**DATABASE FINAL PROJECT REPORT:**

**Introduction:**

Project Name: Payroll Database System

Team: Arbo

Student Name: Ariful Hoq

**Scope:**

This project is based on 1 organization. So, this database will work within the organization.

**Implementation / Explanation:**

The database is made of 6 tables. Here we have employee table, check history table, departments table, federal tax table, payrate table and time table.

Employee Table:

The employee table is the center of this database. It has only basic fields like employee id, first name, last name, and gender.

Check History:

 Next, we have the check history table. Initially this table is empty and is only populated after the payroll engine is run. It holds the check date, the total amount earned, how much tax was taken out for state and federal and then finally the net amount paid to the employee.

Departments table:

This table has 2 fields dept\_no and dept\_name. Dept\_no is a foreign key here which will interact with employee table. And the dept\_name will store employees department name.

Federal Tax table:

Next, we have federal tax table. This table is unique because it has no foreign keys in it all. Its purpose to hold the multiple tax bands. There might be a tax band based on specific income. The percentage column is the tax percent. The system will use multiple bands as needed to calculate the total federal tax.

Pay Rate table:

The pay rate table has 3 fields emp\_no, hourly\_rate, and salary. Emp\_no is a foreign key here.

Time table:

This table has 4 fields emp\_no (FK), start\_date, end\_date, hours\_worked. This table will keep track of the number of hours employee worked.

**Schema:**

|  |  |  |  |
| --- | --- | --- | --- |
| Employee Table | First Name | Last Name | Gender |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Check History | Emp\_no (FK) | Check\_date | Gross | Federal tax | Net\_amount |

|  |  |  |
| --- | --- | --- |
| Departments | Dept\_no | Dept\_name |

|  |  |
| --- | --- |
| Federal tax | Percentage |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Time | Emp\_no (FK) | Start\_date | End\_date | Hours\_worked |

|  |  |  |  |
| --- | --- | --- | --- |
| Payrate | Emp\_no (FK) | Hourly\_rate | Salary |