Craig Barkley  
Project: App/password/equipment/api

**Overall Design:**

Web Café is a business that runs a fully stocked coffee bar. While the trained barista who is also a developer takes your coffee and web site or internet product order. Patrons are considered customers until they become technology clients. Once they are a client they will have more access to the Web Café resources. Alongside of the Web Café is a decision support system that manages technology projects and the assigned technicians. Edit the active projects to add information and see images of hardware or software requirements. View cash flow summaries based on a percentage labor rate. The program intended for open studios and businesses managing multiple projects with various technologists. We need to be able to track what projects are being worked on and who is managing them and how much they will be making on the project and how much the business will make. This should be able to be designed as a management tool that other developers could purchase to manage their own employees and clients’ projects. This program should be able to create new projects, update existing projects, and retrieve projects for viewing and deleting. Executive managers will utilize the system to track ongoing projects and view their descriptions. There should be a cash flow analysis function, where a manager can add projects to a list to see various cash flow outcomes. The tool should display what technicians are assigned to what projects. It should also calculate how much technician payout will be and how much Tekstudios or another business would make on the project. The Café should also be able to sell coffee with out having to sell technology

Requirements.

1. List of Technicians

2. List of Projects per Technicians

3. Each vendor should have a default commission rate.

4. Commissions can change.

5. Forecast how much to pay the technicians

6. Track how much TekStudios will make.

7. Create, Read, Update, and View Projects.

The principle Use Cases:

Browse a List of projects.

Choose a project to learn about.

Read a project description.

Go to the next project description.

Edit a project.

Add a new project.

Three Tier Data Driven Application

ProjectPresentationViews -for interacting with the user.  
 ProjectLogic -to provide services and data to the views.  
 ProjectDataAccessor -to handle all the file read and write operations.

The solution will be in a project folder (TekStudiosPM) to hold those classes as custom data types.  
  
TekStudios Project Entity Models

Within the solution, the project references will work like this:

Project Presentation Views

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Project Control Logic – – – –> Project Entity Models

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Project File Data Access

* The presentation layer accepts requests from the user and displays results, consequently the view layer has a reference to the control logic layer to request services.
* The control logic has a reference to the data access layer to request any data from file storage.
* All three layers have a reference to the data models.
  + The data access layer build objects from data model classes, and to writes out to files.
  + The control logic accepts and/or filters data objects before passing them to the views.
  + The views present data from those objects to the user. Data will be displayed in text boxes, labels and select an image to display.

Project Files

* projectname.png - one image file for each project.
* projectdescription.txt - one text file for each project.
* projectlist.csv - contains the project list with, name, Project Type, Location of Install, with one line per project.

**Project Entity Models**

Project

+string Name  
+string ProjectType  
+string installLocation  
+string DescriptionFileName  
+string ImageFileName

Project Description

+string Title  
+string DescriptionText

**Project Presentation View classes with their I/O requirements:**

Project List Form

Control for displaying a project list.  
Button to view description.  
Button to edit project.  
Button to add a project.

Project Description Form

Control to display project description.  
 Control to display Hardware or software image.  
 Button to return to project list view.

Project Add Edit Form

Controls to display project data items.  
Button to choose project image file.  
Button to save project.  
Button to cancel project.

Project Add and Calculate Form

Controls to display project lists.  
 Button to add a project to a completed list.  
 Button to Calculate selected projects for cash flow forecasting.  
 Button to reset the projects from completed back to the active projects list.

**Project Control Logic classes with their public members:**

Project Manager  
+ List <Project> Project List  
+ ProjectDescription Fetch ProjectDescription (int project Index)  
+ List< Project > EditProject (Project project, ProjectDescription projectDescription, int projectIndex)  
+ List< Project > AddProject (Project project, ProjectDescription projectDescription)  
+ProjectManager() // constructor to populate projectList

**Project File Data Access classes with their public members:**  
Project Data Accessor  
+ List<Project> RetrieveProjectList()  
+ ProjectDescription RetrieveProjectDescription (Project project)  
+ bool UpdateProject (Project project, ProjectDescription projectDescription, List<Project> projectList)  
+ bool AddProject (Project project, ProjectDescription projectDescription)

Code Comments

All code that was written for this project includes comments sections within each file. Each class or form contains detailed description of what is going on and how it relates to the solution as a whole. After all the code was commented, the code was tested, cleaned up and debugged. This file and comments were updated.