SCript for in-class demo Example of DEFERRABLE foreign key constraint

Create tables
Student (id, first, last, advisor_id)
Advisor (id, first, last, student_id)

Now, try inserting tuples in the advisor relation or student relation.

INSERT INTO advisor VALUES (11, 'Mary', 'Jones', 1)
INSERT INTO student VALUES (1, 'John', 'Smith', 11);

You will get foreign key violation error (catch 22!).

Use DEFERRABLE INITIALLY DEFERRED

If we declare a constraint to be DEFERRABLE, then we have the option of having it wait until a transaction is complete before checking the constraint. We follow the keyword DEFERRABLE by either INITIALLY DEFERRED. Then, checking will be deferred to just before each transaction commits.

ALTER TABLE advisor
ADD FOREIGN KEY (student_id)
  REFERENCES student(id)
  DEFERRABLE INITIALLY DEFERRED

INSERT INTO advisor VALUES (11, 'Mary', 'Jones', 1)
INSERT INTO student VALUES (1, 'John', 'Smith', 11);

DELETE FROM student WHERE id = 1;
DELETE FROM advisor WHERE id = 11;

NOTE: All the queries typed in phpPgAdmin are executed as one transaction.