- **The CRUD matrix:**
  - The CRUD matrix, which stands for CREATE, READ, UPDATE, DELETE, examines the interaction of data and processes. The CRUD Matrix is a technique to identify the tables in a database which are used in any user interaction within a database application.
  - Define the data and functional requirements in database design document
  - Use a CRUD matrix to depict the mapping between these two requirements

- **CRUD Matrix (cont.):**
  - In your database design document:
    - List all entities
      - E1: EMPLOYEE
      - E2: PROJECT
      - E3: EMP_PROJ_HOURS
      - …
    - List all functions/processes
      - F1: Insert/update/delete/retrieve an employee
      - F2: Insert/update/delete/retrieve a project
      - F3: Assign working hours for an employee on a project
      - …

- **CRUD Matrix (cont.):**
  - Assume your have ten entities and five functions:

    (Note: One function/process may involve multiple entities, e.g., invoice processing. Not all CRUD actions need to involve a Function/Entity interaction.)

Function / Entity Interaction	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10
F1	**CR UD**									
F2		**CR UD**								
F3			**CR UD**					**CR U**		
F4				**CR U**		**CR U**				**CRU**
F5	**R**		**R**				**R**		**R**	