Daniel O'Brien
DSC 450
January 16th, 2021

Part 1.

1.

```
CREATE TABLE Author_Table (
   LastName VARCHAR2(15),
   FirstName VARCHAR2(15),
   ID NUMBER(3) PRIMARY KEY,
   BirthDate DATE
);

CREATE TABLE Publisher_Table(
   Name VARCHAR2(30),
   PubNumber NUMBER(3) PRIMARY KEY,
   Address VARCHAR2(30)
);

CREATE TABLE Book_Table(
   ISBN NUMBER(15) PRIMARY KEY,
   Title VARCHAR2(50),
   PubNumber NUMBER(3),

   CONSTRAINT booktopub_FK
   Foreign Key (PubNumber)
   REFERENCES Publisher_Table(PubNumber)
);

CREATE TABLE Connector_Table(
   ID NUMBER(3),
   ISBN NUMBER(15) PRIMARY KEY,
   AuthorRank NUMBER (3),

   CONSTRAINT Author_Connect_FK
   Foreign Key (ID)
   REFERENCES Author_Table(ID),

   CONSTRAINT Book_Connect_FK
   Foreign Key (ISBN)
   REFERENCES Book_Table(ISBN)
);
```

2.

```
INSERT INTO Author_Table VALUES ('King', 'Stephen', 2, TO_DATE('1947-09-09', 'YYYY-MM-DD'));
INSERT INTO Author_Table VALUES ('Asimov', 'Isaac', 4, TO_DATE('1921-01-02', 'YYYY-MM-DD'));
INSERT INTO Author_Table VALUES ('Verne', 'Jules', 7, TO_DATE('1828-02-08', 'YYYY-MM-DD'));
INSERT INTO Author_Table VALUES ('Rowling', 'Joanne', 37, TO_DATE('1965-07-31', 'YYYY-MM-DD'));

INSERT INTO Publisher_Table VALUES ('Bloomsbury Publishing', 17, 'London Borough of Camden');
INSERT INTO Publisher_Table VALUES ('Arthur A. Levine Books', 18, 'New York City');

INSERT INTO Book_Table VALUES (1111111, 'Databases from outer space', 17);
INSERT INTO Book_Table VALUES (2222222, 'Revenge of SQL', 17);
INSERT INTO Book_Table VALUES (3333333, 'The night of the living databases', 18);

INSERT INTO Connector_Table VALUES (2, 1111111, 1);
INSERT INTO Connector_Table VALUES (4, 1111111, 2);
INSERT INTO Connector_Table VALUES (4, 2222222, 2);
INSERT INTO Connector_Table VALUES (7, 2222222, 1);
INSERT INTO Connector_Table VALUES (37, 3333333, 1);
INSERT INTO Connector_Table VALUES (2, 3333333, 2);
```

3.

```
CREATE TABLE Student (
   StudentID NUMBER(10) PRIMARY KEY,
   LastName VARCHAR2(15),
   FirstName VARCHAR2(15),
   DOB DATE,
   Telephone NUMBER(12)
);

CREATE TABLE Advisor (
   ID NUMBER(10) PRIMARY KEY,
   Name VARCHAR2(30),
   Address VARCHAR2(30),
   ResearchArea VARCHAR2(20),
   Dept VARCHAR2(20)
);

CREATE TABLE Department (
```

```
    Name VARCHAR2(30) PRIMARY KEY,
    Chair VARCHAR2(30),
    Endowment VARCHAR2(20)
);

CREATE TABLE Connector_1_3 (
    StudentID Number(10) PRIMARY KEY,
    AdvisorID Number(10),
    DepartmentName VARCHAR2(30),

    CONSTRAINT Student_FK
    Foreign Key (StudentID)
    REFERENCES Student(StudentID),

    CONSTRAINT Advisor_FK
    Foreign Key (AdvisorID)
    REFERENCES Advisor(ID),

    CONSTRAINT Department_FK
    Foreign Key (DepartmentName)
    REFERENCES Department(Name)
);

4.
#Daniel OBrien
#DSC 450
#HW 1b


def SQLInsert(string):
    s = string.replace('(', ' , ')
    s2 = s.replace(')', ' , ')
    s3 = s2.replace(',', '')
    newLst = s3.split()
    values = newLst[4:-1]
    values = (', '.join(values))
    if newLst[-1] == ';' and newLst[0] == 'INSERT' and newLst[1] == 'INTO':
        return 'Inserting ({}) into {} Table'.format(values, newLst[2])

    else:
        return 'Invalid Statement'
print(SQLInsert('INSERT INTO Students VALUES(1, Jane, A+);'))
```