Design Document Specification

Class Diagram:
Employee

- EmployeeID (primary key)
- Name
- Qualification
- Experience
- LoginID
- Password

Project

- ProjectID (primary key)
- ProjectName
- ProjectDescription

EmployeeProject

- EmployeeID (foreign key referencing Employee)
- ProjectID (foreign key referencing Project)
- StartDate
- EndDate

Skill

- SkillID (primary key)
- SkillName

EmployeeSkill

- EmployeeID (foreign key referencing Employee)
- SkillID (foreign key referencing Skill)
- YearsOfExperience

Certification

- CertificationID (primary key)
- CertificationName

EmployeeCertification

- EmployeeID (foreign key referencing Employee)
- CertificationID (foreign key referencing Certification)
- CertificationDate

Education

- EducationID (primary key)
- DegreeName
- University
- YearOfGraduation

EmployeeEducation

- EmployeeID (foreign key referencing Employee)
- EducationID (foreign key referencing Education)

Training

- TrainingID (primary key)
- TrainingName
- TrainingDescription

SkillTraining

- SkillID (foreign key referencing Skill)
- TrainingID (foreign key referencing Training)

EmployeeTraining

- EmployeeID (foreign key referencing Employee)
- TrainingID (foreign key referencing Training)
- TrainingDate

Administration

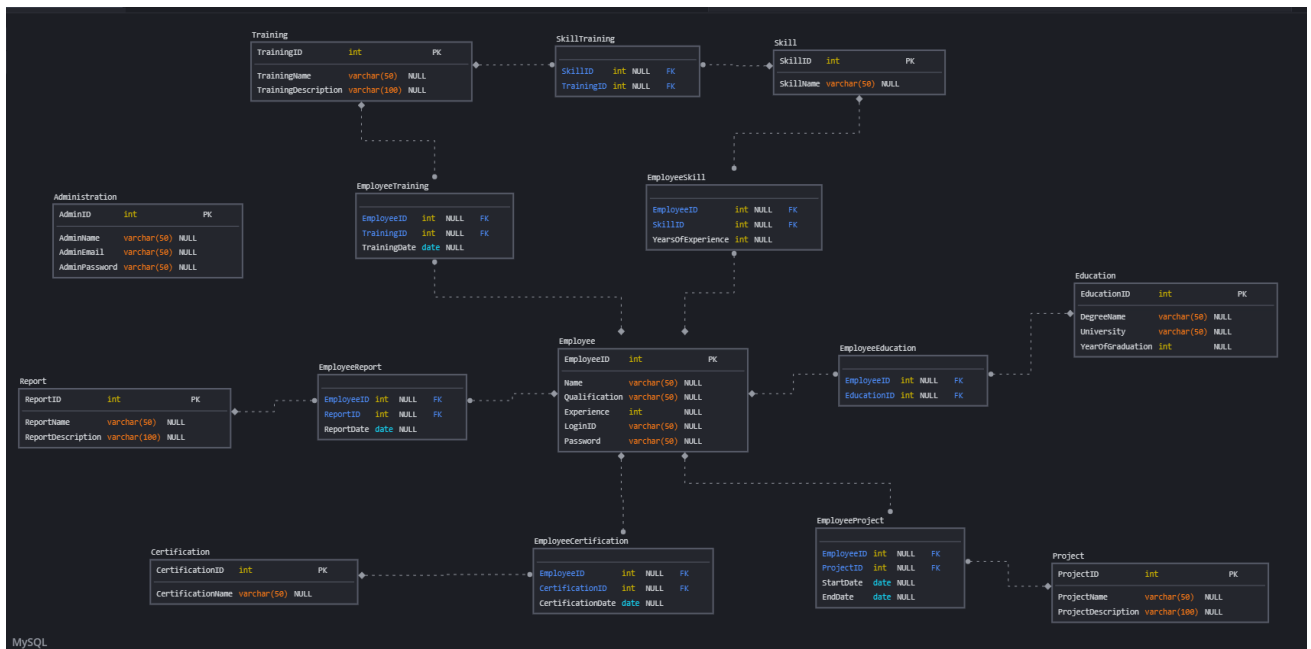- AdminID (primary key)
- AdminName
- AdminEmail
- AdminPassword
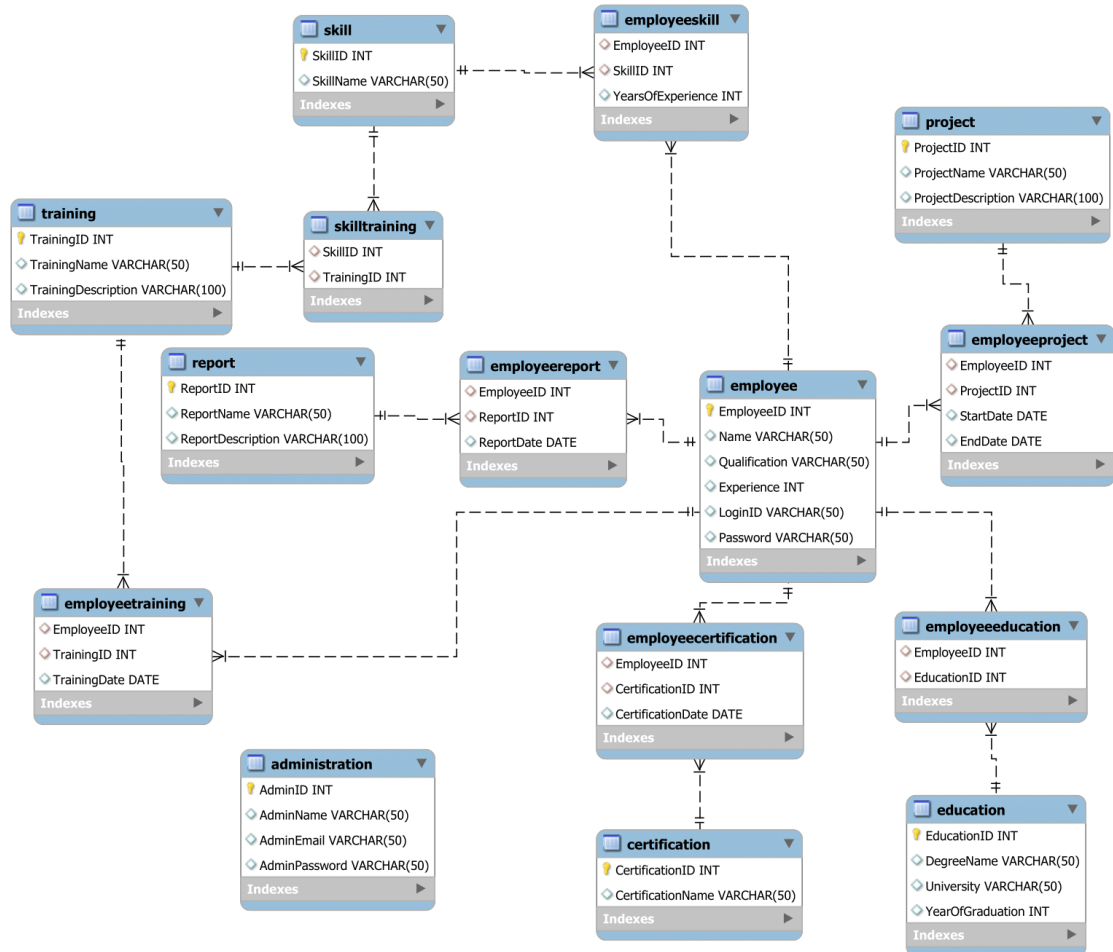
Report

- ReportID (primary key)

- ReportName
- ReportDescription

EmployeeReport

- EmployeeID (foreign key referencing Employee)
- ReportID (foreign key referencing Report)
- ReportDate

Database Design:

Structure Source Code like Methods, Classes and their Implementation Details:

Employee Info Module:
Structure:
EmployeeID (int)
Name (string)
Qualification (string)
Experience (int)
LoginID (string)
Password (string)

Methods:
add_employee(employee_info) - adds a new employee to the database
view_employee(employee_id) - displays the details of a specific employee
update_employee(employee_id, updated_info) - updates the details of a specific employee
delete_employee(employee_id) - removes an employee from the database

Administration Module:
Structure:
AdminID (int)
AdminName (string)
AdminEmail (string)
AdminPassword (string)

Methods:
add_admin(admin_info) - adds a new administrator to the database
view_admin(admin_id) - displays the details of a specific administrator
update_admin(admin_id, updated_info) - updates the details of a specific administrator
delete_admin(admin_id) - removes an administrator from the database

Project Management Module:
Structure:
ProjectID (int)
ProjectName (string)
ProjectDescription (string)

Methods:
add_project(project_info) - adds a new project to the database
view_project(project_id) - displays the details of a specific project
update_project(project_id, updated_info) - updates the details of a specific project

delete_project(project_id) - removes a project from the database

Training Management Module:
Structure:
TrainingID (int)
TrainingName (string)
TrainingDescription (string)

Methods:
add_training(training_info) - adds a new training to the database
view_training(training_id) - displays the details of a specific training
update_training(training_id, updated_info) - updates the details of a specific training
delete_training(training_id) - removes a training from the database

HR Reports Module:
Structure:
ReportID (int)
ReportName (string)
ReportDescription (string)

Methods:
add_report(report_info) - adds a new report to the database
view_report(report_id) - displays the details of a specific report
update_report(report_id, updated_info) - updates the details of a specific report
delete_report(report_id) - removes a report from the database