**DATA6222\_Test Brief-2024**

--1.1 create table

CREATE DATABASE SCHOOLDB;

USE SCHOOLDB;

CREATE TABLE SHORT\_COURSE(COURSE\_ID VARCHAR(20) PRIMARY KEY NOT NULL, COURSE\_DESCIPTION VARCHAR(255) NOT NULL, COURSE\_PRICE MONEY NOT NULL);

CREATE TABLE CAMPUS(CAMPUS\_ID VARCHAR(20) PRIMARY KEY NOT NULL, CAMPUS\_NAME VARCHAR(50) NOT NULL, CAMPUS\_ADDRESS VARCHAR(100) NOT NULL);

CREATE TABLE COURSE\_REGISTRATION(COURSE\_ID VARCHAR(20) NOT NULL, CAMPUS\_ID VARCHAR(20) NOT NULL, SPACES\_AVAILABLE BIT NOT NULL,

PRIMARY KEY (COURSE\_ID, CAMPUS\_ID),

FOREIGN KEY (COURSE\_ID) REFERENCES SHORT\_COURSE(COURSE\_ID),

FOREIGN KEY (CAMPUS\_ID) REFERENCES CAMPUS(CAMPUS\_ID));

--1.2 INSERT INTO

INSERT INTO SHORT\_COURSE(COURSE\_ID, COURSE\_DESCIPTION, COURSE\_PRICE)

VALUES('CRE101', 'CREATIVE WRITING 1', 1500),

('UIF101', 'USER INTERFACE DESIGN 1', 1700),

('PHO201', 'PHOTOGRAPHY 2', 2400),

('STA301', 'ADVANCED STATISTICS', 5000),

('FRE101', 'FRENCH FOR BEGINNERS', 1900);

INSERT INTO CAMPUS(CAMPUS\_ID, CAMPUS\_NAME, CAMPUS\_ADDRESS)

VALUES('C001', 'JOHANNESBURG CAMPUS', '167 PERT ROAD, JOHANNESBURG'),

('C002', 'GQEBERHA CAMPUS', '5 SECOND AVENUE, GQEBERHA'),

('C003', 'BERTHA MKHIZE CAMPUS', '33 BERTHA MKHIZE STREET, DURBAN'),

('C004', 'DURBAN CAMPUS', '27 BRAN FISCHER ROAD, DURBAN'),

('C005', 'TSHWANE CAMPUS', '210 DU TOIT STREET, TSHWANE');

INSERT INTO COURSE\_REGISTRATION(COURSE\_ID, CAMPUS\_ID, SPACES\_AVAILABLE)

VALUES('UIF101', 'C001', '50'),

('UIF101', 'C004', '30'),

('PHO201', 'C005', '15'),

('STA301', 'C003', '20'),

('STA301', 'C001', '40');

--1.3 ALTER

ALTER TABLE COURSE\_REGISTRATION ADD NUMBER\_OF\_STUDENTS\_REGISTERED INT;

--1.4 UPDATE

UPDATE COURSE\_REGISTRATION

SET NUMBER\_OF\_STUDENTS\_REGISTERED = 35

WHERE COURSE\_ID = 'STA301' AND CAMPUS\_ID = 'C001';

--2.1 SELECT

SELECT SHORT\_COURSE.COURSE\_DESCIPTION FROM SHORT\_COURSE

LEFT JOIN COURSE\_REGISTRATION ON SHORT\_COURSE.COURSE\_ID = COURSE\_REGISTRATION.COURSE\_ID

WHERE COURSE\_REGISTRATION.COURSE\_ID IS NULL;

--2.2

SELECT SHORT\_COURSE.COURSE\_DESCIPTION AS COURSE\_NAME,

SUM(COURSE\_REGISTRATION.SPACES\_AVAILABLE) AS TOTAL\_SPACES

FROM SHORT\_COURSE

JOIN COURSE\_REGISTRATION ON SHORT\_COURSE.COURSE\_ID = COURSE\_REGISTRATION.COURSE\_ID

GROUP BY COURSE\_DESCIPTION

ORDER BY COURSE\_DESCIPTION ASC;

--2.3

SELECT TOP 1 SHORT\_COURSE.COURSE\_DESCIPTION AS COURSE\_NAME,

CAMPUS.CAMPUS\_NAME,

COURSE\_REGISTRATION.SPACES\_AVAILABLE

FROM COURSE\_REGISTRATION

JOIN SHORT\_COURSE ON COURSE\_REGISTRATION.COURSE\_ID = SHORT\_COURSE.COURSE\_ID

JOIN CAMPUS ON COURSE\_REGISTRATION.CAMPUS\_ID = CAMPUS.CAMPUS\_ID

WHERE COURSE\_REGISTRATION.COURSE\_ID = 'STA301'