**Assignment\_01**

**DDL and DML operations**

CREATE TABLE `classroom`(

`building` varchar(20) NOT NULL,#primary

`room\_num` varchar(20) NOT NULL,

`capacity` INT,

PRIMARY KEY(`building`,`room\_num`)

);

insert into classroom(building,room\_num,capacity)

VALUES('Padma','011A',45)

CREATE TABLE `depertment`(

`dept\_name` varchar(20) NOT NULL,#primary

`building` varchar(20) NOT NULL,

`budget` varchar(20) ,

PRIMARY KEY(`dept\_name`),

FOREIGN KEY(`building`) REFERENCES classroom(`building`)

);

insert into depertment(dept\_name,building,budget)

VALUES('EEE','Meghna','870000.00')

CREATE TABLE `course`(

`course\_id` varchar(20) NOT NULL,#primary

`title` varchar(20) ,

`dept\_name` varchar(20) NOT NULL,#foreign

`credits` float(2,1),

PRIMARY KEY(`course\_id`),

FOREIGN KEY(`dept\_name`) REFERENCES depertment(`dept\_name`)

);

insert into course(course\_id,title,dept\_name,credits)

VALUES('CSE 1110','ICS','CSE',1.0)

CREATE TABLE `instructor`(

`ID` varchar(20) NOT NULL,#primary

`name` varchar(20) ,

`dept\_name` varchar(20) NOT NULL,#foreign

`salary` float(2,1),

PRIMARY KEY(`ID`),

FOREIGN KEY(`dept\_name`) REFERENCES depertment(`dept\_name`)

);

– modification

ALTER TABLE instructor

MODIFY COLUMN salary float(7,2)

insert into instructor(ID,name,dept\_name,salary)

VALUES('MnTA','Nafiz Tahmid','CSE',45000.0)

CREATE TABLE `section`(

`course\_id` varchar(20) NOT NULL,#primary

`sec\_id` varchar(20) NOT NULL ,

`semister` varchar(20) NOT NULL,#foreign

`year` INT NOT NULL,

`building` varchar(20) NOT NULL,

`room\_num` varchar(10) NOT NULL,

`time\_slot` varchar(30) ,

PRIMARY KEY(`course\_id`,`sec\_id`,`semister`,`year`),

FOREIGN KEY(`course\_id`) REFERENCES `course`(`course\_id`),

FOREIGN KEY(`building`, `room\_num`) REFERENCES classroom(`building`, `room\_num`)

);

insert into section(course\_id,sec\_id,semister,year,building,room\_num,time\_slot)

VALUES('CSE 1110','A','FALL',2023, 'Padma','011A','8.30-9.51')

insert into section(course\_id,sec\_id,semister,year,building,room\_num,time\_slot)

VALUES('CSE 1111','K','FALL','2023', 'Padma','011A','9.51-11.10')

CREATE TABLE `teaches`(

`ID` varchar(20) NOT NULL,#primary

`course\_id` varchar(20) NOT NULL,

`sec\_id` varchar(20) NOT NULL,

`semister` varchar(20) NOT NULL,

`year` INT NOT NULL,

PRIMARY KEY(`ID`, `course\_id`,`sec\_id`,`semister`, `year`),

FOREIGN KEY(`ID`) REFERENCES instructor(`ID`),

– FOREIGN KEY(`course\_id`) REFERENCES course(`course\_id`),

FOREIGN KEY(`sec\_id`,`semister`, `year`) REFERENCES section(`sec\_id`,`semister`, `year`)

);

insert into teaches(ID,course\_id,sec\_id,semister,year)

VALUES('SaAd','CSE 1110','A','Fall', 2023)

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CREATE TABLE `student` (

`ID` varchar(20) NOT NULL,

`name` varchar(20) NOT NULL,

`dept\_name` varchar(20) NOT NULL,

`tot\_credit`float(4,1) NOT NULL,

PRIMARY KEY (`ID`),

FOREIGN KEY (`dept\_name`) REFERENCES `depertment` (`dept\_name`)

);

insert into student(ID,name,dept\_name,tot\_credit)

VALUES('011221331','Sharmin Sultana','CSE',9.0)

CREATE TABLE `takes`(

`ID` varchar(20) NOT NULL,#primary

`course\_id` varchar(20) NOT NULL,

`sec\_id` varchar(20) NOT NULL,

`semister` varchar(20) NOT NULL,

`year` INT NOT NULL,

`grade` float(4,3),

PRIMARY KEY(`ID`,`course\_id`,`sec\_id`,`semister`, `year`),

FOREIGN KEY(`ID`) REFERENCES student(`ID`),

FOREIGN KEY(`course\_id`,`sec\_id`,`semister`, `year`) REFERENCES section(`course\_id`,`sec\_id`,`semister`, `year`)

);

insert into takes(ID,course\_id,sec\_id,semister,year,grade)

VALUES('011221331','CSE 1110','A','Fall', 2023, 4.0)

CREATE TABLE `advisor`(

`s\_ID` varchar(20) NOT NULL,#forgin

`i\_ID` varchar(20) NOT NULL,#forgin

FOREIGN KEY(`s\_ID`) REFERENCES student(`ID`),

FOREIGN KEY(`i\_ID`) REFERENCES instructor(`ID`)

);

INSERT INTO advisor(s\_ID, i\_ID)

VALUES('011221334' ,'Nas')

**– Update table name(DDL)**

Rename TABLE takes to takings

**– Update column name(DDL)**

ALTER TABLE advisor CHANGE COLUMN s\_ID student\_ID Varchar(20);

ALTER TABLE advisor CHANGE COLUMN i\_ID Teacher\_ID Varchar(20);

**– ADD and Drop table**

CREATE TABLE `prerequisite` (

`course\_id` VARCHAR(20) NOT NULL,

`title` VARCHAR(20) NOT NULL,

PRIMARY KEY (`course\_id`),

FOREIGN KEY (`course\_id`) REFERENCES course (`course\_id`)

);

DROP table prerequisite;

**– Update Column data**

UPDATE advisor SET Teacher\_ID = 'NaS' WHERE Teacher\_ID = 'Nas';