**Employee Management System**

**CPSC 5090** Database systems 004

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**Initial Proposal**

The whole data of Employee Management system is present in four different files. Employees personal information like first\_name, last\_name, phone\_number, hire\_date, email, salary, department\_id, job\_id, commission\_pct,manager\_id are stored in the Employees table. Employees has a attribute called manager\_id self-referencing foreign key to this table. This data can be used to get all the details of an employee if employee\_id which is primary key is known for a particular person. Data for this table was present in csv format.

Next table or data we have in Employee Management system is Departments. It has attributes like department\_id, department\_name , manager\_id and location\_id. Department\_id should be the primary key and department\_name should not be null. Employees and Job\_history have a foreign key to this table. Data of Department is present in json format.

Jobs table holds the different names of job roles within the company. Employees table has a foreign key to this table. It has following attributes: job\_id, job\_title, min\_salary and max\_salary. Data is inserted into this table from json format in which data is initially stored. Job\_history table holds the history of jobs that employees have held in the past. All the above three tables have a foreign key to this table.

Employee database is a critical piece of information and it is being managed in silos by multiple teams within the company. The reason it’s important is that it’s a key point of contact between your business and your employees. By collecting all of this information from different teams in one place, it provides better insight and can help us to make better decisions in the business. One can make sure that they have employees with the right skills that help increase the revenue. An employee database is essential for organizations that are looking to streamline their human resources (HR) processes, as well as their business processes. This is because a well-designed, organized employee database will not only help you run your business smoothly, but it will also help you improve the performance and productivity as well.

In today's technologically advanced world, businesses need to have a better idea of their employees in order to retain the best and improve the weakest. The employee database may be a powerful tool that can assist you in meeting these goals. Whether one is interested in keeping a complete list of each employee or one simply need a quick and easy way to keep up with the team's performance, the employee database can help.

**Some of the benefits of an employee database are:**

**Better Employee Performance:** The employee database is a simple yet effective tool that can be used to measure and manage the performance of employees. With all of the personal information stored, it can be easy to find information about your employees, their strengths, and weaknesses. The information can then be used to help your employees improve their performance.

**Better Retention:** Another benefit of the employee database is that it can help you keep your employee's contact information. Even if your employees move or leave the company, the contact information can still be kept in the database. If you're interested in making sure that your company knows who is coming and going, the employee database is a perfect solution.

**Accessible Data:** One more advantage to the employee database is that it's accessible, which means you can access it from anywhere. That way, if you need to check up on your employee's work status or performance, you don't have to run to their desk, which can save a lot of time.

**Alternative ways to store the data**

**Alternative - 1**

An employee database isn't the only way to store employee information. If you don't want to create an employee database, you can also use a spreadsheet to store your employee information. A spreadsheet can also store employee information.

**Advantages:** Cost: Using a spreadsheet can be inexpensive, which is another advantage to using it. You don't need to spend money on adding data entry software to your computer or buying an employee database. Usability: The data is more easily accessible to everyone, which means that anyone can be able to view it. If you're looking to keep track of your employee's daily activities, it's easier to use a spreadsheet than an employee database.

**Disadvantages:** A spreadsheet isn't a good place to keep large amounts of data, such as a spreadsheet containing a list of your employees. The spreadsheet can also have issues managing change in information. A spreadsheet also can be difficult to maintain if you have a lot of data to store. You need to have a certain amount of skill to keep the data in a spreadsheet up to date.

**Alternative - 2**

Network model: This type of structure can be good if you're interested in tracking employee data throughout your company. If this data is spread out across different parts of the company, it could be difficult to keep an eye on it. This model is good for companies with numerous offices or campuses, since this data would be distributed among the various locations.

**Advantages:** The main advantage of the network model is the fact that it's a centralized structure. This means that there would be a central point of data, and any information related to that data would also be centralized. This makes it easy to access the information, and make sure that employees are following a certain strategy. Simple Setup, no setup cost, ease of use and easy to change.

**Disadvantages:** More Complex: Requires a lot of coordination Network model is more difficult to implement in a start-up.

**Activity Log**

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| --- | --- | --- |
| Name | Week | Activity |
| Deepsai Vemulapalli | Week 1 | Formed a group and arranged a meeting with team to discuss on the database system project. |
| Week 2 | Prepared initial Proposal |
| Manisai Bejjanki | Week 1 | Searching resources like internet, journal, csv files to find the datasets to work on. |
| Week 2 | Gathering all data sources |
| Saiprakash Reddy Appidi | Week 1 | Collecting required data to start the project and planning to work on project as a group. |
| Week 2 | Searched for the alternatives and its advantages and disadvantages. |