ISYS 464, Fall 23, Assignment 4, Due Date: Wednesday, 10/18/23

Your mydb schema of assignment 3 should be similar to this design, if not, you should make changes:

Department table: deptNumber, deptName
Employee table: employeeSSN, empName, address, birthday, salary, deptNumber
Dependent table:dependentSSN, name, sex, birthday, employeeSSN
Project table: projectID, projName, deptNumber
employeeProject table: employeeSSN, projectID

We will add the following constraints to the mydb database created in assignment 3:

1. Add referential integrity between:
   a. Department table and Employee table, add foreign key constraint in the Employee table.
   b. Employee table and Dependent table, add foreign key constraint in the Dependent table
   c. Department table and Project table, add foreign key constraint in the Project table .

2. Add a domain constraint to the Salary field of the Employee table: Salary is between 500000 and 10000.

3. Test the constraints by trying to add a record that violates the constraints:

   a. Add a new employee record with a duplicated employeeSSN.
   b. Add a new employee record where the deptNumber does not exist in the Department table.
   c. Add a new dependent record where the employeeSSN does not exist in the Employee table.
   d. Add a new employee record with $5,000 salary.
   e. Change one department's number, deptNumber, in the department table, and see the changes of deptNumber in the employee table.

4. Submit the followings:
   a. For each of the constraint violation in step 3, copy the error message and paste to the Word document.
   b. Show the employee records with updated deptNumber after applying 3e.
   c. Submit the Word document by email attachment.

Example of violating a constraint:

```
1    insert into employee
2    values('ea','aaa','m',600.0,'2020-10-10','d1');
3
```

Output

Action Output

#	Time	Action	Message
❌ 1	22:25:33	insert into employee values('ea','aaa','m',600.0,'2020-10-10','d1')	Error Code: 3819. Check constraint 'validSalaryRange' is violated.