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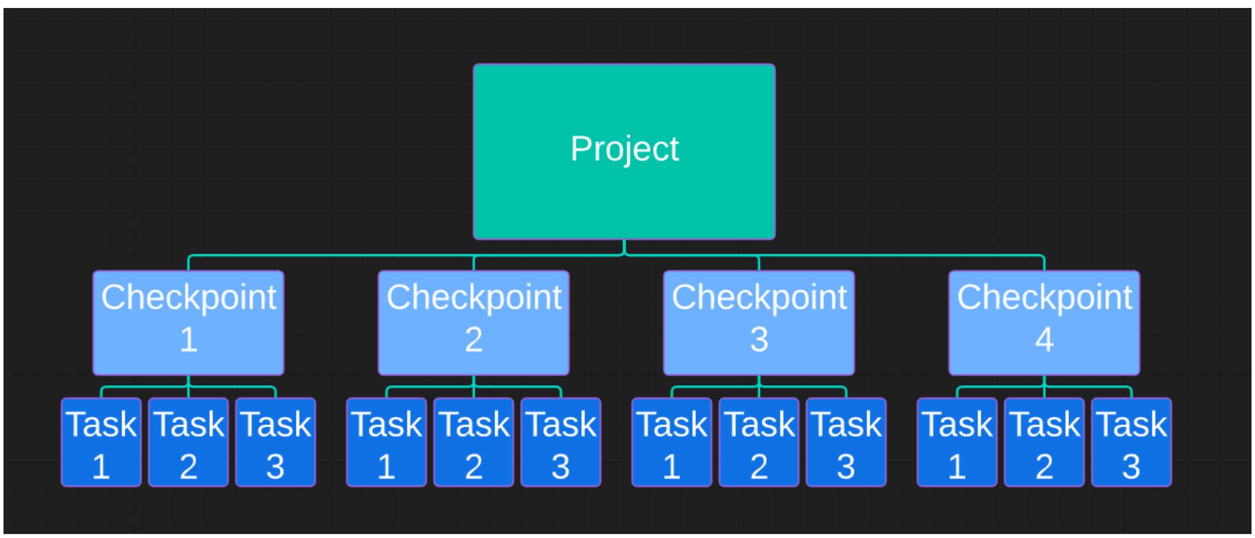
Project Management System document

Our company's database can manage projects across multiple departments, tracking project progress, associated expenses, and employees with their hours worked. Our database application allows managers to create, view, edit, and delete tasks, projects, employees, departments, and checkpoints. The application also can generate 3 reports and has 2 triggers with semantic constraints.

The project breakdown is as follows, each project can have multiple checkpoints, and each checkpoint can have multiple tasks.



Note: checkpoint status becomes complete when all tasks are complete

COMPANY has **DEPARTMENTs**
EMPLOYEEs work for **DEPARTMENTs**
DEPARTMENTs control **PROJECTs**
PROJECTs have **EXPENSEs**
PROJECTs have **CHECKPOINTs**
CHECKPOINTs are made of **TASKs**
EMPLOYEEs work on **TASKs**
PROJECTs have **TIME ENTRY SHEETs**

<u>Tasks</u>

Can add, modify, edit, and delete tasks
When updating a task you can change:
-Status (Incomplete/Complete)
-Assignee (Employee/Supervisor)
-Checkpoint the task belongs to
-Start Date
-Due Date
-Select a specific project to edit
-Select which Checkpoint the task will be added to

<u>Departments</u>

Can add, modify, edit, and delete departments
-Add or remove projects to a department
-Assign or change supervisor for departments

<u>Projects & Checkpoints</u>

Can add, modify, edit, and delete projects and checkpoints for each project

<u>When updating a project you can change:</u>

-Project title

-Description

-Budget

-Cost

-Status

-Start Date

-End Date

<u>When updating a checkpoint within a project you can change:</u>

-Checkpoint Description

-Checkpoint Name

<u>Timesheets</u>

Can add, modify, edit, and delete timesheet entries

Employees can log their own hours worked on a project including:

-Hours worked

-Date

-Project worked on

Employee

Can add, edit, and delete employees

When updating Employee Information you can change:

-Address

-Wage

-First Name

-Last Name

-Department ID

-Phone Number

-Email

-Title

-Start Date

-Supervisor ID

User roles

There are two user roles, employee and manager.

Username: employee
Password: employee
Employees can view their assigned tasks, view their employee information, view project and checkpoint information, log their own timesheet entries, and register for their own account if they already have an Employee ID assigned to them.

Username: admin
password: admin
Managers have unrestricted access to the site.

Triggers

-Trigger 1

Enforce checkpoint is complete if all the tasks are complete and incomplete if not all tasks are finished

-Trigger 2

Enforce the business rule that a project is considered to be over budget when its cost exceeds its budget.

Reports

-View unfinished tasks

Select a department to view its unfinished tasks, the report displays each task with, Task ID, Name, Description Assignee, Project, Start Date, and Due Date. Pulls data from the project and task tables

-Project Hour and Labor Costs

Select a project to view the total hours worked and total cost, the report also displays each timesheet entry with, timesheet ID, Employee Name, Hours Worked, Hourly Wage, and Associated Cost. The report pulls data from the timesheet and employee tables

-View Past Due Tasks

Select a department to view tasks that have passed their due date, the report also displays Task ID, Name, Description, Assignee Project, Days Overdue, and Due Date. The report pulls data from the project and task tables.