




***Java SE 8 Programming Language***

**Training Assignments**

|                |                      |
|----------------|----------------------|
| Document Code  | 25e-BM/HR/HDCV/FSOFT |
| Version        | 1.1                  |
| Effective Date | 20/11/2012           |

**RECORD OF CHANGES**

| No | Effective Date | Change Description     | Reason     | Reviewer | Approver |
|----|----------------|------------------------|------------|----------|----------|
| 1. | 01/Mar/2019    | Add the new assignment | Create new | DieuNT1  | VinhNV   |
|    |                |                        |            |          |          |
|    |                |                        |            |          |          |
|    |                |                        |            |          |          |
|    |                |                        |            |          |          |
|    |                |                        |            |          |          |
|    |                |                        |            |          |          |
|    |                |                        |            |          |          |

|   |  |
|---|--|
|  | <b>CODE:</b> ASQL_Assignment2_Opt1<br><b>TYPE:</b> Medium<br><b>LOC:</b> n/a<br><b>DURATION:</b> 180 MINUTES |
|---|--|

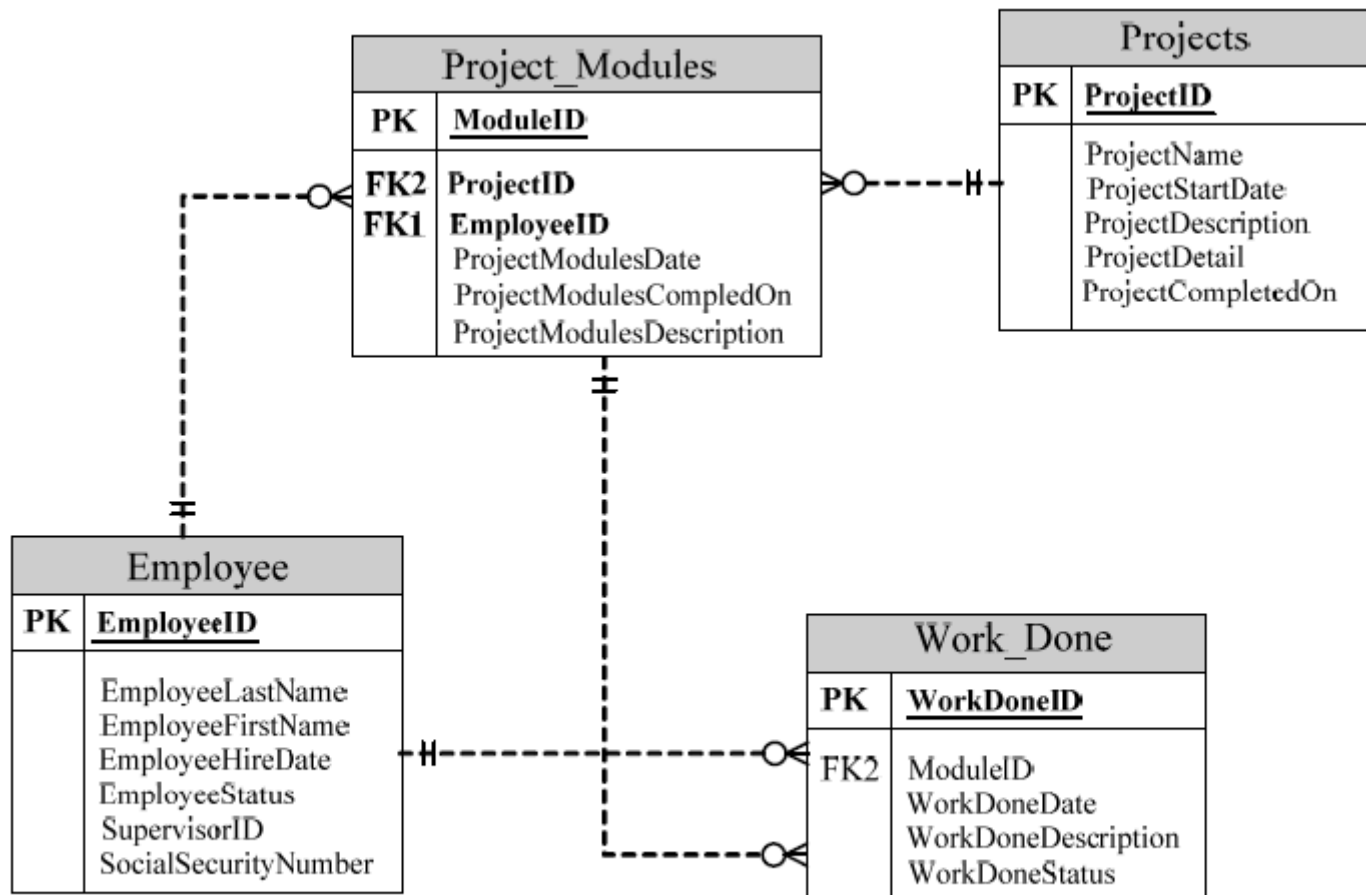
## ASQL Assignment 201

**Barems:** Q1-25%, Q2-15% each sub question

**Objectives:** H5SD - SQL skills

### Problem Descriptions:

You work as a Database Developer for ABC Inc. The company uses RDBMS for project management. The fragments of database schema are given in figure below. As shown, the Project database contains four tables: **Projects**, **Employee**, **Project\_Modules** and **Work\_Done**.



**(PK: Primary Key; FK: Foreign Key)**

- Each project is assigned to an employee called Project Manager and there can be only one Project Manager for a project.
- For better planning and management, each project is divided into smaller modules and responsibility of each module is assigned to an Employee.
- Reporting is done on a daily basis and employees report the work done on their modules as well as other employees' modules (if any).

- You remove the project information after three months of project completion.

Beside the fact that a Project Manager is an ABC Inc employee, we have some other assumptions on the table fields as below:

- ProjectCompletedOne: the date project was completed.
- ProjectModulesDate: the due date for the owner employee to complete the module
- ProjectModulesCompletedOn: the actual date that the owner employee has completed the module.
- WorkDoneDate: the date when the relevant employee has completed the Work, it would be NULL if the Work is still in progress
- SupervisorID: the ID of mentioned employee's supervisor, who is also an ABC Inc employee.

### Questions

1. Update the database schema above to reflect the business logics, design
2. Write :
  - a. Create the tables (with the most appropriate field/column constraints & types) and add at least 5 records into each created table.
  - b. Select the modules that employee have id = 3 has been working on.
  - c. Select uncompleted projects which have resigned members.
  - d. Select the Works information that employee have id = 3 has been involving though those were not assigned to him/her.
  - e. Remove the project information after three months of project completion.
  - f. Select uncompleted modules, employee name and employee's reports about those modules.
  - g. Select EmployeeID, Supervisor's FirstName, Supervisor's LastName and all project name that employee and their's supervisor work together with employeeID =2.

**-- THE END --**