SQL Queries to create tables

```
CREATE TABLE term (
  TermId NUMBER PRIMARY KEY NOT NULL,
  TermDesc VARCHAR2(50),
  StartDate DATE,
  EndDate DATE
);

CREATE TABLE major (
  MajorId NUMBER PRIMARY KEY NOT NULL,
  MajorDesc VARCHAR2(50)
);

CREATE TABLE course (
  CourseId NUMBER PRIMARY KEY NOT NULL,
  Title VARCHAR2(20),
  Credits NUMBER,
  PreReq VARCHAR2(20)
);

CREATE TABLE room (
  RoomType VARCHAR2(20) PRIMARY KEY NOT NULL,
  RoomDesc VARCHAR2(50)
);

CREATE TABLE location (
  RoomId NUMBER PRIMARY KEY NOT NULL,
  Building VARCHAR2(20),
  RoomNo VARCHAR2(20),
  Capacity NUMBER,
  RoomType VARCHAR2(20) NOT NULL,
  FOREIGN KEY (RoomType) REFERENCES room(RoomType)
);

CREATE TABLE faculty (
  FacultyId NUMBER PRIMARY KEY NOT NULL,
  Name VARCHAR2(50),
  RoomId NUMBER NOT NULL,
  FOREIGN KEY (RoomId) REFERENCES location(RoomId),
  Phone NUMBER(10),
  DeptId NUMBER NOT NULL
);

CREATE TABLE department (
  DeptId NUMBER PRIMARY KEY NOT NULL,
  DeptName VARCHAR2(20),
  FacultyId NUMBER
);

ALTER TABLE faculty ADD CONSTRAINT dept_fk FOREIGN KEY (DeptId) REFERENCES department(DeptId);
ALTER TABLE department ADD CONSTRAINT faculty_fk FOREIGN KEY (FacultyId) REFERENCES faculty(FacultyId);

CREATE TABLE student (
  StudentId NUMBER PRIMARY KEY NOT NULL,
  Last VARCHAR2(20),
  First VARCHAR2(20) NOT NULL,
  Street VARCHAR2(50),
  City VARCHAR2(20),
  State VARCHAR2(20),
  Zip NUMBER(6),
  StartTerm DATE,
  BirthDate DATE,
  FacultyId NUMBER NOT NULL,
  FOREIGN KEY (FacultyId) REFERENCES faculty(FacultyId),
  MajorId NUMBER NOT NULL,
  FOREIGN KEY (MajorId) REFERENCES major(MajorId),
  Phone NUMBER(10)
);
```

```
CREATE TABLE crossection (
  CsId NUMBER PRIMARY KEY NOT NULL,
  CourseId NUMBER NOT NULL,
  FOREIGN KEY (CourseId) REFERENCES course(CourseId),
  Section VARCHAR2(20),
  TermId NUMBER NOT NULL,
  FOREIGN KEY (TermId) REFERENCES term(TermId),
  FacultyId NUMBER NOT NULL,
  FOREIGN KEY (FacultyId) REFERENCES faculty(FacultyId),
  Day VARCHAR2(20),
  StratTime VARCHAR2(20),
  EndTime VARCHAR2(20),
  RoomId NUMBER NOT NULL,
  FOREIGN KEY (RoomId) REFERENCES location(RoomId),
  MaxCount NUMBER
);

CREATE TABLE registration (
  StudentId NUMBER,
  FOREIGN KEY (StudentId) REFERENCES student(StudentId),
  CsId NUMBER,
  FOREIGN KEY (CsId) REFERENCES crossection(CsId),
  PRIMARY KEY (StudentId, CsId),
  Midterm DATE,
  Final DATE,
  RegStatus VARCHAR2(20)
);
```

SQL Queries to insert data in tables

1. Insert data into TERM
```
INSERT INTO term (TermId, TermDesc, StartDate, EndDate)
VALUES (1, 'Spring 2025', TO_DATE('2025-01-01', 'YYYY-MM-DD'), TO_DATE('2025-05-31', 'YYYY-MM-DD'));
```

2. Insert data into MAJOR
```
INSERT INTO major (MajorId, MajorDesc)
VALUES (1, 'Computer Science');
```

3. Insert data into COURSE
```
INSERT INTO course (CourseId, Title, Credits, PreReq)
VALUES (1, 'Database Systems', 3, NULL);
```

4. Insert data into ROOM
```
INSERT INTO room (RoomType, RoomDesc)
VALUES ('Lecture', 'Large Lecture Room');
```

5. Insert data into LOCATION
```
INSERT INTO location (RoomId, Building, RoomNo, Capacity, RoomType)
VALUES (1, 'Science Building', '101', 100, 'Lecture');
```

6. Insert data into DEPARTMENT
```
INSERT INTO department (DeptId, DeptName, FacultyId)
VALUES (1, 'Engineering', NULL);
```

7. Insert data into FACULTY
```
INSERT INTO faculty (FacultyId, Name, RoomId, Phone, DeptId)
VALUES (1, 'Dr. John Doe', 1, 1234567890, 1);
```

Update DEPARTMENT to set the FacultyId (Circular Reference Handling)
```
UPDATE department SET FacultyId = 1 WHERE DeptId = 1;
```

8. Insert data into STUDENT
```
INSERT INTO student (StudentId, Last, First, Street, City, State, Zip, StartTerm, BirthDate, FacultyId,
MajorId, Phone)
VALUES (1, 'Smith', 'Jane', '123 Main St', 'Anytown', 'CA', 123456, TO_DATE('2025-01-01', 'YYYY-MM-DD'),
TO_DATE('2003-05-10', 'YYYY-MM-DD'), 1, 1, 9876543210);
```

9. Insert data into CROSSECTION
```
INSERT INTO crossection (CsId, CourseId, Section, TermId, FacultyId, Day, StratTime, EndTime, RoomId,
MaxCount)
VALUES (1, 1, 'A', 1, 1, 'Monday', '10:00', '12:00', 1, 30);
```

10. Insert data into REGISTRATION
```
INSERT INTO registration (StudentId, CsId, Midterm, Final, RegStatus)
VALUES (1, 1, TO_DATE('2025-03-15', 'YYYY-MM-DD'), TO_DATE('2025-05-15', 'YYYY-MM-DD'), 'Enrolled');
```