CIS 4301 - Information & Database Systems I

Homework 1

1.

CREATE TABLE Student (

Id INT PRIMARY KEY,

Name CHAR(50),

Lastname CHAR(50),

Address CHAR(255),

Birthday DATE,

Gender CHAR(10),

GPA FLOAT

);

CREATE TABLE Class (

Classcode CHAR(7),

Classname CHAR(50),

Semester CHAR(6),

RoomID CHAR(10),

Period CHAR(10),

Cap INT,

PRIMARY KEY(Classcode, Period, Semester)

);

ALTER TABLE Class DROP Classname;

INSERT INTO Student (Id, Name, Lastname, Address, Birthday, Gender, GPA)

VALUES (12345, BOB, Marley, 2401 SW Archer Road, 2001-10-1, M, 3.5);

2.

Text, letter

Description automatically generated

3.

a. The minimum amount of tuples is 0 because there may be no tuples that they share in common. The maximum number of tuples is m or n depending on which is smaller since if all of the tuples are the same the intersection is going to be the smaller number of tuples.

b. The minimum number of tuples is 0 since the condition could create an empty set which is an empty set when joined with anything. The maximum amount of tuples is m times n where all the condition for the selection is all of R and all the columns that S and R have in common are uniform and identical.