YQG Data Portal: Inception Report

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Vision and Business Case

Vision: Citizens can use City of Windsor's open data for research purposes or improve their interaction with municipal services and facilities.

Business Case: To focus on making data accessible dynamically and have interactive implementation of data sets.

Use Cases

Use Case (#1) Name	Filtering search by themes
Scope	Open Data Management Tool
Primary Actor	User
Interests	The search engine will provide the user to search datasets according to their choice
Preconditions	● User must be on City of Windsor on data portal ● User must be under search by themes tab
Success Guarantee	User will find their desired dataset in a reduced amount of time
Main Success Scenario	1. The user opens the data portal 2. User clicks on "Themes" option 3. User will see a page showing them different themes like housing, safety, health, traffic with the number of data sets in each category 4. User clicks on a category 5. The user will see all datasets in that category 6. User can further filter by selecting the type of format
Special Requirements	● UI device ● Use Google Chrome to get the best experience in terms of user-interaction and good speed

Use case (#2) name	Visualize a dataset
Scope	Open Data Management Tool
Primary actor	User
Interests	The graphs or maps of the dataset will be displayed for each data

Preconditions	● User must be on City of Windsor on data portal ● User has their desired dataset open
Success Guarantee	The visual representation of the data will appear helping users get an insight of the data set at the first sight
Main Success Scenario	1. User will navigate to a dataset of their choice 2. On the side, there may be up to three options: tables, maps, graph 3. Users will click on one of the options 4. The visual option selected will be displayed according to that dataset
Special Requirements	● UI device ● Use Google Chrome for faster display

Use Case (#3) Name	Accessing APIs of a dataset
Scope	Open Data Management Tool
Primary actor	Developer
Interests	The API will get the request from the developer for the data and the API will send a response data in return
Preconditions	● Prior knowledge of working with API
Success Guarantee	The API sends a JSON data as a response to the developer's request
Main Success Scenario	1. The developer will navigate to their desired dataset 2. The dataset's API code is linked at the top of the dataset page under the tab name "Developers tools" 3. The API can then be used in Python or JavaScript by the developer
Special Requirements	● API key

Supplementary Requirements

- Users can contact those who have published the datasets
- Each dataset will be licensed to make data truly open for users and users will stay protected under the database laws
- Datasets will be updated more frequently

Glossary

- Filter: A tool allowing users to search the dataset among limited datasets
- Format: The user will be able to search the dataset of their choice (pdf, xlsx…)
- Metadata: The user can get more details of the dataset i.e. tag, contact name, date created, date modified

Risk List & Risk Management Plan

Technical Risk: Users who have been retrieving the data from City of Windsor's website can have difficulties using the new tools, especially those who are not developers. This can reduce the frequency of visitors on the website.

Resource Risk: Due to the dynamic nature of the website, the risks below can be taken into consideration.

- The cost for setting up would be roughly $5000-7000 and $50-200/month for maintenance.
- Additionally, a large portion of time is required for many activities i.e. designing APIs, hosting web servers and databases, deployment (3-4 weeks), and maintenance (5-10 hrs./month).
- There will be more frequent updates to the dataset than the static view of the website. This process can require more storage space to more versions

Business Risk: Data cannot be updated automatically once it has been downloaded. Hence, the user can be using a version of a dataset even when there is an updated one with more accurate information.

Iteration Plan

In the first elaboration iteration, the open data portal will include its previous functionalities with a focus of visualizing datasets on the website instead of having the user to download it and having themes for users to filter from.

Phase Plan & Software Development Plan

The following needs to be accomplished in the two-week frame:
Tools: To set up visuals, the website will need

- Front-end: HTML5, CSS,
- Back-end: Java spring, Node.js
- Database: SQLite
- Data visualization tool: Google Data Studio

People: City of Windsor must hire 2-3 developers to effectively and efficiently set-up and manage APIs for datasets. Roughly, each developer will be paid $30-40/hr.

Resources: Website constantly needs to address any issues users may encounter while retrieving data.

Development Case

Discipline	Practice	Artifact	Incep.	Elab.	Const.	Trans.
		Iteration →	I1	E1..En	C1..Cn	T1..T2
		Glossary	s	r		
Design	agile modeling test-driven dev.	Design Model		s	r	
		SW Architecture Document		s		
		Data Model		s	r	
Implementation	test-driven dev. pair programming continuous integration coding standards	...				
Project Management	agile PM daily Scrum meeting	...				
...						

Prototype

Use case #1: Filtering search by themes

Below, the user can choose a theme which closely matches their dataset search. This will reduce their search time since its searched under limited datasets lying under that theme.

Use case #2: Visualizing a dataset

Below, is a graph retrieve from Arenas dataset from the City's site. When the user opens this dataset, with an option of visualization, user will be able to view the following graph.