-- Class Assignment 3 - DDL\_DML

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-- 1. Create Database schema called ClassAssignment

-- Use ClassAssignment database for rest of the exercise.

DROP SCHEMA IF EXISTS `ClassAssignment`;

CREATE SCHEMA IF NOT EXISTS `ClassAssignment`;

USE `ClassAssignment` ;

-- 2. Create a table called Project with the following columns:

DROP TABLE IF EXISTS Project;

CREATE TABLE IF NOT EXISTS Project(

project\_num INT(10) NOT NULL PRIMARY KEY,

project\_code CHAR(4),

project\_title VARCHAR(45),

first\_name VARCHAR(45),

last\_name VARCHAR(45),

project\_budget DECIMAL(5,2)

);

DESC Project;

SELECT \* FROM Project;

-- 3. Modify project\_num to auto\_increment and also auto\_increment starts from 10.

ALTER TABLE Project

MODIFY project\_num INT AUTO\_INCREMENT;

ALTER TABLE Project

AUTO\_INCREMENT = 10;

-- 4. Modify project\_budget datatype from decimal (5, 2) to (10, 2).

ALTER TABLE Project

MODIFY project\_budget DECIMAL(10,2);

-- 5. Insert following values into the Project table.

INSERT INTO Project (project\_code,project\_title,first\_name,last\_name,project\_budget)

VALUES ('PC01','DIA','John','Smith','10000.99'),

('PC02','CHF','Tim','Cook',12000.50),

('PC03','AST','Rhonda','Smith',8000.40);

DESC Project;

SELECT \* FROM Project;

-- 6. Create a table PayRoll with the following info:

DROP TABLE IF EXISTS PayRoll;

CREATE TABLE IF NOT EXISTS PayRoll(

employee\_num INT(10) PRIMARY KEY AUTO\_INCREMENT,

job\_id INT(10) NOT NULL,

job\_desc VARCHAR(40),

emp\_pay DECIMAL (10,2)

);

DESC PayRoll;

SELECT \* FROM PayRoll;

-- 7. Alter PayRoll table with the following, make sure to write each scripts separately.

-- i

ALTER TABLE PayRoll

ADD CONSTRAINT emp\_pay\_limit CHECK (emp\_pay >= 10000);

-- ii

ALTER TABLE PayRoll

ALTER job\_desc SET DEFAULT 'Data Analyst';

-- iii

ALTER TABLE PayRoll

ADD pay\_date DATE AFTER job\_desc;

-- 8. Add Foreign Key constraint in PayRoll table with job\_id column referencing to project\_num column in Project table.

ALTER TABLE PayRoll

ADD FOREIGN KEY (job\_id) REFERENCES Project(project\_num);

-- 9. Insert following values into PayRoll table. DO NOT insert employee\_num and job\_desc, those should be auto populated using auto\_increment and default values, respectively.

INSERT INTO PayRoll (job\_id,pay\_date,emp\_pay)

VALUES (10, curdate(), 12000.99),

(11, curdate(), 14000.99),

(12, curdate(), 16000.99);

-- 10. Update emp\_pay in PayRoll table for employee\_num = 2 with 10% emp\_pay increase i.e. (emp\_pay \* 0.10).

UPDATE PayRoll

SET emp\_pay = emp\_pay\*1.1

WHERE employee\_num = 2;

DESC PayRoll;

SELECT \* FROM PayRoll;

-- 11. Create Project\_backup table from project table you created above using bulk insert statement only for last\_name ‘Smith’.

CREATE TABLE Project\_backup

SELECT \* FROM Project

WHERE last\_name = 'Smith';

DESC Project\_backup;

SELECT \* FROM Project\_backup;

-- 12. Create VIEW as PayRoll\_View from PayRoll table you created above. However, your VIEW should only contain job\_id, job\_desc and pay\_date for job\_id > 10.

CREATE VIEW PayRoll\_View AS

SELECT job\_id,job\_desc,pay\_date FROM PayRoll

WHERE job\_id > 10;

DESC PayRoll\_View;

SELECT \* FROM PayRoll\_View;

-- 13. Create Index for pay\_date on PayRoll table.

CREATE INDEX IX\_pay\_date ON PayRoll (pay\_date);

SHOW INDEX FROM PayRoll;

-- 14. Delete all data from project\_backup table but keep the table structure.

TRUNCATE TABLE Project\_backup;

-- 15. Write a DELETE script to delete a row from Project table where project\_num = 10. If there is an error, give a short explanation of what/why about error msg?

DELETE FROM Project

WHERE project\_num = 10;

-- Error Code: 1451. Cannot delete or update a parent row: a foreign key constraint fails (`classassignment`.`payroll`, CONSTRAINT `payroll\_ibfk\_1` FOREIGN KEY (`job\_id`) REFERENCES `project` (`project\_num`))

-- Error shows because there is a foreign key linking the tables "Payroll" and "Project". There is a Foreign key connecting PayRoll table with job\_id column referencing to project\_num column in Project table.

DELETE FROM PayRoll

WHERE job\_id = 10;

DELETE FROM Project

WHERE project\_num = 10;

DESC PayRoll;

SELECT \* FROM PayRoll;

DESC Project;

SELECT \* FROM Project;