**System Design Specification**



**BCD Carpentry Project**

**BCD1-0117**

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Description of Change** | **Author** | **Date** |
| 1.0 | Initial | Tao Sun | 24/04/2017 |
|  |  |  |  |
|  |  |  |  |

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# Introduction

This System Design Document has been created to outline the proposed system design for Human Resource Management System (HRMS) of BCD Carpentry Ltd. The HRMS is intended to store and process the information of human resource which is managed by using Microsoft Word and Microsoft Excel spreadsheet currently. This brand-new information system will simplify the administrator’s operation and relieve her workload greatly.

The purpose of this System Design Document is to provide a description for how the new HRMS will be constructed. The Systems Design Document was created to ensure that the system design meets the requirements specified in the project requirements documentation. This document provides a description of the system architecture, software, hardware, database design, and detailed functions.

# Reference

* Requirement\_List\_BCD1-0117\_BCDCarpentryProject.docx
* Requirement\_Specification\_BCD1-0117\_BCDCarpentryProject.docx
* ConceptualModel\_BCD1-0117\_BCDCarpentryProject.vpp
* LogicalModel\_BCD1-0117\_BCDCarpentryProject.vpp
* PhysicalModel\_BCD1-0117\_BCDCarpentryProject.vpp

# Audience

* Project sub-committee
* Project coordinator
* Project supervisor
* Project team
* Client
* Anybody else who care about this project in Faculty of Business and Information Technology.

# System Architecture

# Physical architecture



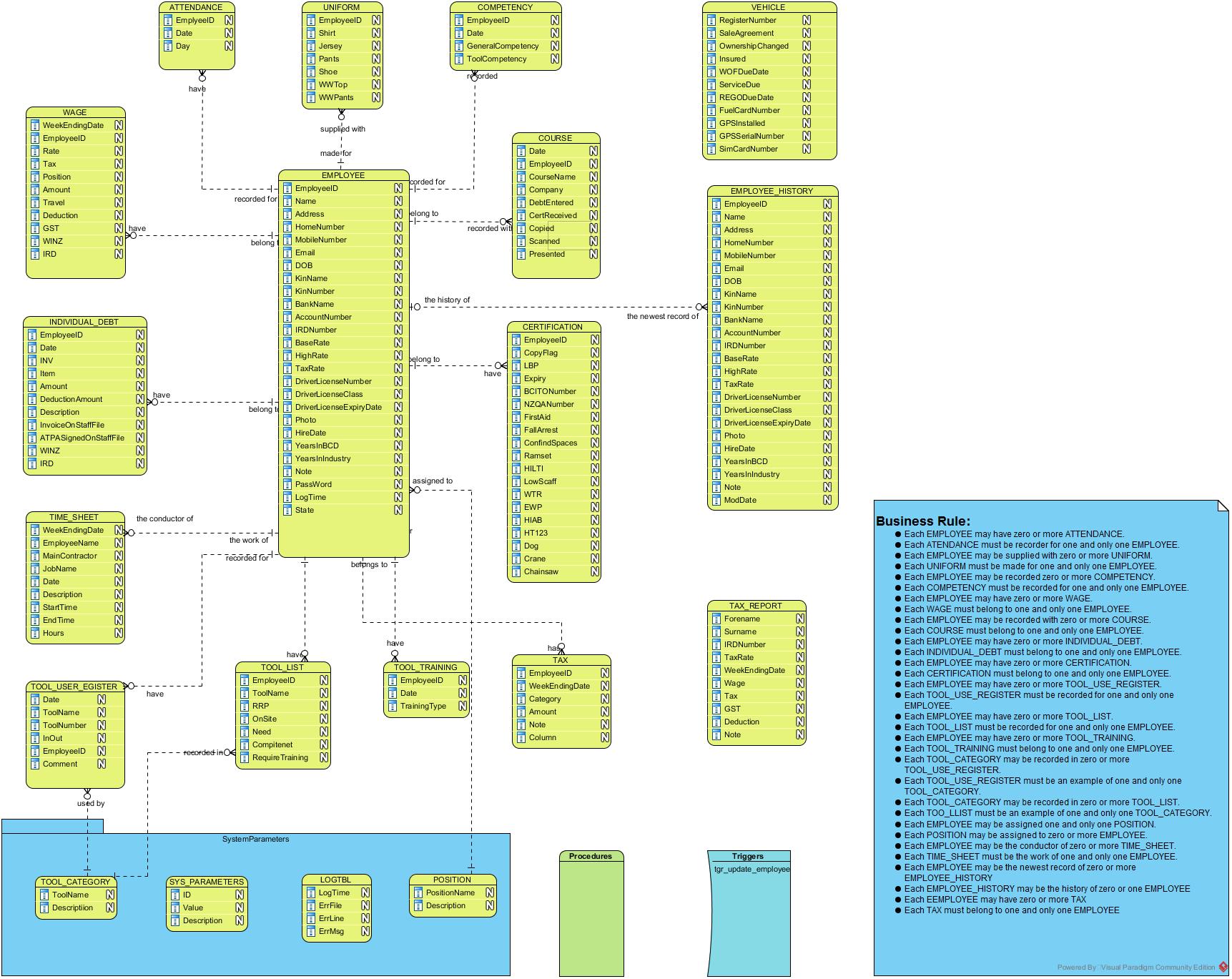
# Logical architecture



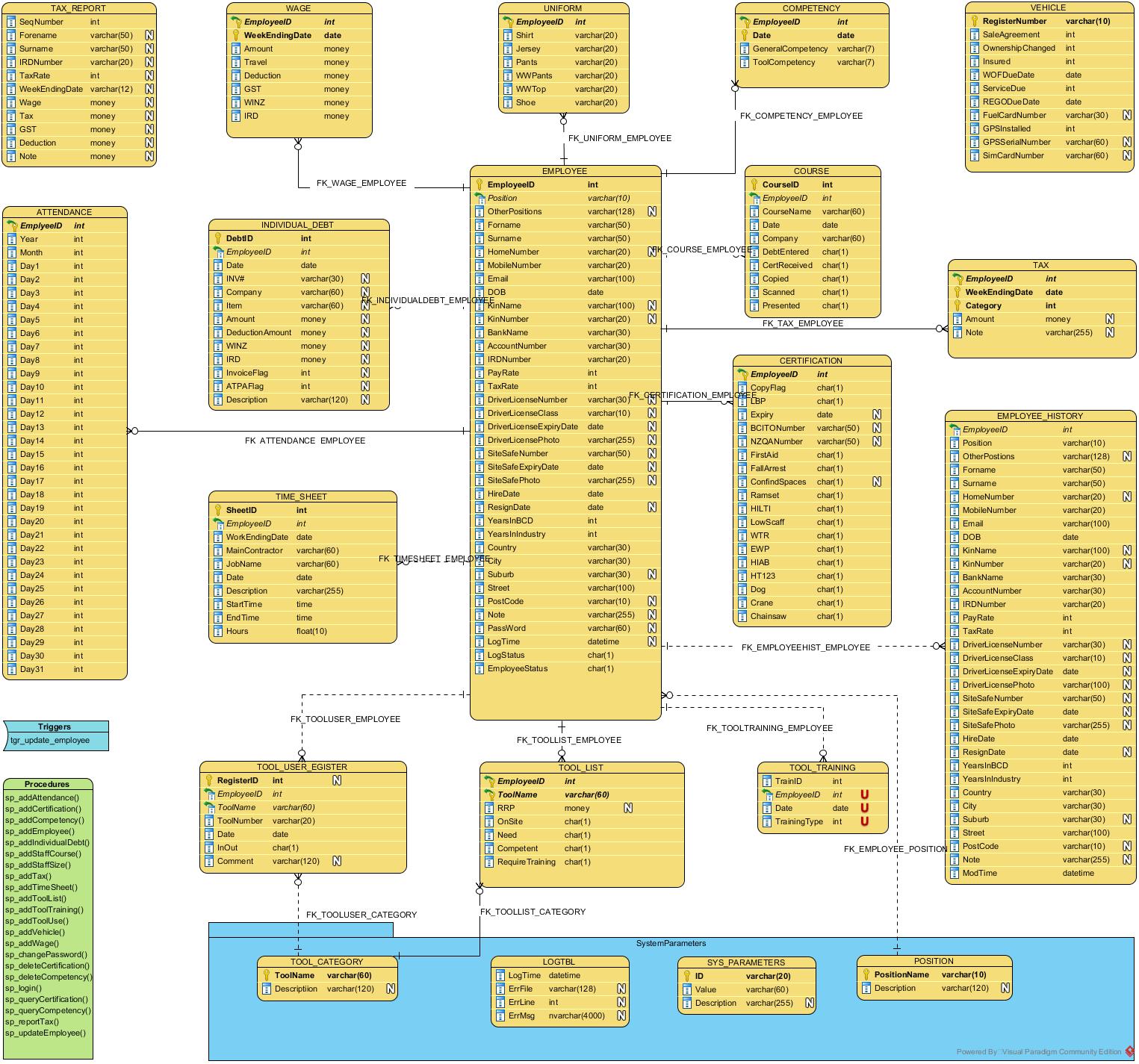
# Database Design

# ERD Diagram

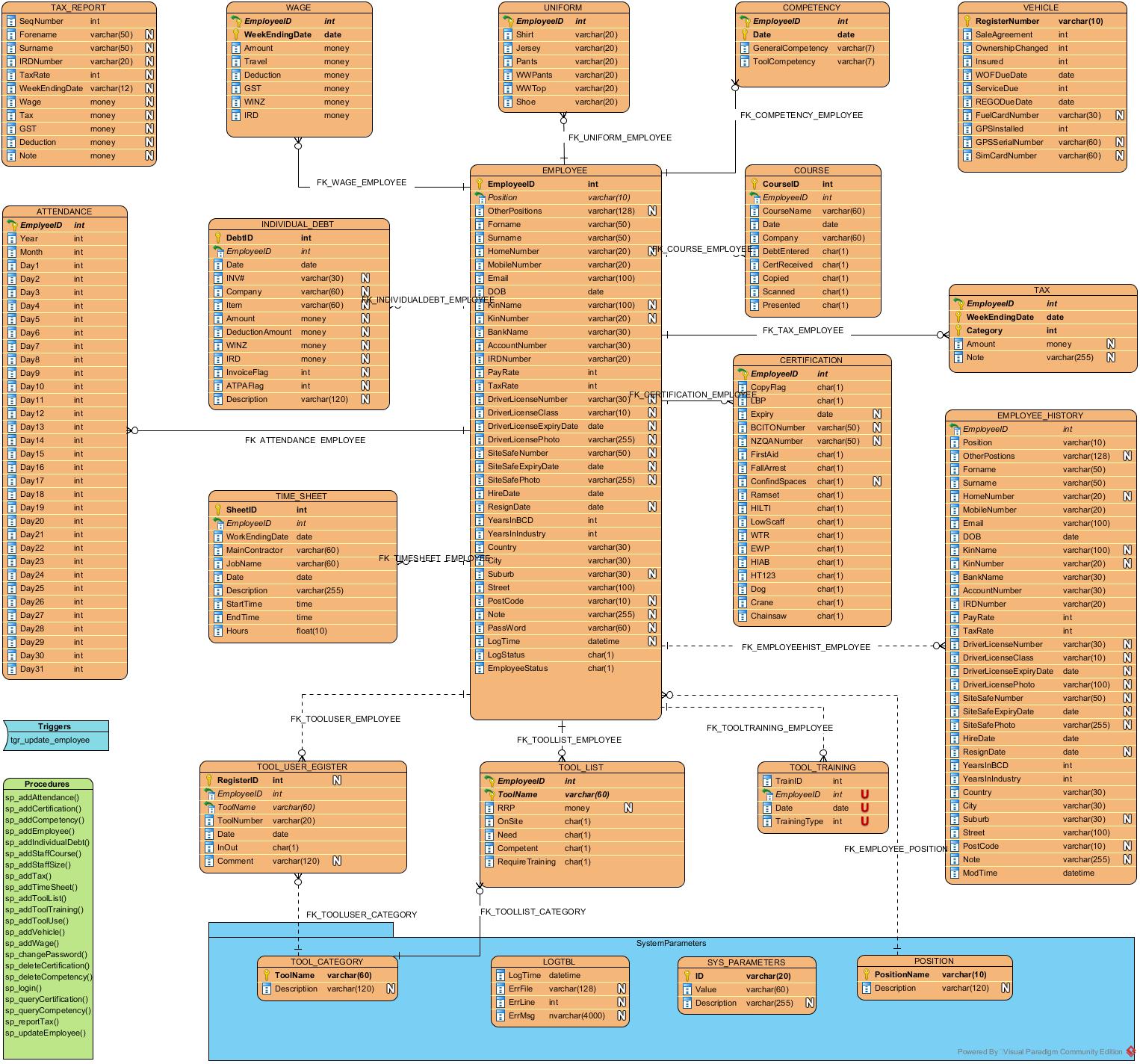
# Conceptual Model



# Logical Model



# Physical Model



# Detailed Tables

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **TAX\_REPORT** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | SeqNumber | int | 0 |  | No | No | No |
| 2 | Forename | varchar | 50 |  | No | Yes | No |
| 3 | Surname | varchar | 50 |  | No | Yes | No |
| 4 | IRDNumber | varchar | 20 |  | No | Yes | No |
| 5 | TaxRate | int | 0 |  | No | Yes | No |
| 6 | WeekEndingDate | varchar | 12 |  | No | Yes | No |
| 7 | Wage | money | 0 |  | No | Yes | No |
| 8 | Tax | money | 0 |  | No | Yes | No |
| 9 | GST | money | 0 |  | No | Yes | No |
| 10 | Deduction | money | 0 |  | No | Yes | No |
| 11 | Note | money | 0 |  | No | Yes | No |
| **TAX** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | EmployeeID | int | 10 |  | Yes | No | No |
| 2 | WeekEndingDate | date | 0 |  | Yes | No | No |
| 3 | Category | int | 0 | ${name} in (1,2,3,4) | Yes | No | No |
| 4 | Amount | money | 0 |  | No | Yes | No |
| 5 | Note | varchar | 255 |  | No | Yes | No |
| **SYS\_PARAMETERS** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | ID | varchar | 20 |  | Yes | No | No |
| 2 | Value | varchar | 60 |  | No | No | No |
| 3 | Description | varchar | 255 |  | No | Yes | No |
| **LOGTBL** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | LogTime | datetime | 0 |  | No | No | No |
| 2 | ErrFile | varchar | 128 |  | No | Yes | No |
| 3 | ErrLine | int | 0 |  | No | Yes | No |
| 4 | ErrMsg | nvarchar | 4000 |  | No | Yes | No |
| **TIME\_SHEET** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | SheetID | int | 0 |  | Yes | No | No |
| 2 | EmployeeID | int | 10 |  | No | No | No |
| 3 | WorkEndingDate | date | 0 |  | No | No | No |
| 4 | MainContractor | varchar | 60 |  | No | No | No |
| 5 | JobName | varchar | 60 |  | No | No | No |
| 6 | Date | date | 0 |  | No | No | No |
| 7 | Description | varchar | 255 |  | No | No | No |
| 8 | StartTime | time | 7 |  | No | No | No |
| 9 | EndTime | time | 7 |  | No | No | No |
| 10 | Hours | float | 10 | ${name} >= 0.00 | No | No | No |
| **EMPLOYEE\_HISTORY** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | EmployeeID | int | 10 |  | No | No | No |
| 2 | Position | varchar | 10 |  | No | No | No |
| 3 | OtherPostions | varchar | 128 |  | No | Yes | No |
| 4 | Forname | varchar | 50 |  | No | No | No |
| 5 | Surname | varchar | 50 |  | No | No | No |
| 6 | HomeNumber | varchar | 20 |  | No | Yes | No |
| 7 | MobileNumber | varchar | 20 |  | No | No | No |
| 8 | Email | varchar | 100 |  | No | No | No |
| 9 | DOB | date | 0 |  | No | No | No |
| 10 | KinName | varchar | 100 |  | No | Yes | No |
| 11 | KinNumber | varchar | 20 |  | No | Yes | No |
| 12 | BankName | varchar | 30 |  | No | No | No |
| 13 | AccountNumber | varchar | 30 |  | No | No | No |
| 14 | IRDNumber | varchar | 20 |  | No | No | No |
| 15 | PayRate | int | 10 | ${name} > 0 | No | No | No |
| 16 | TaxRate | int | 10 |  | No | No | No |
| 17 | DriverLicenseNumber | varchar | 30 |  | No | Yes | No |
| 18 | DriverLicenseClass | varchar | 10 |  | No | Yes | No |
| 19 | DriverLicenseExpiryDate | date | 0 |  | No | Yes | No |
| 20 | DriverLicensePhoto | varchar | 100 |  | No | Yes | No |
| 21 | SiteSafeNumber | varchar | 50 |  | No | Yes | No |
| 22 | SiteSafeExpiryDate | date | 0 |  | No | Yes | No |
| 23 | SiteSafePhoto | varchar | 255 |  | No | Yes | No |
| 24 | HireDate | date | 0 |  | No | No | No |
| 25 | ResignDate | date | 0 |  | No | Yes | No |
| 26 | YearsInBCD | int | 10 |  | No | No | No |
| 27 | YearsInIndustry | int | 10 |  | No | No | No |
| 28 | Country | varchar | 30 |  | No | No | No |
| 29 | City | varchar | 30 |  | No | No | No |
| 30 | Suburb | varchar | 30 |  | No | Yes | No |
| 31 | Street | varchar | 100 |  | No | No | No |
| 32 | PostCode | varchar | 10 |  | No | Yes | No |
| 33 | Note | varchar | 255 |  | No | Yes | No |
| 34 | ModTime | datetime | 0 |  | No | No | No |
| **VEHICLE** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | RegisterNumber | varchar | 10 |  | Yes | No | No |
| 2 | SaleAgreement | int | 0 | ${name} in (0,1) | No | No | No |
| 3 | OwnershipChanged | int | 0 | ${name} in (0,1) | No | No | No |
| 4 | Insured | int | 0 | ${name} in (0,1) | No | No | No |
| 5 | WOFDueDate | date | 0 |  | No | No | No |
| 6 | ServiceDue | int | 10 |  | No | No | No |
| 7 | REGODueDate | date | 0 |  | No | No | No |
| 8 | FuelCardNumber | varchar | 30 |  | No | Yes | No |
| 9 | GPSInstalled | int | 0 | ${name} in (0,1) | No | No | No |
| 10 | GPSSerialNumber | varchar | 60 |  | No | Yes | No |
| 11 | SimCardNumber | varchar | 60 |  | No | Yes | No |
| **TOOL\_TRAINING** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | TrainID | int | 0 |  | No | No | No |
| 2 | EmployeeID | int | 10 |  | No | No | Yes |
| 3 | Date | date | 0 |  | No | No | Yes |
| 4 | TrainingType | int | 0 | ${name} in (1,2,3) | No | No | Yes |
| **TOOL\_LIST** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | EmployeeID | int | 10 |  | Yes | No | No |
| 2 | ToolName | varchar | 60 |  | Yes | No | No |
| 3 | RRP | money | 0 |  | No | Yes | No |
| 4 | OnSite | char | 1 | ${name} in ('Y','N') | No | No | No |
| 5 | Need | char | 1 | ${name} in ('Y','N') | No | No | No |
| 6 | Competent | char | 1 | ${name} in ('Y','N') | No | No | No |
| 7 | RequireTraining | char | 1 | ${name} in ('Y','N') | No | No | No |
| **POSITION** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | PositionName | varchar | 10 |  | Yes | No | No |
| 2 | Description | varchar | 120 |  | No | Yes | No |
| **TOOL\_CATEGORY** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | ToolName | varchar | 60 |  | Yes | No | No |
| 2 | Descriptiion | varchar | 120 |  | No | Yes | No |
| **CERTIFICATION** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | EmployeeID | int | 10 |  | Yes | No | No |
| 2 | CopyFlag | char | 1 | ${name} in ('Y','N') | No | No | No |
| 3 | LBP | char | 1 | ${name} in ('Y','N') | No | No | No |
| 4 | Expiry | date | 0 |  | No | Yes | No |
| 5 | BCITONumber | varchar | 50 |  | No | Yes | No |
| 6 | NZQANumber | varchar | 50 |  | No | Yes | No |
| 7 | FirstAid | char | 1 | ${name} in ('Y','N') | No | No | No |
| 8 | FallArrest | char | 1 | ${name} in ('Y','N') | No | No | No |
| 9 | ConfindSpaces | char | 1 | ${name} in ('Y','N') | No | Yes | No |
| 10 | Ramset | char | 1 | ${name} in ('Y','N') | No | No | No |
| 11 | HILTI | char | 1 | ${name} in ('Y','N') | No | No | No |
| 12 | LowScaff | char | 1 | ${name} in ('Y','N') | No | No | No |
| 13 | WTR | char | 1 | ${name} in ('Y','N') | No | No | No |
| 14 | EWP | char | 1 | ${name} in ('Y','N') | No | No | No |
| 15 | HIAB | char | 1 | ${name} in ('Y','N') | No | No | No |
| 16 | HT123 | char | 1 | ${name} in ('Y','N') | No | No | No |
| 17 | Dog | char | 1 | ${name} in ('Y','N') | No | No | No |
| 18 | Crane | char | 1 | ${name} in ('Y','N') | No | No | No |
| 19 | Chainsaw | char | 1 | ${name} in ('Y','N') | No | No | No |
| **COMPETENCY** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | EmployeeID | int | 10 |  | Yes | No | No |
| 2 | Date | date | 0 |  | Yes | No | No |
| 3 | GeneralCompetency | varchar | 7 | ${name} in ('LOW','AVERAGE','HIGH') | No | No | No |
| 4 | ToolCompetency | varchar | 7 | ${name} in ('LOW','AVERAGE','HIGH') | No | No | No |
| **WAGE** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | EmployeeID | int | 10 |  | Yes | No | No |
| 2 | WeekEndingDate | date | 0 |  | Yes | No | No |
| 3 | Amount | money | 0 | ${name} >= 0.00 | No | No | No |
| 4 | Travel | money | 0 | ${name} >= 0.00 | No | No | No |
| 5 | Deduction | money | 0 | ${name} >= 0.00 | No | No | No |
| 6 | GST | money | 0 | ${name} >= 0.00 | No | No | No |
| 7 | WINZ | money | 0 | ${name} >= 0.00 | No | No | No |
| 8 | IRD | money | 0 | ${name} >= 0.00 | No | No | No |
| **TOOL\_USER\_EGISTER** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | RegisterID | int | 0 |  | Yes | Yes | No |
| 2 | EmployeeID | int | 10 |  | No | No | No |
| 3 | ToolName | varchar | 60 |  | No | No | No |
| 4 | ToolNumber | varchar | 20 |  | No | No | No |
| 5 | Date | date | 0 |  | No | No | No |
| 6 | InOut | char | 1 | ${name} in ('I','O') | No | No | No |
| 7 | Comment | varchar | 120 |  | No | Yes | No |
| **ATTENDANCE** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | EmplyeeID | int | 10 |  | Yes | No | No |
| 2 | Year | int | 0 |  | No | No | No |
| 3 | Month | int | 0 |  | No | No | No |
| 4 | Day1 | int | 0 |  | No | No | No |
| 5 | Day2 | int | 0 |  | No | No | No |
| 6 | Day3 | int | 0 |  | No | No | No |
| 7 | Day4 | int | 0 |  | No | No | No |
| 8 | Day5 | int | 0 |  | No | No | No |
| 9 | Day6 | int | 0 |  | No | No | No |
| 10 | Day7 | int | 0 |  | No | No | No |
| 11 | Day8 | int | 0 |  | No | No | No |
| 12 | Day9 | int | 0 |  | No | No | No |
| 13 | Day10 | int | 0 |  | No | No | No |
| 14 | Day11 | int | 0 |  | No | No | No |
| 15 | Day12 | int | 0 |  | No | No | No |
| 16 | Day13 | int | 0 |  | No | No | No |
| 17 | Day14 | int | 0 |  | No | No | No |
| 18 | Day15 | int | 0 |  | No | No | No |
| 19 | Day16 | int | 0 |  | No | No | No |
| 20 | Day17 | int | 0 |  | No | No | No |
| 21 | Day18 | int | 0 |  | No | No | No |
| 22 | Day19 | int | 0 |  | No | No | No |
| 23 | Day20 | int | 0 |  | No | No | No |
| 24 | Day21 | int | 0 |  | No | No | No |
| 25 | Day22 | int | 0 |  | No | No | No |
| 26 | Day23 | int | 0 |  | No | No | No |
| 27 | Day24 | int | 0 |  | No | No | No |
| 28 | Day25 | int | 0 |  | No | No | No |
| 29 | Day26 | int | 0 |  | No | No | No |
| 30 | Day27 | int | 0 |  | No | No | No |
| 31 | Day28 | int | 0 |  | No | No | No |
| 32 | Day29 | int | 0 |  | No | No | No |
| 33 | Day30 | int | 0 |  | No | No | No |
| 34 | Day31 | int | 0 |  | No | No | No |
| **COURSE** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | CourseID | int | 0 |  | Yes | No | No |
| 2 | EmployeeID | int | 10 |  | No | No | No |
| 3 | CourseName | varchar | 60 |  | No | No | No |
| 4 | Date | date | 0 |  | No | No | No |
| 5 | Company | varchar | 60 |  | No | No | No |
| 6 | DebtEntered | char | 1 | ${name} in ('Y','N') | No | No | No |
| 7 | CertReceived | char | 1 | ${name} in ('Y','N') | No | No | No |
| 8 | Copied | char | 1 | ${name} in ('Y','N') | No | No | No |
| 9 | Scanned | char | 1 | ${name} in ('Y','N') | No | No | No |
| 10 | Presented | char | 1 | ${name} in ('Y','N') | No | No | No |
| **UNIFORM** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | EmployeeID | int | 10 |  | Yes | No | No |
| 2 | Shirt | varchar | 20 |  | No | No | No |
| 3 | Jersey | varchar | 20 |  | No | No | No |
| 4 | Pants | varchar | 20 |  | No | No | No |
| 5 | WWPants | varchar | 20 |  | No | No | No |
| 6 | WWTop | varchar | 20 |  | No | No | No |
| 7 | Shoe | varchar | 20 |  | No | No | No |
| **INDIVIDUAL\_DEBT** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | DebtID | int | 0 |  | Yes | No | No |
| 2 | EmployeeID | int | 10 |  | No | No | No |
| 3 | Date | date | 0 |  | No | No | No |
| 4 | INV# | varchar | 30 |  | No | Yes | No |
| 5 | Company | varchar | 60 |  | No | Yes | No |
| 6 | Item | varchar | 60 |  | No | Yes | No |
| 7 | Amount | money | 0 |  | No | Yes | No |
| 8 | DeductionAmount | money | 0 |  | No | Yes | No |
| 9 | WINZ | money | 0 |  | No | Yes | No |
| 10 | IRD | money | 0 |  | No | Yes | No |
| 11 | InvoiceFlag | int | 1 |  | No | Yes | No |
| 12 | ATPAFlag | int | 1 |  | No | Yes | No |
| 13 | Description | varchar | 120 |  | No | Yes | No |
| **EMPLOYEE** | | | | | | | |
| **No.** | **Name** | **Type** | **Length** | **Check Constraint** | **Primary** | **Nullable** | **Unique** |
| 1 | EmployeeID | int | 10 |  | Yes | No | No |
| 2 | Position | varchar | 10 |  | No | No | No |
| 3 | OtherPositions | varchar | 128 |  | No | Yes | No |
| 4 | Forname | varchar | 50 |  | No | No | No |
| 5 | Surname | varchar | 50 |  | No | No | No |
| 6 | HomeNumber | varchar | 20 |  | No | Yes | No |
| 7 | MobileNumber | varchar | 20 |  | No | No | No |
| 8 | Email | varchar | 100 |  | No | No | No |
| 9 | DOB | date | 0 |  | No | No | No |
| 10 | KinName | varchar | 100 |  | No | Yes | No |
| 11 | KinNumber | varchar | 20 |  | No | Yes | No |
| 12 | BankName | varchar | 30 |  | No | No | No |
| 13 | AccountNumber | varchar | 30 |  | No | No | No |
| 14 | IRDNumber | varchar | 20 |  | No | No | No |
| 15 | PayRate | int | 10 | ${name} > 0 | No | No | No |
| 16 | TaxRate | int | 0 | ${name} >= 0 | No | No | No |
| 17 | DriverLicenseNumber | varchar | 30 |  | No | Yes | No |
| 18 | DriverLicenseClass | varchar | 10 |  | No | Yes | No |
| 19 | DriverLicenseExpiryDate | date | 0 |  | No | Yes | No |
| 20 | DriverLicensePhoto | varchar | 255 |  | No | Yes | No |
| 21 | SiteSafeNumber | varchar | 50 |  | No | Yes | No |
| 22 | SiteSafeExpiryDate | date | 0 |  | No | Yes | No |
| 23 | SiteSafePhoto | varchar | 255 |  | No | Yes | No |
| 24 | HireDate | date | 0 |  | No | No | No |
| 25 | ResignDate | date | 0 |  | No | Yes | No |
| 26 | YearsInBCD | int | 10 |  | No | No | No |
| 27 | YearsInIndustry | int | 10 |  | No | No | No |
| 28 | Country | varchar | 30 |  | No | No | No |
| 29 | City | varchar | 30 |  | No | No | No |
| 30 | Suburb | varchar | 30 |  | No | Yes | No |
| 31 | Street | varchar | 100 |  | No | No | No |
| 32 | PostCode | varchar | 10 |  | No | Yes | No |
| 33 | Note | varchar | 255 |  | No | Yes | No |
| 34 | PassWord | varchar | 60 |  | No | Yes | No |
| 35 | LogTime | datetime | 0 |  | No | Yes | No |
| 36 | LogStatus | char | 1 |  | No | No | No |
| 37 | EmployeeStatus | char | 1 |  | No | No | No |

# Trigger

* **Trigger Name:** tgr\_update\_employee
* **Trigger Function:** When the employee’s information is modified by the user, this trigger will be fired automatically and record the old values of employee’s information into a history table – Employee\_History.

# Stored Procedures

|  |  |  |
| --- | --- | --- |
| **No.** | **Name** | **Function** |
|  | sp\_addAttendance | Insert new attendance information into table Attendance |
|  | sp\_addCertification | Insert new certification information into table Certification |
|  | sp\_addCompetency | Insert new competency information into table Competency |
|  | sp\_addEmployee | Insert new employee information into table Employee |
|  | sp\_addIndividualDebt | Insert new individual debt information into table Individual\_Debt |
|  | sp\_addStaffCourse | Insert new staff course information into table Staff\_Course |
|  | sp\_addStaffSize | Insert new uniform information into table Uniform |
|  | sp\_addTax | Insert new tax information into table Tax |
|  | sp\_addTimeSheet | Insert new time information into table Time\_Sheet |
|  | sp\_addToolList | Insert new tool list information into table Tool\_LIst |
|  | sp\_addToolTraining | Insert new tool training information into table Tool\_Traing |
|  | sp\_addToolUse | Insert new tool use information into table Tool\_Use |
|  | sp\_addVehicle | Insert new vehicle information into table Vehicl |
|  | sp\_addWage | Insert new wage information into table Wage |
|  | sp\_backupDB | Backup database |
|  | sp\_changePassword | Change the specified user’s password |
|  | sp\_deleteCertification | Delete employee’s certification information from database |
|  | sp\_deleteCompetency | Delete employee’s competency record from database |
|  | sp\_login | log into the system |
|  | sp\_queryCertification | Query employee’s certification information |
|  | sp\_queryCompetency | Query employee’s competency information |
|  | sp\_reportTax | Create report data of tax |
|  | sp\_updateEmployee | Update employee’s information in database |

# System Functions

# Function List

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO.** | **Menu** | **Sub Menu** | **Code File** | **Difficulty** |
|  | Login |  | Default.aspx | Intermdiate |
|  | HomePage |  | Home.aspx | Easy |
|  | Employee | New | CreateEmployee.aspx | Intermdiate |
|  | Maintain | MaintainEmployee.aspx | Intermdiate |
|  | Query | QueryEmployee.aspx | Easy |
|  | Query History | QueryEmployeeHistory.aspx | Easy |
|  | StaffSize | New | CreateStaffSize.aspx | Easy |
|  | Query | QueryStaffSize.aspx | Easy |
|  | StaffCourse | New | CreatStaffCourse.aspx | Easy |
|  | Query | QueryStaffCourse.aspx | Easy |
|  | Certification | Maintain | MaintainCertification.aspx | Intermdiate |
|  | Query | QueryCertification.aspx | Hard |
|  | Attendance | New | CreateAttendance.aspx | Intermdiate |
|  | Query | QueryAttendance.aspx | Intermdiate |
|  | TimeSheet | New | CreateTimeSheet.aspx | Easy |
|  | Query | QueryTimeSheet.aspx | Easy |
|  | Wage | New | CreateWage.aspx | Intermdiate |
|  | Query | QueryWage.aspx | Intermdiate |
|  | Tax | New | CreateTax.aspx | Intermdiate |
|  | Maintain | MaintainTax.aspx | Easy |
|  | Query | QueryTax.aspx | hard |
|  | IndividualDebt | New | CreateIndividualDebt.aspx | Intermdiate |
|  | Query | QueryIndividualDebt.aspx | Intermdiate |
|  | Competency | Maintain | Competency.aspx | Hard |
|  | Tool>ToolUse | New | CreateToolUse.aspx | Easy |
|  | Query | QueryToolUse.aspx | Easy |
|  | Tool>ToolList | New | CreateToolList.aspx | Easy |
|  | Query | QueryToolList.aspx | Easy |
|  | Tool>ToolTraining | New | CreateToolTraining.aspx | Easy |
|  | Query | QueryToolTraining.aspx | Easy |
|  | Vehicle | New | CreateVehicle.aspx | Easy |
|  | Query | QueryVehicle.aspx | Easy |
|  | System | ChangePassword | ChangePassword.aspx | Easy |

# Function Details

# Login

* **Input：**



* **Process:**

Verify user name and password, if they are verified successful, the user can access the HRMS system.

* **Output:**

None.

# HomePage

* **Input：**

None

* **Process:**

Show the welcome information.

* **Output:**

None

# Employee

1. **NEW**

* **Input：**



* **Process**

Validate the inputted information and stored them into table Employee

* **Output**

Prompt a message to tell the user if the operation succeeds.

1. **MAINTAIN**

* **Input:**



* **Process:**

First, query the employee’s information according to what the user inputs and showed them on the screen. Then the user can modify them. At last, the user can choose update button or delete button to update them or delete them from the database.

* **Output:**

Prompt a message to tell the user if the operation succeeds.

1. **QUERY**

* **Input**



* **process**

The user selects the checkbox he want to query and click query button, then the system will return the result in a table. The result can be exported to an Excel spreadsheet.

* **output**

The query result and Excel spreadsheet

1. **HISTORY**

* **Input:**

Employee’s name or email information.

* **Process:**

According to the input information query the employee’s history information.

* **Output:**

Employee’s history information in a form of table or Excel spreadsheet.

# StaffSize

1. **NEW**

* **Input:**



* **Process:**

Verify the data user inputs and store them into table Uniform.

* **Output:**

Prompt a message to tell the user if the operation succeeds.

1. **QUERY**

* **Input:**



* **Process:**

According to the input information query the employee’s uniform size information.

* **Output:**

Employee’s uniform size information in a form of table or Excel spreadsheet.

# StaffCourse

1. **NEW**

* **Input:**



* **Process:**

Verify the data user inputs and store them into table Course.

* **Output:**

Prompt a message to tell the user if the operation succeeds.

1. **QUERY**

* **Input:**



* **Process:**

According to the input information query the employee’s course information.

* **Output:**

Employee’s course information in a form of table or Excel spreadsheet.

# Certification

1. **MAINTAIN**

* **Input:**

Employee’s name or email information.

* **Process:**

Verify the data user inputs first. When the user clicks the Add/Update button, the information is stored in the database if this employee’s information doesn’t exist in database or updated if it has already existed. When the Delete button is clicked the record will be delete from database.

* **Output:**

Prompt a message to tell the user if the operation succeeds.

1. **QUERY**

* **Input:**

 Employee’s name or email information

* **Process:**

Query out the employee’s certification information according to the query condition.

* **Output:**

Employee’s certification information in a form of table or Excel spreadsheet.

# Attendance

1. **NEW**

* **Input:**



* **Process:**

Verify the data user inputs and store them into table Attendance.

* **Output:**

Prompt a message to tell the user if the operation succeeds.

1. **QUERY**

* **Input:**

Employee’s name or email information as well as year and month information.

* **Process:**

Query out the employee’s attendance information according to the query condition.

* **Output:**

Employee’s attendance information in a form of table or Excel spreadsheet.

# TimeSheet

1. **NEW**

* **Input:**



* **Process:**

Verify the data user inputs and store them into table Time\_Sheet.

* **Output:**

Prompt a message to tell the user if the operation succeeds.

1. **QUERY**

* **Input:**



* **Process:**

Query out the employee’s time sheet information according to the query condition.

* **Output:**

Employee’s time sheet information in a form of table or Excel spreadsheet.

# Wage

1. **NEW**

* **Input:**



* **Process:**

Verify the data user inputs and store them into table Wage.

* **Output:**

Prompt a message to tell the user if the operation succeeds.

1. **Query**

* **Input:**



* **Process:**

Query out the employee’s wage information according to the query condition.

* **Output:**

Employee’s wage information in a form of table or Excel spreadsheet.

# Tax

1. **NEW**

* **Input:**



* **Process:**

Verify the data user inputs and store them into table Tax.

* **Output:**

Prompt a message to tell the user if the operation succeeds.

1. **MAINTAIN**

* **Input:**



* **Process:**

Query out the employee’s tax information according to the query condition. The user can update and delete them.

* **Output:**

Employee’s tax information in a form of table or Excel spreadsheet.

1. **QUERY**

* **Input:**



* **Process:**

Query out the employee’s tax information according to the query condition. The result is shown as report.

* **Output:**

Employee’s tax information in a form of table or Excel spreadsheet.

# IndividualDebt

1. **NEW**

* **Input:**



* **Process:**

Verify the data user inputs and store them into table Individual\_Debt.

* **Output:**

Prompt a message to tell the user if the operation succeeds.

1. **QUERY**

* **Input:**



* **Process:**

Query out the employee’s debt information according to the query condition. The result is shown as report.

* **Output:**

Employee’s debt information in a form of table or Excel spreadsheet.

# Competency

* **Input:**



* **Process:**

The user input the employee’s name or email information and click Query button. If there is competency record in database, the values will be returned and showed on the screen. Otherwise, the fields will keep blank. Then the user can modify or add new information and all these information can to be stored into database. There information also can be deleted or exported to a PDF file.

* **Output:**

Prompt a message to tell the user if the operation succeeds or export a PDF file including competency information.

# Tool>ToolUse

1. **NEW**

* **Input:**



* ** Process:**

Verify the data user inputs and store them into table Tool\_Use\_Register.

* ** Output:**

Prompt a message to tell the user if the operation succeeds.

1. **QUERY**

Input:



* ** Process:**

Query out the employee’s tool use information according to the query condition.

* ** Output:**

Employee’s tool use information in a form of table or Excel spreadsheet.

# Tool>ToolList

1. **NEW**

* **Input:**



* **Process:**

Verify the data user inputs and store them into table Tool\_List.

* **Output:**

Prompt a message to tell the user if the operation succeeds.

1. **QUERY**

* **Input:**



* **Process:**

Query out the employee’s tax information according to the query condition.

* **Output:**

Employee’s tax information in a form of table or Excel spreadsheet.

# Tool>ToolTraining

1. **NEW**

* **Input:**



* **Process:**

Verify the data user inputs and store them into table Tool\_Training.

* **Output:**

Prompt a message to tell the user if the operation succeeds.

1. **QUERY**

* **Input:**



* **Process:**

Query out the employee’s tool training information according to the query condition.

* **Output:**

Employee’s tool training information in a form of table or Excel spreadsheet.

# Vehicle

1. **NEW**

* **Input:**



* **Process:**

Verify the data user inputs and store them into table Vehicle.

* **Output:**

Prompt a message to tell the user if the operation succeeds.

1. **QUERY**

* **Input:**

None.

* **Process:**

Query out the vehicle’s information.

* **Output:**

Vehicle’s information in a form of table or Excel spreadsheet.



# System

1. **CHANGEPASSWORD**

* **Input:**



* **Process:**

Verify if the user name exists and the correction of old password, if the verification succeeds, then change the user’s password into the new password.

* **Output:**

Prompt a message to tell the user if the operation succeeds.