CREATE TABLE Dept

(

Department\_ID NUMBER CONSTRAINT DEPT\_PK PRIMARY KEY,

Department\_Name VARCHAR2(200) UNIQUE NOT NULL,

Head\_ID NUMBER UNIQUE

--CONSTRAINT Dept\_FK\_1 FOREIGN KEY(Head\_ID) REFERENCES Teacher(Teacher\_ID) ON DELETE SET NULL

-- Foreign Key constraint will be declared later

);

CREATE TABLE Teacher

(

Teacher\_ID NUMBER CONSTRAINT Teacher\_PK PRIMARY KEY,

Username VARCHAR2(200) UNIQUE NOT NULL CONSTRAINT Valid\_Username\_Of\_Teacher CHECK( LENGTH(Username) > 0 ),

--Password is showing BLUE in navicat

Pass VARCHAR2(200) NOT NULL CONSTRAINT Valid\_Pass\_Of\_Teacher CHECK( LENGTH(Pass) > 0 ),

First\_Name VARCHAR2(200) NOT NULL,

Last\_Name VARCHAR2(200) NOT NULL,

Address VARCHAR2(200),

Phone\_Number VARCHAR2(200) UNIQUE NOT NULL CONSTRAINT Valid\_Phone\_Number\_Of\_Teacher CHECK( LENGTH(Phone\_Number)=11 AND (Phone\_Number LIKE '01%') ),

Email\_Address VARCHAR2(20) UNIQUE NOT NULL CONSTRAINT Valid\_Email\_Address\_Of\_Teacher CHECK( Email\_Address LIKE '\_%@\_%' ),

Salary NUMBER CONSTRAINT Min\_Sal\_Of\_Teacher CHECK (Salary > 0),

Join\_Date DATE DEFAULT SYSDATE,

Department\_ID NUMBER

--CONSTRAINT Teacher\_FK\_1 FOREIGN KEY(Department\_ID) REFERENCES Dept(Department\_ID) ON DELETE CASCADE

-- Foreign Key Constraint will be declared later

--Declared later

--ALTER TABLE Teacher ADD CONSTRAINT Teacher\_Valid\_JOIN\_DATE

--CHECK(JOIN\_DATE > TO\_DATE('01/01/1950', 'DD/MM/YYYY') );

-- I will check whether the date is illogically future in the inserting function

);

CREATE TABLE Student

(

Student\_ID NUMBER CONSTRAINT Student\_PK PRIMARY KEY,

Username VARCHAR2(200) UNIQUE NOT NULL CONSTRAINT Valid\_Username\_Of\_Student CHECK( LENGTH(Username) > 0 ),

--Password is showing BLUE in navicat

Pass VARCHAR2(200) NOT NULL CONSTRAINT Valid\_Pass\_Of\_Student CHECK( LENGTH(Pass) > 0 ),

First\_Name VARCHAR2(200) NOT NULL,

Last\_Name VARCHAR2(200) NOT NULL,

Address VARCHAR2(200) NOT NULL,

Phone\_Number VARCHAR2(200) UNIQUE NOT NULL CONSTRAINT Valid\_Phone\_Number\_Of\_Student CHECK( LENGTH(Phone\_Number)=11 AND (Phone\_Number LIKE '01%') ),

Email\_Address VARCHAR2(200) UNIQUE NOT NULL CONSTRAINT Valid\_Email\_Address\_Of\_Student CHECK( Email\_Address LIKE '\_%@\_%' ),

Lev NUMBER CONSTRAINT Min\_Level\_Of\_Student CHECK(Lev > 0), -- Level is showing blue

Term NUMBER CONSTRAINT Min\_Term\_Of\_Student CHECK(Term > 0),

Department\_ID NUMBER,

CONSTRAINT Student\_FK\_1 FOREIGN KEY (Department\_ID) REFERENCES Dept(Department\_ID) ON DELETE CASCADE -- references Dept(Name)

);

CREATE TABLE Course

(

Course\_ID NUMBER CONSTRAINT Course\_PK PRIMARY KEY,

COURSE\_NUMBER VARCHAR2(200),

Course\_Name VARCHAR2(200) NOT NULL,

Credit\_Hours NUMBER CONSTRAINT Min\_Credit\_Of\_A\_Course CHECK (Credit\_Hours >= 0.5),

Department\_ID NUMBER NOT NULL, -- references Dept()

CONSTRAINT Course\_FK\_1 FOREIGN KEY (Department\_ID) REFERENCES Dept(Department\_ID) ON DELETE CASCADE

);

-- Class is showing BLUE

CREATE TABLE Class\_Of\_Course

(

Class\_ID NUMBER CONSTRAINT Class\_Of\_Course\_PK PRIMARY KEY,

-- Session is showing blue

Session\_Of\_Class VARCHAR2(200) NOT NULL,

Course\_ID NUMBER NOT NULL, -- references Course(Course\_ID)

CONSTRAINT Course\_Of\_Class\_FK\_1 FOREIGN KEY (Course\_ID) REFERENCES Course(Course\_ID) ON DELETE CASCADE

);

ALTER TABLE Teacher ADD CONSTRAINT Teacher\_FK\_1

FOREIGN KEY (Department\_ID) REFERENCES Dept(Department\_ID) ON DELETE CASCADE;

ALTER TABLE Dept ADD CONSTRAINT Dept\_FK\_1

FOREIGN KEY (Head\_ID) REFERENCES Teacher(Teacher\_ID) ON DELETE SET NULL;

CREATE TABLE Department\_Head\_Log

(

Department\_ID NUMBER CONSTRAINT DEPARTMENT\_HEAD\_LOG\_FK\_1 REFERENCES DEPT(Department\_ID) ON DELETE CASCADE,

HEAD\_ID NUMBER CONSTRAINT DEPARTMENT\_HEAD\_LOG\_FK\_2 REFERENCES Teacher(Teacher\_ID) ON DELETE CASCADE,

Start\_Date DATE,

End\_Date DATE ,

CONSTRAINT Department\_Head\_Log\_PK PRIMARY KEY(Department\_ID, Start\_Date)

);

CREATE TABLE Enrolment

(

Student\_ID NUMBER REFERENCES Student(Student\_ID) ON DELETE CASCADE,

Class\_ID NUMBER REFERENCES Class\_Of\_Course(Class\_ID) ON DELETE CASCADE,

Grade VARCHAR2(200),

CONSTRAINT Enrolment\_PK PRIMARY KEY (Student\_ID, Class\_ID)

);

CREATE TABLE Class\_Teacher

(

Class\_ID NUMBER REFERENCES Class\_Of\_Course(Class\_ID) ON DELETE CASCADE,

Teacher\_ID NUMBER REFERENCES Teacher(Teacher\_ID) ON DELETE CASCADE,

CONSTRAINT Class\_Teacher\_PK PRIMARY KEY (Class\_ID, Teacher\_ID)

);

ALTER TABLE Teacher ADD CONSTRAINT Teacher\_Valid\_JOIN\_DATE

CHECK(JOIN\_DATE > TO\_DATE('01/01/1950', 'DD/MM/YYYY') );

-- I will check whether the date is illogically future in the inserting function

ALTER TABLE Student ADD CONSTRAINT MAX\_LEVEL\_OF\_STUDENT

CHECK(LEV < 6 );

ALTER TABLE Student ADD CONSTRAINT MAX\_TERM\_OF\_STUDENT

CHECK(TERM < 3 );

ALTER TABLE TEACHER

ADD TEACHER\_RANK VARCHAR2(200);