Coast Capital Contractor Records Database System - Requirements

The Terminal

September 30, 2017

Contents

1 Revision History

Version	Description	Date
1.0.0	Initial set of requirements	2017/07/30

2 Stakeholders

1. **Coast Capital Savings**
2. **Jerry Jim**
3. **Anna Scholtz**
4. **The Terminal**
   (a) Vaastav Anand
   (b) Anushka Agarwal
   (c) Maia Mahta Kamyab
   (d) Shrey Swades Nayak
   (e) Stephen van Son

3 Scope

The project scope entails building a web application to simplify data analysis and management of contractor data for Coast Capital Savings. Hiring managers are able to add and edit contracts, whereas supervisors to the hiring managers (i.e. those with admin privileges) can additionally change user permissions and manage other users. Functionalities to visualize trending data reports, filter through the contractor database, as well as automated maintenance of FX table is also within scope of the project.

4 Project Description

The aim of our project is to simplify the system Coast Capital uses for capturing contractor data. Their current system requires many hours of manual data entry and complex spreadsheet manipulation, and our aim is to provide a better method of visualization, management and maintenance. The system our team (The Terminal) will be building will be an online web application designed for ease of use and powerful data analysis. The application aims to make it a straightforward process to add, edit, and visualize contractor data. Our application will be easy to learn for new users such that there is not a long ramp-up period for using it in comparison to using excel spreadsheets. Furthermore, since our application is an online web tool, all the contractor data within it will always be the most up to date data available so no two users are viewing different data.

5 Impacted Systems

1. We will be impacting the existing system that maintains the contractor records and generates expense reports based on that as our system will be completely replacing that system.

2. We might also be impacting the current HR system as all the existing HR records might get migrated to our system in the future if the contractor system works well for Coast Capital.

3. Our system is also likely to have an impact on Coast Capitals budget for servers. A long term cost will be added in hosting and maintaining this system and the database. Our plan is to have it be deployed on AWS and if Coast Capital continues with that then they would have some costs associated with this after the first free year.

6 Impacted Groups and Individuals

1. The person who is currently in charge of maintaining contractor records and generating reports wont have to manually add and edit the data and neither will he have to generate reports manually.

2. The group of Hiring Managers will now be able to easily view and manipulate all contractor records.

3. the group of Reporting Managers will be able to view contractor records who work directly under them and generate reports based on specific projects.

4. Training other employees to generate reports and maintain the records will now be easier as the system will be user friendly.

7 Assumptions

1. Our systems reporting mechanism should be very easily usable by someone who has never ever used Pivot Tables. Thus our reporting mechanism should be easy to use and very user friendly.

2. The process of creating and modifying contractor records should be very easy to use and understand.

3. No one except the admin should be able to delete contractor records

4. There should be a way of recovering the data if something happens to the database.

5. The data that will be used by our system is very sensitive data so appropriate security measures should be in place.

8 Dependencies

1. The main dependency of our project is on Amazon Web Services. If any of the Amazon hosting services we are using experience an outage our web application will not function properly or will not be accessible

2. Since our team is made up of full-time university students we will not be able to work full-time on this project so the project is also dependent on our time commitment to it.

9 Functional Requirements

9.1 Requirement Traceability Matrix

REQ No.	Reference	Requirement Description	Type	Priority	MVP	Related Test Case	Test Status	Comments
1.0.0	Use Case 1	Adding or editing contractors	Functional	1	Y	TBD	TBD	
1.0.0	Use Case 2	Filtering Data to extract information from the larger database	Functional	1	Y	TBD	TBD	
1.0.0	Use Case 3	Generating graphs for trend report analysis	Functional	2	Y	TBD	TBD	
1.0.0	Use Case 4	Managing user permissions or adding new users for the system	Functional	2	Y	TBD	TBD	
1.0.0	Use Case 5	Adding or editing skills table	Functional	2	Y	TBD	TBD	
1.0.0	Use Case 6	Maintaining HR Pay Equivalent table	Functional	2	Y	TBD	TBD	
1.0.0	Use Case 7	Maintaining HR Role table	Functional	2	Y	TBD	TBD	
1.0.0	Use Case 8	Maintain a list of Hiring Managers	Functional	2	Y	TBD	TBD	
1.0.0	NA	Support UI on IE 11	Non Functional	1	Y	TBD	TBD	
1.0.0	NA	Support UI on Firefox	Non Functional	3	Y	TBD	TBD	

9.2 Use Cases Diagram

Use Case 1: Add A Contractor For A New Project	
Description	A hiring manager hires a new contractor for a project and needs to record it in the contractor management system. The hiring manager creates a new Contractor and Project in the system representing the newly hired contractor and newly added engagement contract.
Preconditions	The hiring manager is logged into the contractor management system.
Postconditions	• A new contractor is created in the system with the supplied details and the contractor's status is set to active. • A new engagement contract is created in the system. • The newly added contractor is associated with the newly added engagement contract.
Main Scenario	1. Hiring manager selects "Add Contractor" 2. Application displays an "Add Contractor" form a. Tombstone data fields b. Skills category option fields c. Engagement contract subform 3. Hiring manager fills out tombstone data fields (first name, surname, agency source, status, rehire) 4. Hiring manager fills out skills category free format dropdowns with information relating to contractors skills 5. Hiring manager fills out engagement contract subform with details of contractor's engagement contract

Alternate Scenarios	• (5) A contractor is engaged in multiple engagement contracts.
	  • The hiring manager can select an "Add Engagement Contract" button to display another engagement contract subform within the "Add Contractor" page.
	• (3,4,5) The hiring manager does not fill in some or all of the required fields.
	  • The application displays an error stating which fields still need to be filled in.

Use Case 2: Filter Data	
Description	An HM wants to extract information from the larger table to analyse specifics.

Primary Actor	Hiring Manager (HM)
Preconditions	The HM must be logged into the system.
Postconditions	The table shown in the Data Filter tab has been changed according to the user's specifications.
Main Scenario	1) HM selects "Data Filter" tab. 2) Current page displays a table with an "Edit Table" option. 3) HM selects "Edit Table". 4) A pop-up appears with four ways to edit the table. (i) Filter (ii) Values (iii) Rows (iv) Columns HM selects these values according to the information they need to extract. Select "Done" and view table.
Alternate Scenarios	• (5) If the HM does not select any values the page will show the previous table that was loaded before filtering.

Use Case 3: Generating Graphs/Reports	
Description	A user wants to view trends and prepare for future plans by generating reports and graphs from the contractor's data.
Primary Actor	Hiring Managers (HM) - i.e. the system's users
Preconditions	The user has to be logged in and have permissions to view the data and generate reports.
Postconditions	The desired graph or report is generated for the user.
Main Scenario	1. User selects "Generate Reports & Graphs" tab 2. User chooses which graph or report to generate from a menu 3. The graph is generated
Alternate Scenarios	• (4) User chooses to filter the data in the graph • The graph is regenerated based on the filters

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Use Case 4: User Management for System Admin	
Description	An admin user can add or remove non-admin users from the system so that they can maintain contractor records and perform data visualization.
Primary Actor	System Admin
Preconditions	An administrator is logged into the system.
Postconditions	A non-admin user is edited, added to, or deleted from the system.
Main Scenario	1. Admin user selects “Administrator Panel” 2. Application displays the “Administrator Panel” screen 3. Admin selects “Add User” button 4. Application displays “Username” and “Password” fields 5. Admin fills in “Username” and “Password” fields with desired values 6. Admin selects “Save User” button

Alternate Scenarios	• (3,4,5,6) Administrator wants to delete a user
	  ○ Admin selects “View Current Users”
	  ○ Admin selects checkboxes beside users they wish to delete
	  ○ Admin selects “Delete Users” button
	  ○ Prompt displays asking if the admin is sure they want to delete those users
	  ○ Admin selects “Yes” or “No” buttons
	• (3,4,5,6) Administrator wants to edit a user’s information
	  ○ Admin selects “View Current Users”
	  ○ Admin selects the user they wish to edit
	  ○ Interface shows user’s information
	  ○ Admin clicks on “Edit User”
	  ○ User information becomes editable and admin can edit the information as needed
	  ○ Admin selects “Save” to save the new edits or “Cancel” to go back to viewing the user

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Use Case 5: Maintaining Skills Tables for System Admin	
Description	An admin user can add, remove and edit a predefined list of skills to be associated with contractors.
Primary Actor	System Admin.
Preconditions	An administrator is logged into the system.

Postconditions	A skill is added, removed, or edited in the database.
Main Scenario	1. Admin user selects “Administrator Panel”. 2. Application displays the “Administrator Panel” screen. 3. Admin chooses the “Skills” table. 4. Admin chooses the “Add Skill” option. 5. Admin fills in the form and clicks “Save” to add the new skill or “Cancel” to return to view the skills table.

Alternate Scenarios	• (4,5) Admin would like to edit a skill.
	  ○ Admin chooses the skill they want to edit.
	  ○ Admin can edit the information of the skill, and hit “Save” to update the skill or “Cancel” to return to the table.
	• (4,5) Admin would like to delete a skill.
	  ○ Admin chooses the skill(s) they’d like to delete.
	  ○ Admin chooses the “Delete” option.
	  ○ A pop-up prompts and asks for confirmation on whether or not admin is sure they want to delete the rows.
	  ○ Admin confirms to delete the rows or clicks “Cancel” to return to the table.

Use Case 6: Maintaining HR Pay Equivalent Table for System Admin	
Description	An admin user can add, remove, and edit a predefined list of tiers of pay equivalences associated with contractors.
Primary Actor	System Admin.
Preconditions	An administrator is logged into the system.
Postconditions	A tier is added, deleted, or edited in the database.
Main Scenario	1. Admin user selects “Administrator Panel”. 2. Application displays the “Administrator Panel” screen. 3. Admin chooses the “HR Pay Equivalent” table. 4. Admin chooses the “Add Tier” option. 5. Admin fills in the form and clicks “Save” to add the new tier or “Cancel” to return to view the table.

Alternate Scenarios	(4,5) Admin would like to edit a tier.
	  ○ Admin chooses the tier they want to edit.
	  ○ Admin can edit the information of the tier, and hit “Save” to update the tier or “Cancel” to return to the table.
	(4,5) Admin would like to delete a tier.

	○ Admin chooses the tier(s) they'd like to delete. ○ Admin chooses the "Delete" option. ○ A pop-up prompts and asks for confirmation on whether or not admin is sure they want to delete the rows. ○ Admin confirms to delete the rows or clicks "Cancel" to return to the table.

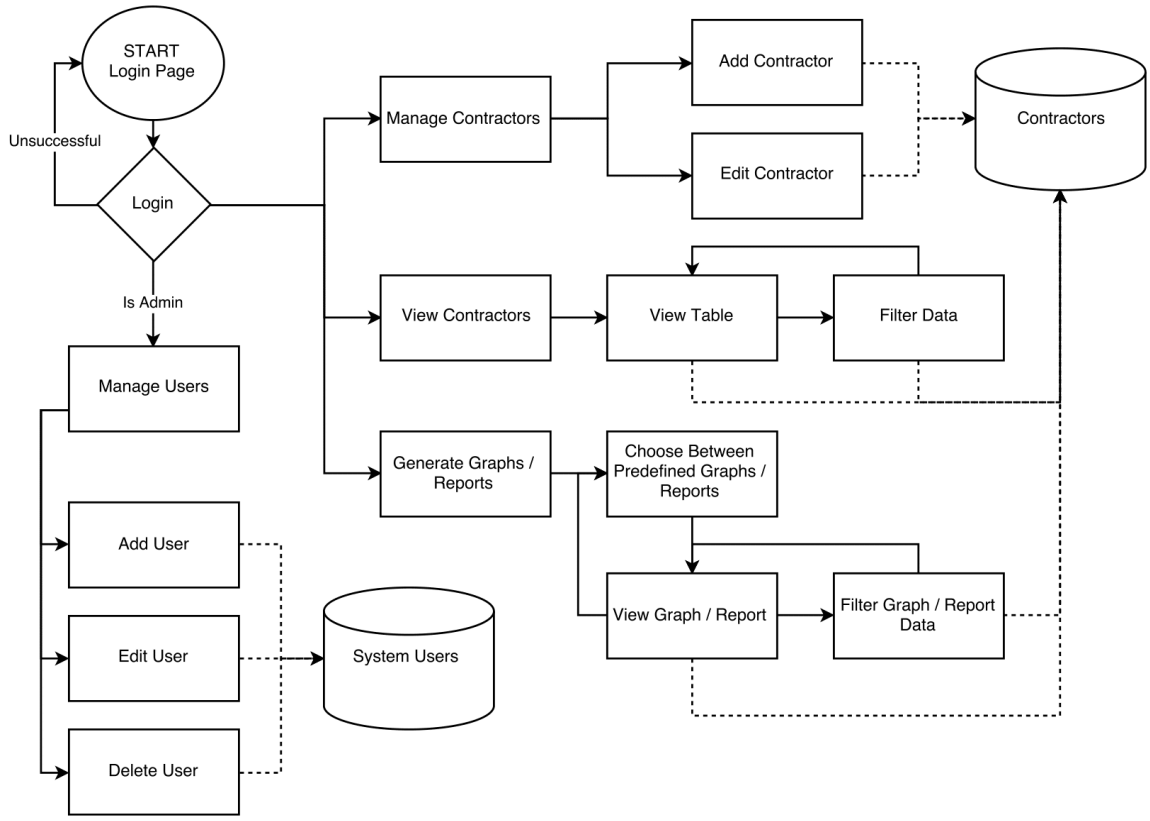
Use Case 7: Maintaining HR Role Table for System Admin	
Description	An admin user can add, remove, and edit a predefined list of HR roles associated with the contractors.
Primary Actor	System Admin.
Preconditions	An administrator is logged into the system.
Postconditions	A role is added, deleted, or edited in the database.
Main Scenario	1. Admin user selects "Administrator Panel". 2. Application displays the "Administrator Panel" screen. 3. Admin chooses the "HR Role" table. 4. Admin chooses the "Add Role" option. 5. Admin fills in the form and clicks "Save" to add the new role or "Cancel" to return to view the table.
Alternate Scenarios	(4,5) Admin would like to edit a role. ○ Admin chooses the role they want to edit. ○ Admin can edit the information of the role, and hit "Save" to update the skill or "Cancel" to return to the table. (4,5) Admin would like to delete a role. ○ Admin chooses the role(s) they'd like to delete. ○ Admin chooses the "Delete" option. ○ A pop-up prompts and asks for confirmation on whether or not admin is sure they want to delete the rows. ○ Admin confirms to delete the rows or clicks "Cancel" to return to the table.

Use Case 8: Maintaining a list of Hiring Managers for System Admin	
Description	An admin user can add, remove and edit hiring managers.

Primary Actor	System Admin.
Preconditions	An administrator is logged into the system.
Postconditions	A hiring manager is added, removed, or edited in the database.
Main Scenario	1. Admin user selects “Administrator Panel”. 2. Application displays the “Administrator Panel” screen. 3. Admin chooses “Hiring Managers”. 4. Admin chooses the “Add Hiring Manager” option. 5. Admin fills in the form and clicks “Save” to add the new hiring manager or “Cancel” to return to view the list of hiring managers.

Alternate Scenarios	• (4,5) Admin would like to edit a hiring manager.
	  ○ Admin chooses the hiring they want to edit
	  ○ Admin can edit the information of the hiring manager, and hit “Save” to update the hiring manager or “Cancel” to return to the list.
	• (4,5) Admin would like to delete a hiring manager.
	  ○ Admin chooses the hiring manager(s) they’d like to delete.
	  ○ Admin chooses the “Delete” option.
	  ○ A pop-up prompts and asks for confirmation on whether or not admin is sure they want to delete the hiring managers.
	  ○ Admin confirms to delete the rows or clicks “Cancel” to return to the list.

9.3 Activity Flow



10 Non-Functional Requirements

10.1 Backup Needs

1. **Recoverability:** Database needs to be backed up regularly. We recommend doing either a full backup every 24 hours or a full backup every 168 hours with differentials every 24 hours. This is done so that in case if the admin indeed accidentally deletes all records or some contractor record by mistake.
2. **Data Retention:** The data in the system is to be kept for all time, with functionality provided to toggle between inactive and active jobs.

10.2 Security Needs

1. **Privacy:** Sensitive information requires protection. A safety feature prompted after several minutes (2 minutes) of inactivity will result in being logged off the system.
2. **Accessibility:** With multiple types of users, the system must successfully hide privileged information from those who are not authorized, and also prevent lower-level users from making changes that can grant them upper-level access.

10.3 Capacity Needs

1. **Capability:** The system needs to be able to add and edit contractor information and visualize trending reports. The admin must be able to edit other user permissions and

information.

2. **Performance:** The system must be capable of handling a minimum expected volume of information.

   (a) The system should be able to retrieve and display data in a reasonable amount of time. This is solely dependent on how much data is being transferred based on the query that was made.

   (b) The system is expected to handle around 50 active contractor records per month.

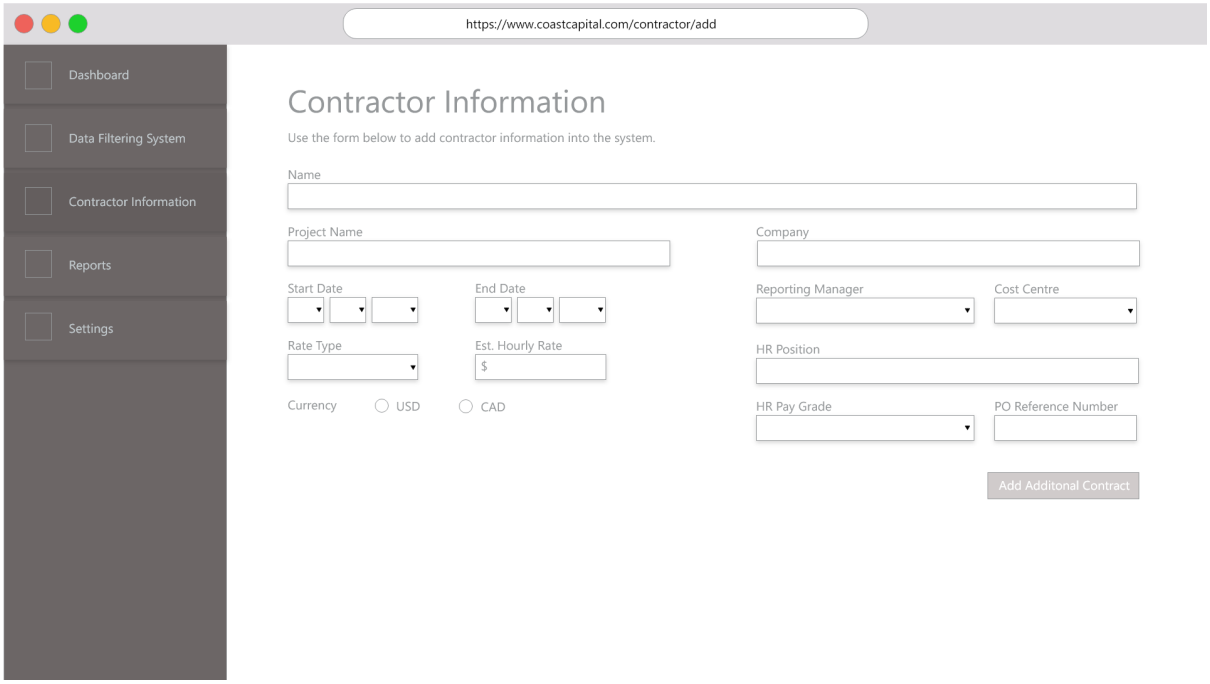
10.4 Costs

1. As mentioned before, using AWS will add an extra cost for hosting the system.

2. Additionally maintaining the database will require manpower which will have some additional costs associated with it.

11 Appendix

11.1 Screen Mockup



The wireframe shows how a user will be able to add a contractor into the database. A simple form format provides good readability, and space is provided to add details if the contractor is assigned to multiple projects.