

Goal:

My goal is to solve the problem faced by freelance developers in managing and organizing different elements of their work. This includes various customers, numerous projects, associated tasks, and related invoices. Without a centralized system, maintaining all these aspects can be time-consuming, prone to error, and generally inefficient, potentially impeding a freelancer's productivity and effectiveness.

Requirements Document

The freelance developers require a solution that allows them to:

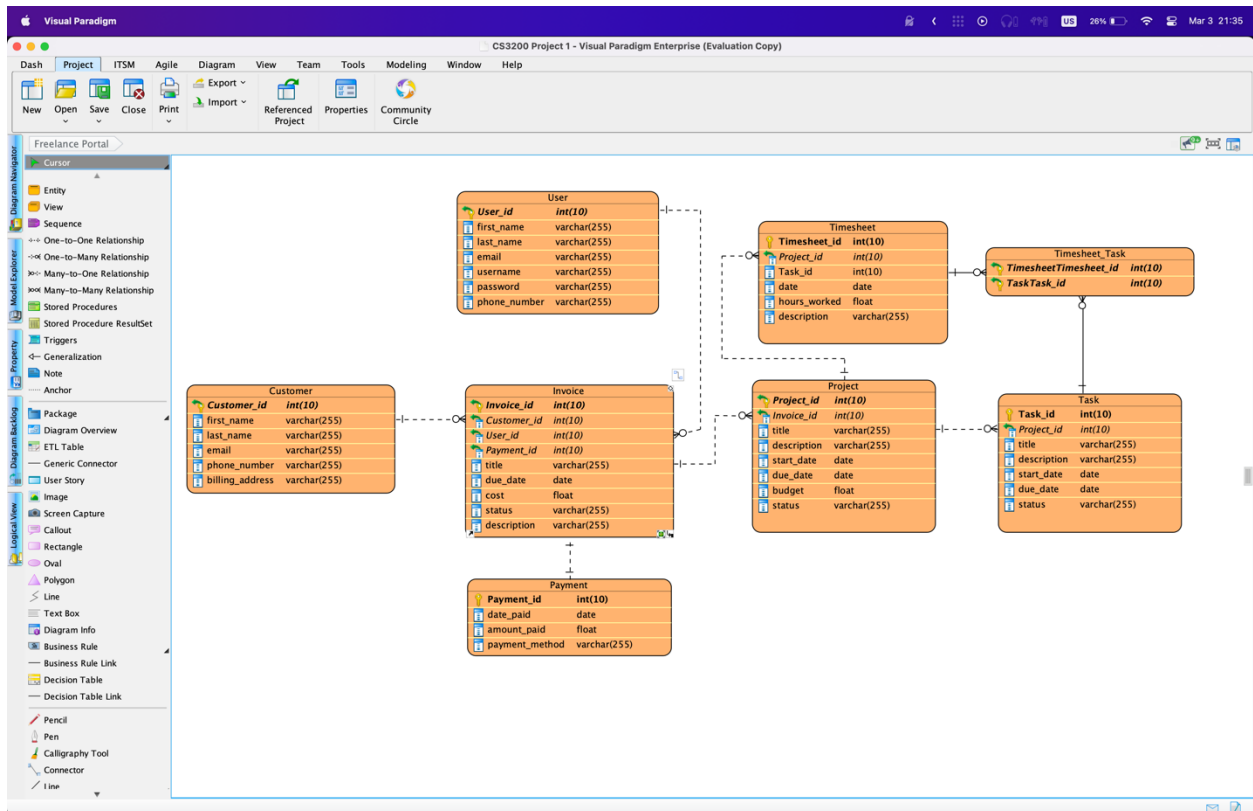
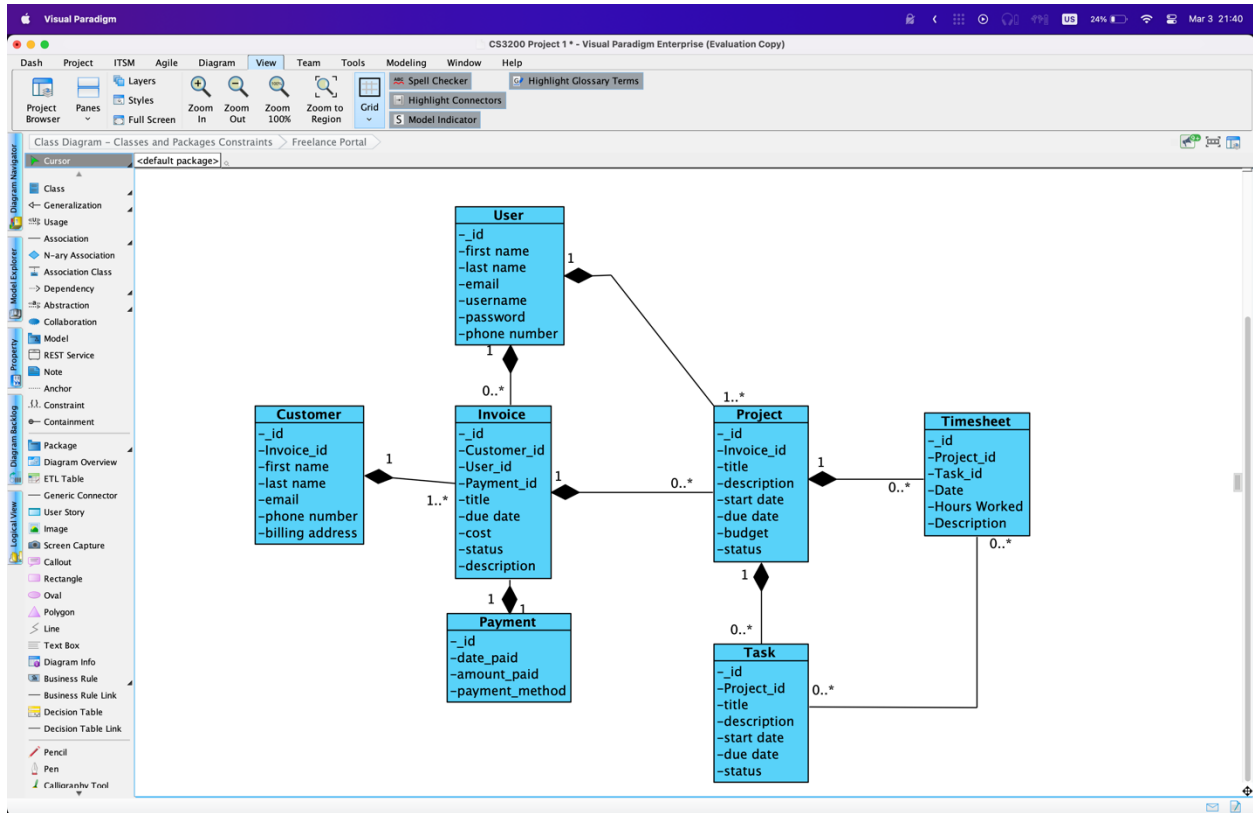
1. Register and manage their profile with basic details (Full_Name, Email, Password, Phone_Number, Username).
2. Manage a list of customers, storing information such as Name, Contact_Email, and Billing_Address.
3. Generate and manage invoices tied to a customer, tracking critical parameters like Date_Issued, Due_Date, Total_Amount, and Status.
4. Create and manage projects, inclusive of details like Title, Brief, Start_Date, End_Date, Budget, and Status, each linked to a specific customer.
5. Assign and track tasks within projects with detailed information like Title, Description, Start_Date, Due_Date, and Status.

Nouns Identified:

User, Full_Name, Email, Password, Phone_Number, Username, Customer, Customer ID, Name, Contact_Email, Billing_Address, Invoice, Invoice_ID, Date_Issued, Due_Date, Total_Amount, Status, Project, Project_ID, Title, Brief, Start_Date, End_Date, Budget, Task, Task_ID, Description.

Actions Identified:

Register, Manage Profile, Manage Customer List, Store Information, Generate Invoice, Track Invoice, Create Project, Manage Project, Assign Task, Track Task, Update Status.



Definition of the Relational Schema

Users(**User_id**, first_name, last_name, email, username, password, phone_number)

Customers(**Customer_id**, first_name, last_name, contact_email, billing_address, phone_number)

Invoices(**Invoice_id**, *Customer_id*, *User_id*, *Payment_id*, title, description, date_issued, due_date, cost, status)

Payments(**Payment_id**, date_paid, amount_paid, payment_method)

Projects(**Project_id**, *Invoice_id*, title, description, start_date, end_date, budget, status)

Tasks(**Task_id**, *Project_id*, title, description, start_date, due_date, status)

Timesheets(**Timesheet_id**, *Project_id*, *Task_id*, date, hours_worked, description)

Timesheet_Task(**Timesheet_id**, **Task_id**)

BOLD = Primary Key

Italicized = Foreign Key