CREATEDDATE | DATETIME | DEFAULT GETDATE() |
| COMPANYID | INT | F.K |
| DEPTID | INT | F.K |
| DESGID | INT | F.K |

**Write a Stored procedure to add and display an Employee**

**Write a Stored Procedure to delete an Employee by using EmployeeId**

**CREATE A TABLE FOR STUDENT**

|  |  |  |
| --- | --- | --- |
| COLUMN\_NAME | DATATYPE | CONSTRAINT |
| ROLLNO | INT  | PRIMARY KEY (IDENTITY(1,1) |
| NAME | VARCHAR(100) | UNIQUE |
| ENGMARKS | FLOAT |  |
| SCNMARKS | FLOAT |  |
| MATHMARKS | FLOAT |  |
| TOTALMARKS | FLOAT |  |
| PERCENTAGE | FLOAT |  |
| GRADE | VARCHAR(100) |  |

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| CREATE TABLE STUDENTS(ROLLNO INT IDENTITY(1,1) PRIMARY KEY,NAME VARCHAR(100) UNIQUE,ENGMARKS FLOAT,SCNMARKS FLOAT,MATHMARKS FLOAT,TOTAL FLOAT,PERCENTAGE FLOAT,GRADE VARCHAR(100)) |

* Part A

WRITE A PROCEDURE TO INSERT VALUES INTO STUDENTS

THE PROCEDURE SHOULD TAKE NAME, ENGMAKS, SCNMARKS, MATHMARKS AS INPUT PARAMETERS AND CALCULATE THE TOTALMARKS, PERCENTAGE & GRADE AND INSERT IT INTO THE STUDENTS TABLE

* Part B

IF THE NAME IS ALREADY PRESENT THEN IT SHOULD UPDATE THE VALUES INTO THE STUDENTS TABLE.

CREATE TWO TABLES COUNTRY & STATE

COUNTRY

|  |  |  |
| --- | --- | --- |
| COUNTRY\_ID | COUNTRY\_NAME | COUNTRY\_CAPITAL |
| INT, IDENTITY, PRIMARY KEY | UNIQUE |  |

STATE

|  |  |  |  |
| --- | --- | --- | --- |
| STATE\_ID | STATE\_NAME | STATE\_CAPITAL | COUNRTYID |
| INT, IDENTITY, PRIMARY KEY | UNIQUE |  | INT (FOREIGN KEY) |

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| CREATE TABLE COUNTRY(COUNTRYID INT IDENTITY(1,1) PRIMARY KEY,COUNTRYNAME VARCHAR(100),COUNTRYCAPITAL VARCHAR(100))CREATE TABLE STATES(STATEID INT IDENTITY(1,1) PRIMARY KEY,STATENAME VARCHAR(100),STATECAPITAL VARCHAR(100),COUNTRYID INT FOREIGN KEY REFERENCES COUNTRY(COUNTRYID)) |

WRITE A SINGLE PROCEDURE TO INSERT VALUES INTO BOTH COUNTRY & STATE TABLE.

 PROCEDURE PARAMETERS

|  |  |  |  |
| --- | --- | --- | --- |
| COUNTRY\_NAME | COUNTRY\_CAPITAL | STATE\_NAME | STATE\_CAPITAL |
|  |  |  |  |

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| **1** | **WRITE A PROCEDURE TO TAKE THE BACKUPS OF ALL THE DATABASES IN THE SERVER** |
| **2** | **WRITE A PROCEDURE TO DISPLAY THE NAMES OF ALL THE TABLES IN THE DATABASE.****THE USER WILL ENTER THE DATABASE NAME AND IT SHOULD DISPLAY THE LIST OF TABLES IN THE DATABASE** |
| **3** | **WRITE A PROCEDURE TO SEND A MAIL TO An EMAIL ID.****THE USER WILL ENTER THE EMAILID AND IT SHOULD SEND A MAIL TO THE EMAILID** |
| **4** | **WRITE A PROCEDURE TO DISPLAY THE COLUMN NAMES OF A TABLE.****THE USER WILL ENTER THE TABLENAME AND IT SHOULD DISPLAY THE LIST OF COLUMNS OF THE TABLE** |
| **5** | **WRITE A PROCEDURE TO DISPLAY THE SIZE OF EACH OF THE DATABASES IN THE SERVER** |
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