Douglas Collision Job Tracker PHASE III

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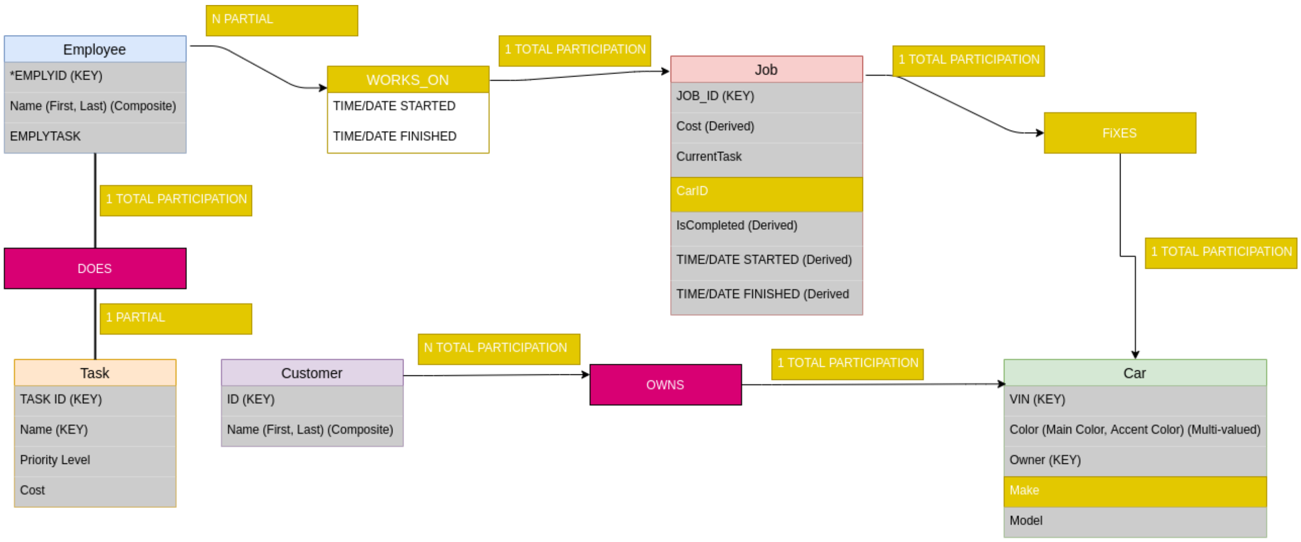
Problem Statement

The Douglas Collision Job tracker is based off a three-tier client/server architecture. It will consist of a client, web server, as well as a database server. The clients will be coded in normal CSS, JavaScript, and HTML, the web server will be coded in Node.JS and Express.Js and finally, the database server will be MySql and Bootstrap

The Client will consist of an interface that will help the user track what stage current jobs are at via a visual representation. This visualization will include specific attributes of a Job which are ID, currentTask, and start and finish times. Other things that may be displayed are the type of car that is a part of that job and description about the car There will be another menu option to see how which employees are working on certain jobs at the moment. Finally, there will be a part where all info of a specific job can be printed off into nice format for the customer so that the customer has a receipt and full details of what happened to their car.

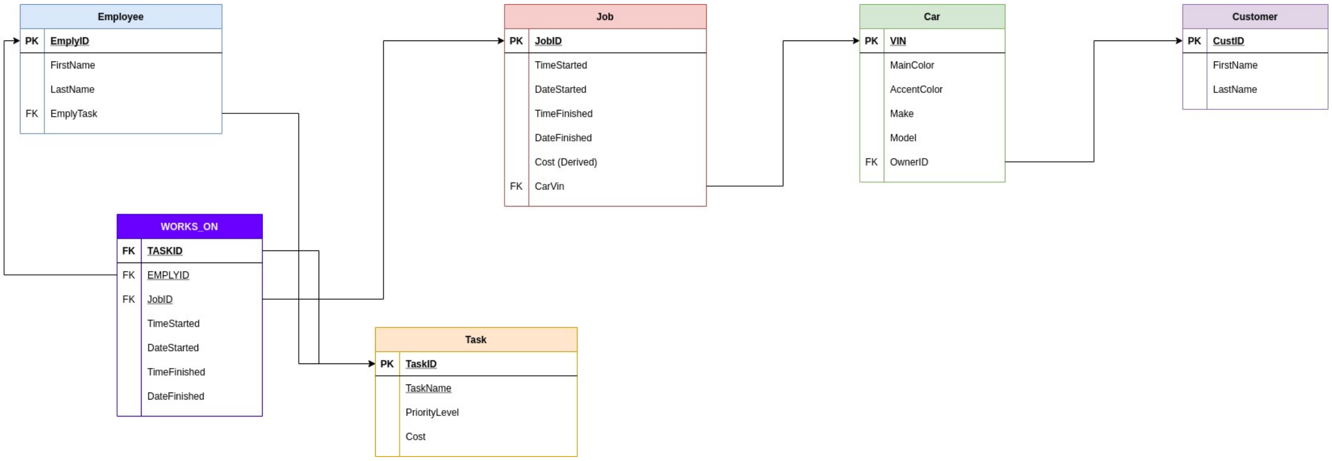
Conceptual Design



Within the job tracker database there are entities needed for employees, customers, jobs, tasks, and cars. Each employee will consist of a employee id, their name and what task the employee does. The Job entity will consist of a job id, a derived cost, current task, the car id that it is working on, a completed attribute, and finally a start and finished date and time attribute. A customer will only need the name and a id. A task is going to need a task id, name, priority Level and a cost. Finally, a Car needs a Vin number, Color, Owner, make, and model.

Any employee can work on any job that needs their specific task but is required to have a task assigned. A job is not considered a job without an employee or car. A job only works on one with one employee and task. A customer must have a car to work on and a car must have a owner/customer to be returned too.

Logical Design



Employee	
PK	EmplyID
	FirstName
	LastName
FK	EmplyTask

Job	
PK	JobID
	TimeStarted
	DateStarted
	TimeFinished
	DateFinished
	Cost (Derived)
FK	CarVin

Car	
PK	VIN
	MainColor
	AccentColor
	Make
	Model
FK	OwnerID

Customer	
PK	CustID
	FirstName
	LastName

WORKS_ON	
FK	TASKID
FK	EMPLYID
FK	JobID
	TimeStarted
	DateStarted
	TimeFinished
	DateFinished

Task	
PK	TaskID
	TaskName
	PriorityLevel
	Cost

Summary of Data Types

Table	Attribute	Type	Constraint	Meaning
Employee	EmplyID	CHAR(80)	Primary Key	
Employee	FirstName	CHAR(80)	NOT NULL	
Employee	LastName	CHAR(80)	NOT NULL	
Employee	EmplyTask	CHAR(80)	Foreign Key	
Job	JobID	CHAR(80)	Primary Key	
Job	IsCompleted	BOOL	DEFAULT(FALSE /0)	
Job	TimeStarted	TIME		
Job	DateStarted	DATE		
Job	TimeFinished	TIME		
Job	DateFinished	DATE		
Job	CarVin	CHAR(17)	Foreign Key	
Task	TaskID	Char(80)	Primary Key	
Task	PriorityLevel	INTEGER	NOT NULL	Range from (0-INF). Allows certain tasks to go ahead of others in production line.
Task	Cost	DOUBLE(5, 2)	NOT NULL	
Task	TaskName	Char(80)	NOT NULL UNIQUE	
Car	VIN	Char(17)	Primary Key	
Car	MainColor	Char(30)	NOT NULL	
Car	AccentColor	Char(30)	DEFAULT(NONE)	
Car	Make	Char(20)	NOT NULL	
Car	MODEL	Char(20)	NOT NULL	
Car	OwnerID	Char(80)	Foreign Key	
Customer	CustID	Char(80)	Primary Key	
Customer	FirstName	Char(80)	NOT NULL	
Customer	LastName	Char(80)	NOT NULL	
WORKS_ON	JobID	Char(80)	Primary Key Foreign Key	
WORKS_ON	EMPLYID	Char(80)	Foreign Key	
WORKS_ON	TimeStarted	TIME		
WORKS_ON	TimeFinished	TIME		
WORKS_ON	DateStarted	Date		
WORKS_ON	DateFinished	Date		

Changes to Types

CustomerID, JobID, EmployeeID All are char(13) for all characters. EMPLYID is default null. All TimeStarted, TimeFinished, DateStarted, and DateFinished have all become combined in their respective tables to DateTimeStarted and DateTimeEnded with a datatype of DateTime. DateTimeStarted is default current_timestamp while DateTimeEnded is default null. JobID is not a primary key of Works_On; TaskID is added into Works_On and is a foreign key to TaskID in table Task.

Installation Instructions

The preferred operating system to use is ubuntu.

Ubuntu Installation Guide

1. sudo apt-get update && sudo apt-get update -y
2. sudo apt-get install nodejs npm mysql-server -y
3. open my-sql and setup credentials and load sql file
4. Open Project folder and change credentials to your sql server settings in sqlConnection.js located in “sql” folder
5. After that, open a terminal window in the project folder and then type “npm start”
6. Go to browser and type in localhost:3000 and you are ready

Dependencies

1. Nodejs
2. NPM
3. MySQL

User Manual

1. Employee Menu

To Add Employee press button and type in First and Last name Along with a Task
To Delete Employee press button and Select Employee from Drop menu and press delete
To update Employee press button and Select Employee and Choose Task and press Update

2. Task Menu

To Add Task, press Add Task button and type in Task Name and Cost and Priority Level and Cost.

To update, press Update Task button and choose the Task from drop down menu and change either the cost, priority level or both and hit the update button

To Delete Task, Press Delete Task button and choose the Task from the drop down menu and press the Delete button

3. Job Menu

To Add Job, Press Add Job button Enter in All information about the Car. Select if the owner of the car is an existing owner or a new owner. From there, either choose the owner from the drop down or enter in the owners credentials

To Update Job. Press the Update Job button and select the job to update with the drop down menu. Then Select a task that you want to change the job to or hit complete button if job is complete.

To Delete Job. Hit the delete job button and then chose a Job from the drop down menu. Jobs that are complete will only be presented here.

4. View Jobs

Hit the View Jobs button to see all jobs currently in the system. If a job is complete, you can select the print information button to get a printout of the job information

If a task from a job is missing an Employee. Select the drop down near the employee name and choose an Employee and select update.

5. View Owners and Employees

Pressing theses buttons will give you information about all the Employees and The Owners in the systems. The Owners page will show all their cars and what jobs they are in. The Employee view will give you information about the task the employee is in and what jobs he is currently working on.