COMP-3220 Project

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Inception Phase

City of Windsor's Open Data Portal

Vision and Business Case

The most important vision for this project is to be able to create an open data access portal for the city of Windsor to collect, manage, and distribute this open data. This needs to be very user-friendly allowing users to easily view this data in a simple and easy to find manner. The goal for this access portal application is to be able to easily navigate through the data to find what is needed and to be able to easily collect, manage, and distribute the data. This open data portal can help build on relationships between citizens and their governments, businesses, and public institutions by keeping all their data open and easily accessible to the citizens. The vision for the city of Windsor is stated as follows: Dream, Dare, Do. Windsor is a quality city full of history and potential, with a diverse culture, a durable economy, and a healthy environment where citizens share a strong sense of belonging and a collective pride of place. We believe this new and improved data access portal can uphold this vision and allow the citizens of Windsor to truly understand all of what is going around them. The main known constraints at this time are how to get the data from the old data access portal over to the new data access portal, what to use to create this portal, how many features to include, the capital needed to create, who is allowed to upload data, should this be a website only or with a phone application, who to distribute the data to, how to manage and uphold the integrity of the data, and how and what to store in the database used for the open data portal. This data portal will most likely cost thousands to create, it is hard to give a good estimate at this point. The best option at this point would be to use CKAN as it can easily maintain all needed data and help to get the old data over.

Use-Case Model

The most important functional requirements for the user to interact with at this point are to have a user friendly data catalogue, to be able to search for data, to be able to find what is needed by categories such as locations, parking lots, garbage, etc., to be able to find what is needed by what is most popular (track who views what), to be able to upload data to the portal if you have permission to do so, to be able to manage your data, to easily read the latest data uploaded as well as changes to existing data, and to be able to find what is needed based on trending (an example is currently finding open data related to COVID-19 in Windsor). The most important functional requirements for the administrators are to be able to upload, manage, distribute, and bring over data easily. The most common and important use cases would be the user comes to the data portal and simply searches what is wanted. The portal then finds the relevant information and displays options to the user. The user selects one and can easily read the data and can choose to download if it is needed. Another important use case is the user uploads data if they are permitted to do so and the administrators can easily distribute data to who should view it. Some other use cases are other ways the user can find the data (discussed above on what the user is able to do).

Supplementary Specification

The main key non-functional requirements are creating the database to store the all of the data, the amount of data to bring over from the old open data access portal and the tool to use, security needed to preserve the data, protecting user data, not displaying any individuals information, keeping the integrity and accuracy of the data, making sure the portal is fast and efficient, and having easy accessibility and downloading.

Glossary

Open Data: is the idea that some data should be freely available to everyone to use and republish as they wish, without restrictions from copyright, patents, or other mechanisms of control.

Access Portal: the tool utilized by the user to easily find the data needed and wanted.

CKAN: Comprehensive Knowledge Archive Network is an open-source open data portal for the storage and distribution of open data.

Old Data Windsor: the old tool used by the city of Windsor for the open data.

Risk List and Management Plan

At this point the main known risks are how to get data from the old open data access portal to the new open data access portal (can be solved by creating or finding a tool that can easily do this), what tool to use to create this portal (most likely will be CKAN), how many features to include (can be solved by understanding what is needed, timetable, and budget), the capital needed to create and maintain (can be solved by the city of Windsor deciding on the budget for this), who is allowed to upload data (can be solved by simply deciding who can upload), should this include a phone application (can be solved by knowing budget and seeing if it is possible), how will we distribute (can be solved by having a distribution center), how to maintain and uphold the integrity of the data (can be solved by having a tool to check for this), and how big should the database be (can be solved by knowing the size of the data).

Prototypes and Proof of Concepts

The vision as stated above is to be able to create an open data access portal for the city of Windsor to collect, manage, and distribute this open data. A common prototype will be to display some open dataset that the user has selected. Including with this could be a Java class on how the data to display the information is stored, the actual website display, and the database for this.

Below is a description of the prototype included in this phase:

- Includes the display, Java class, and database example for a dataset found by the user.
- All datasets have a number, title, description, publisher, date, image, file, and contact information.
- Constructors are included for when this class is needed.
- Also included is getters and setters to get and set values as well as a method to easily print all information.
- Did not include public or private for variables, can be done later.
- All of this is stored in a database.
- Also included is a sample display of how a user could possibly enter the data needed (pdf file attached).
- Note the real database would be used with a SQL database or something very similar.
- Below is a sample database table:

ID	TITLE	DESRIPTION	PUBLISHER	DATE	IMAGE	FILE	CONTACT
ID	“TITLE HERE”	“DESCRIPTION HERE”	“PUBLISHER HERE”	“DATE HERE”	“IMAGE HERE”	“FILE HERE”	“INFO HERE”

- Anything more that can be added will be added later as this is just a preliminary prototype of a high-risk item.

Iteration Plan

In the following Elaboration phase, platform decisions should be made, making sure we have employed all the team collaboration tools including: code repository, version control, bug reporting tool and project management/task tracking for the team (e.g. Redmine), testing strategy, and documentation repository. UML should be used for use cases, class diagrams, and sequence diagrams. Some code implementation can be done, and we should be able to solve all the main issues including functional requirement prototypes.

Phase Plan and Software Development Plan

A rough timetable for the duration would be a few months but this can always change as this is a very rough timetable. This can also change as the issues now maybe could not initially be solved and new issues may arise. Our software development team should aim to meet at the very minimum weekly, this will most likely be online and being discussed will be what we have been working on during on own time and what is still needed. Some training may be needed on the various tools that will be used, including GitHub, Visual Paradigm, Redmine, and Overleaf. A platform decision should also be made.

Development Case

Use-case model- Typical scenario is the user comes to the data portal and simply searches what is wanted. The portal then finds the relevant information and displays options to the user. The user selects one and can easily read the data and can choose to download if needed. Others include other ways of finding data, uploading data, distributing data, and maintaining data.

Supplementary Specification- Some sort of licensing or report generation might be needed from the city of Windsor.

Glossary- all needed terms defined above.

Vision- The vision as stated above is to be able to create an open data access portal for the city of Windsor to collect, manage, and distribute this open data.

This is the end of the Inception Phase although any information discussed here can always change as the process is ongoing.