Coast Capital Savings Contractor Dashboard

Terms of Reference

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Version 0.1

Document Information

Revision History

Date	Version	Status	Prepared by	Comments

Document Control

Role	Name	E-mail	Telephone

Approval

Role	Name	Signature	Sign-off Date

Post Approval Distribution

Role	Name

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Project Information

Project Overview

Coast Capital Savings employs a lot of contractors to augment staffing levels when project demands are high. These contractors can be sourced from various avenues including agencies, partners and individuals directly. Currently these contractors are not captured in the HR records directly and are managed manually in spreadsheets. There should be a newer, more efficient system in place instead that can maintain the history in order to help trend usage and manage future needs.

Goals and Objectives

The goal of this project is to develop a better system for Coast Capital Savings that eases the management of contractor information, including: maintaining the history of the contractors, automating the management of contractor employment records, visualizing trends, generating on-demand reports to aid the administrative and decision making process, and managing future needs of the company.

Benefits

The benefits of this project will be as follows:

- Currently, Coast Capital Savings do not have a system in place to keep track of contractor records and generate trend reports regarding contractors. All of this is done manually via spreadsheets. After the completion of this project, there would be no need to maintain manual records and thus it will save the company's resources.
- This project will also aid in making the administrative process quicker with its ability to generate informative and visually appealing reports.
- This project will also give our team experience with a real life project.

Sustainability Impacts

There is no direct impact from sustainability perspective. With the development and deployment of this system will have absolutely no impact on the environment.

Licensing

The system will be available under the BSD license (3-clause license).

Project Deliverables

Minimum Viable Product

A user-authenticated browser based system that allows users to add/change/delete contractor records as well as generate and view reports in order to aid administrative processing.

Technical Requirements

- The project must be done in Javascript, Java or C# development language. Our choice is **Javascript** and **Java.**
- The database used for storing the contractor data must be a MySQL server as Coast Capital has a SQL Server environment.
- The system must be supported on IE11 and Firefox as these are the 2 main browsers used at Coast Capital with IE11 being the browser standard.

Functional Requirements

- The system must have some user authentication in the form of userid/password combination as the contractor data is very sensitive and is only available to selective members of the management teams.
  - The password must require complex validation including but not limited to uppercase/lowercase/numeric/special characters.
- Admin capability to add/delete/reset user permissions in order to access the records.
- System should maintain the following:
  - Contractor Records
  - Skills table
  - FX(foreign/currency exchange) table. Currently only USD/CAD are the supported currencies.
  - HR pay equivalent table
  - HR role table
  - List of hiring manager(s)
- System should be able to generate the following reports
  - Number of active contractors filtered on a future (including today's) date
    - List relevant contractor tombstone information and relevant engagement information
  - Contractor Costs. Filters for the report include date range, Project Name, Cost centre
    - List relevant contractor tombstone information and relevant engagement information
  - Trending reports on the number of contractors per month. Filter of report by date range, agency source, cost centre and hiring manager.
    - These reports should be illustrated in tables and bar graphs.
  - Trending reports on the Cost of Contractors per month. Filter of report by date range, agency source, cost centre and hiring manager.
- All generated reports must be in CAD with proper conversion from USD if necessary.

Non-functional Requirements

- User should be able to login to the system easily within 5 seconds.
- Modified data in the database should be updated for all relevant users accessing it within a short period of time.
- Trend reports and data visualization should be readable, appealing and informative.
- The system should be able to work efficiently with multiple users accessing it at one time.

Bonus Features

- System to be segmented by Cost Center. Reports would be limited to the data available to be seen for the cost centre administrator. This would require a super-admin that will have access to all the data in order to backup or restore it.
- Generate expiry reports.
    - These reports should be filtered by date.
    - 60, 90, 120 aging reports
- Scenario planning. Eg: Cost estimation if a contractor is extended or if a project is delayed for 6 months.

Scope

In Scope
Our MVP, as described above, will always be In Scope of the project.

Out-of-Scope
The bonus features, as highlighted in the above section, are currently out the scope of the project. However, if we complete our MVP ahead of schedule, these features may be implemented with the remaining time.

Project Constraints, Assumptions, Dependencies and Risks

Constraints

- As this project is done by current students, 10-12 hours or work per week will be allocated for the development of the project as other courses require similar commitments. Project members will also conduct most of their communication on channels such as Slack outside of project meetings.
- The current system in place at Coast Capital, and its respective security measures, administration access and set-up is unknown, so current planning will move forward with the assumptions as described below.
- None of the team members have previous experience with running a MySQL database instance with Java so there will be a learning curve associated.

Assumptions

- The project aims to make the program most efficient.
- The project assumes the target audience is Coast Capital employees and will only be used for management of contractors of Coast Capital.
- Any server is okay as long as it works

Dependences

The only major dependency this project has is on the availability of the free time of the team members. However, this should not cause any issues with the delivery of the project in a timely manner.

Risks

The major risks pertaining to this project revolve around the processing of the data by the web application and the security of sensitive information. The table below highlights the potential risks foreseen by the team, and steps that will be taken to mitigate them.

Risk	Description	Assessment
1	Exposure of sensitive information in the case where a user forgets to sign out	Propose to have an automatic session expiry, with prompts to stay logged in after a few minutes of inactivity
2	Breach of information if the communication relay between the application and database is not secure	Propose to have a secure web application (HTTPS) and have a security layer surrounding the database which limits entry points to database
3	[Accidental] data corruption (i.e. loss of data, duplicates, etc.)	Propose to have sanitation of inputs, locking data to avoid issues related to duplicate data and concurrent edits. Further propose to have confirmation prompts for overriding of data, and saving changes

Project Approach and Acceptance Criteria

Project Approach

The development of the system will be broken into multiple phases.

- **Phase 1:** Formalization of Requirements
- **Phase 2:** System Design based on the formalized requirements
- **Phase 3a:** Development of the core system
- **Phase 3b:** Development of additional features
- **Phase 4:** User Acceptance Testing

The development of the system will be Test Driven Development.

- Everyone will be writing Unit Tests in order to test their code.
- There will be Integration Testing as I believe this project will require multiple layers and modules to work together.
- There will be System Integration Testing and User Acceptance Testing at the very end.

Estimated Schedule

Milestone or Key Activity	Start	Complete
Initiation	**7th September 2017**	**14th September 2017**
Requirements	**15th September 2017**	**23rd September 2017**
Build – Core Node build	**24th September 2017**	**2nd November 2017**
Preview Site Available	**2nd November 2017**	**3rd November 2017**
Build - Fix Bugs and Bonus Features	**4th November 2017**	**21st November 2017**
User Acceptance Testing and Polishing the System	**22nd November 2017**	**30th November 2017**
Project Completion	**30th November 2017**	**30th November 2017**

Estimated Effort and Cost

Item	Description	Cost
Developers	**The developers for this project**	**Free**
Test devices	**The local servers and clients used locally for development and testing stage**	**Free. The server for hosting the website will carry charges after a year. Currently we are looking at AWS for deployment and it is free for a year after which it becomes pay-as-you-use.**
Licensing	**The license for this project**	**Free**

Project Governance

Project Team Structure

Vaastav will be the project manager and Anushka will assist him. As the project manager Vaastav will be in charge of delegating tasks and ensuring that everything is completed on time. Anushka will help in the case where the role becomes unmanageable.

Project Communication Plan

Project Meetings
We will have a weekly meeting with the stakeholder(s) every Thursday at 12:30-2pm PDT. This is where we will discuss the goal for the next week with the stakeholder and discuss whether we achieved our last week's goal or not.
Our team will have 2 meetings every week.

- Wednesday 3-4pm PDT: This will be our weekly goal meeting where we decide the team goal as well as individual goals we aim to achieve this week and complete the deliverables for the next week.
- Monday 5-6pm PDT: This will be our status meeting where each individual goes over how they are doing with their weekly goal and whether they are on track to meet the goal. We will potentially re-evaluate our goal at this meeting to a more realistic target.

Project Reporting
Before the stakeholder meeting, we would generate a status report which would contain the highlights of the features that were added in the last week and any changes that were made to the system in the last week. This status report will keep track of all the changes made to the system and manage revision history.