***Final Project in Database Systems Course***

Presented by: Gal Tessler and Or Messing from group 04.

1. **Foundations**
2. The program evaluates the company's profit or loss percentage in each component by letting its employees choose their work shift times based on their personal preference.
3. The database will hold the entire data of the program which will help its users to organize and manage things more easily. Instead of inserting the data manually each time the program runs**,** extracting and inserting information from the tables will increase the company's efficiency.
4. The users of the database are the company's managing positions. The department managers, for instance, can easily access the tables which represent their department and its employees.
5. The entities:

**Department-**

Each department has a list of **Roles** (One to many relationship), the entity's responsibility is to hold the data regarding the roles which belong to the specific department.

Each department also has its own unique **ID** (Primary key) and Preference.

The **changeable** attribute determines whether changing the departments qualities after the initiate is possible.

**Role-**

Each role has it's **DepID\* (Foreign Key)** since the relationship between Role and Department is one to many.

Each Role has it's **RoleID** which is a primary key to represent the Role.

Each Role has **Preference** which represents the hour offset that the Role demands.

Each Role has **HourDelta** which is the specific amount of time based on the Preference.

The **Changeable** attribute determines whether it's possible changing the role qualities after the first initate.

Each Role has **Synchable** which represents if working in this role needs to be done at the same time.

**Department-**

Each department has it's **DepID** which is a primary key to represent the Department.

Each Department has **Preference** which represents the hour offset that the Department demands.

Each Department has **HourDelta** which is the specific amount of time based on the Preference.

The **Changeable** attribute determines whether it's possible changing the Department qualities after the first initate.

The **Synchable** which represents if working in this Department needs to be done at the same time.

**Employee-**

Each employee has it's **EmpID** which is a primary key to represent the Employee.

Each Employee has **Preference** which represents the offset of time that the Employee wants to work in.

Each Employee has **HourDelta** which is the specific amount of time based on the Preference.

Each Employee has it's **RoleID\* (Foreign Key)** since the relationship between Employee and Role is one to many.

The company classifies each employee to one of the three following types, therefore an ISA connection is necessary.

**Base And Sales Employee** which gets fixed salary.

**Base Employee** which gets fixed salary and percentage from monthly sales.

**Hourly Employee** which gets paid per hour.

1. **DepartmentTable:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **DepID** | HourDelta | Changeable | Synchable | Preference |

**RoleTable:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **RoleID** | DepID\* | HourDelta | Changeable | Synchable | Preference |

**EmlpoyeeTable:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EmpID** | Preference | HourDelta | RoleID\* | Type |

**BaseSalesEmployeeTable:**

|  |  |  |
| --- | --- | --- |
| **EmpID\*** | Salary | SalesPercentage |

**BaseEmployeeTable:**

|  |  |
| --- | --- |
| **EmpID**\* | Salary |

**HourlyEmployees:**

|  |  |
| --- | --- |
| **EmpID**\* | Wage |