[**630-03 Database Management Systems & Design**](https://stthomas.instructure.com/courses/57109)

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**Proposal for the project:**

**Name: Human Resources Management System**

“Human Resources Management System is a digital solution that combines several systems and processes to manage and optimize daily HR tasks and the overall HR goals of a given organization**”**

**Purpose:** The aim of this project is to create optimized and normalize skeleton of backend database. This backend database helps to create, manage, update and control data needed to run Human Resource department of any organization.

**Goal:** Employees are the backbone of any organization therefore employee data management plays a major role. The goal of the project is to design and create the database for the employee information such as Demographics, payrates, personal information, organizational relationship, accruals, time management, compensation and performance etc. It serves as a backend database of OLAP and OLTP application for Human Resources department. This database helps to improve data efficiency, integrity, security and availability as compared to paper records. Role based access control can be implemented for employee data using this system i.e payroll should have access to only pay related information of employee. This database can be integrated with any front end and persistence layer to create efficient, data driven Human Resource Information System.

**Benefits:**

* More streamlined processes for employee data management
* Reduced data errors
* Employee tracking makes easy due to 24/7 data availability based on role
* Better and more accurate HR analytics
* Reduce overhead and wastages in HR operation

Planning:

We will create a logical model of HR system with the entities and attributes for different HR sub operations. We will create 1: 1, 1: N and N:M relationships between entities and define minimum and maximum cardinality between relationships. Will create constraints among the entities. We will create a relational view and then generate the DDL statements to create the skeleton of the database. We will add test data and assign and implement role-based security. At the end we will create the queries for different HR operations i.e performance management, employee communication, compliance management etc.