1. **Team Name:**

The Fighting Mongooses

1. **Team Members**

Michael Nollette

Tim Thor

General Guideline for Concept Proposal:

1. **Define your project idea:**

This capstone project is being initially designed as a web crawler geared towards Reddit. Its purpose is to take text-based user input, and monitor subs of your choice for posts that match or contain that input. It will then notify you via email. The core program I aim to complete is a console application that accepts simple text input to this end. It stores the information on what to scan for and what has already been found in a .txt file, and sends an email on that basis.

* 1. **Identify your client.**

Our primary intended audience is Reddit users who buy or sell goods on the website, though the application could just as easily be used by moderators or anyone who wants to monitor what content is posted.

1. **Business Need / Problem / Opportunity – What does the client want?**

Currently, Reddit lacks the functionality to notify users when posts about certain items have been made. For abundant items, this poses no problem. However, rarer items can be frustratingly difficult to find because of this. Often, they are few in number and the offer lasts only for a few days to a few hours. The wait time between offers is also highly variable. The next offer may show up within a few days, or may take months and even years to come up again. Without a notification system, users are left to check each and every day for these items. This is incredibly tedious, frustrating, and wears users down.

1. **Scope and Scale of the Proposed Project – What is the breadth and depth of this project? What will the result be?**

The three main objectives of our Reddit Web Crawler are to:

* Read/write user search terms
* Read/write subreddit post URLs containing said search terms
* Send email notifications once read/write is completed

The deliverable/result will be a Console Application that will: read/write user search terms to a .txt file, read/write subreddit post URLs that contain these search terms to a separate .txt file, and send emails that will notify users that new posts have been made. No other functionality will be considered unless it pertains to or directly influences these three main functions.

1. **Analysis to support 1.) your understanding of the current processes and environment needs and 2.) the conclusions that lead your proposed solution.**

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| --- | --- |
| -Processes and logic models  -Domain model  -Data models  -Data dictionary | -Platform requirements  -Functional and non-functional requirements  -Constraints |

Here is the current process Reddit users must go through to find items for sale:

1. Search for item(s) in search bar
2. Look through posts to find items
3. Contact seller
4. Buy item(s)

Out of these steps, step two is the most time sensitive. Step one is quick as users only have to type what they want to look for in the search bar. Step three and four cannot be completed until step two is, and are far less time sensitive. Even under certain circumstances (the seller already has a few buyers), step two is often more important than either (you can’t make an offer unless you find the item).

For step two, users must read through posts to determine if offers are still available. For rare items, offers can be closed within hours of posting. Without constant checking, all but the most dedicated of users will be unable to find what they are looking for in a timely manner. Without notification, they are left to wait for the next offer which can take months to reappear.

Currently, there are no systems in place to prevent or assist in this endeavor. All but the most dedicated of users will be unable to find these items.