CS1530 – SPRINT 1 DELIVERABLE

PROJECT: Cemetery Plotter

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USER STORY BACKLOG

1. As a user, I want the plots to be organized in a gridded system (ex: G20, F52) in order to better locate plots.
    - This feature is of the utmost importance because it is the primary representation of the structure of the cemetery and is prerequisite for many of the other user functions.
2. As a user, I want to be able to categorize plots as unused, used, available/ready, reserved/purchased so that I can manage usage of the land.
    - This goes together with the organization of the plots in the cemetery. They are not all used so they must have different descriptions of their current status.
3. As a user, I want to be able to search for names of those who are in the cemetery to find what plot they are located in.
    - Searching by name of the interred person must be a very important way of finding information.
4. As a user, I want to be able to search for names of people who made purchases so that I can get a list of all the plots they reserved or own.
    - Another important method of searching by name. Important for the business end of the cemetery.
5. As a user, I want to be able to get all the information of a specific person by searching the location of the plot he is located in so I will not have to look in other files or databases.
    - This indicates information needs to be stored for each plot. It also indicates it is important to consolidate all the information in an easy to find way.
6. As a user, I want to be able to update the status of a plot and add, remove, or modify its associated information so that I can keep accurate records.
    - If each plot has associated information, then we will want to be able to change and update that information.
7. As a user, I want to be able to view a visual representation of the plots in each section of the cemetery so that I can quickly determine who is interred in a specific location.
    - This feature is probably very important in the long run, but difficult to implement, and not immediately necessary for use.
8. As a user, I want to be able to list all the vacant plots for when we need to find a location for a new purchase or burial.
    - This well help the manager sell to his customers and make plans about the cemetery's land usage.
9. As a user, I want the price to be attached on each plot, so I can easily manage the price.

    - A good piece of information to have in the system. Not all plots will have prices. Should be fairly simple to include.
10. As a user, I want to be able to attach a picture of each site so that I can have a visual reference.
    - Helpful for the manager to show prospective buyers or workers who need to find it out in the field.
11. As a user, I want to be able to pay with credit cards in the system, so payments from customers can be automated.
    - Simplifies automatic payments from the customer for the manager. Lower priority because there is probably already another system in place for making payments.
12. As a user, I want a plot comparison function, so I can compare the price, location and other stuffs.
    - Let's say this reports helpful statistics and metrics for the utilization of the cemetery and it's business. This will be a helpful feature, but not necessary for functioning and depends on more basic data being implemented and available.
13. As a user, I want to be able to get an automatic notification when certain rates (for example 90%) of the plots have been occupied so that I can make plans to use new areas.
    - Another type of report for the manager. Very useful for maintaining the cemetery but not critically important.

TESTING OUTLINE

We plan on integrating several tools into our work environment to help with product development, team communication and organization.

Github - Github is a vital tool for our project as it will host our project's resources, provide us with version control, and allow us to build collaboratively.

Intellij - Intellij is our IDE of choice for the Cemetery Plotter project. We will build and test our software using Intellij.

Slack - Slack is a messaging platform built by developers, originally for developers. Slack will serve as the foundation for our team's communication. We will integrate other tools of ours, such as Github, to post notifications to our Slack chat in order to keep all teammates notified of any updates or changes.

Trello - Trello will be an integral part of the development process as it will enable us to list and designate different responsibilities. This will help keep us organized and efficient. We will also list any bugs, issues or concerns via Trello as part of our testing initiative.

Sketch 3 - Assuming that we create a GUI for our program, we will first need to design an outline for the aesthetics of the program. We will use Sketch 3, a digital design editor for the Mac, to create detailed outlines of our design plans.

Our software will be used to help organize the plots of land used to bury (for want of a better phrase) cemetery residents. As such, accuracy is going to be extremely important, lest our client reserves a plot of land for a customer that already contains a body! There are many components of our software that will need to be tested for accuracy. The most important, as mentioned, is probably the component identified in User Story 2; we don't want our software to categorize a plot as available when it is in use, or reserved when it is actually available. Since our software will potentially be storing payment information, we will need to test that this information can be entered and updated properly. We will also test that our software can verify appropriate user input, and reject erroneous input.

Scalability is a factor, albeit not a large one (at least for now). The cemetery has a finite amount of space and there aren't hundreds of people being buried there every day. We will need to test that we can add (and remove) new (and old) plots to our software without breaking it, but as of now that is the only scalability concern that we can think of. We will also try to ensure a threshold of performance for our software. Although there will only be one user at a time (our client), we want our program to be responsive and fast so that Mr. Menes will want to use it. If security is an issue (we aren't sure as of now), we can provide password authentication for our client and ensure that it is functioning correctly.

DECISION DESCRIPTION

Our Project Manager has been touch with Robert Menes, who serves as the Executive Director of the Beth Shalom Synagogue and its respective cemetery. They are scheduled to meet the week of September 28th to discuss specifics about the product and their expectations. We know they are currently using an out-dated command-line application to manage the cemetery. We have made some assumptions and predictions about their needs in order to fulfill this first deliverable.

To make up for not being able to meet with the customer we did research into other existing cemetery management software. We found five existing programs: CIMS (Cemetery Information Management System), Pontem Cemetery Management Software, Cemetery Management Database, CemSites, and The Crypt Keeper. After surveying each program's features we noticed a lot of common features that would be advantageous to Beth Shalom Synagogue. These features deal with cemetery layout management, recordkeeping, or finances. The existing software specialized in one, two, or all three of these categories. We took our inspiration for the user stories from these examples.

To prioritize the backlog of user stories that we generated, we decided to focus on the layout of the cemetery because that is the most basic use of the physical cemetery. The most important user story will be setting up a grid system to represent the land and plots in the cemetery. This is the main structure describing the cemetery and will dictate our object-oriented approach. Once that is in place, we will want to be able to categorize the land and each plot with its associated state. This will allow the manager to make decisions about the cemetery's usage. We then want to be able to search for plots by name of the purchaser and/or the interred person. We are prioritizing this over a visual representation of the cemetery that would allow you to click an area to find out information because that will require a tremendous effort to implement and populate with actual geographic data. This would be a very desirable feature for future sprints. We assigned stories relating to recordkeeping next. This includes things like adding a grave for a person or changing the address for the purchaser of a plot. Having these features will allow us to work on the lower priority stories relating to the finances and business like receiving payments or generating reports.

Initially, we had a disagreement regarding what IDE we should use to develop the product. We all had experience developing with *Eclipse*, but a minority of the group requested we use the commercially-available IDE *Intellij*. Their reasoning was that *Intellij* is a much more solidly build IDE, one that is necessary for the development of high-quality programs. After short debate, and the agreeance that *Eclipse* tends to be a nuisance, we agreed about using *Intellij* for our project.

However, choosing a tool for communication was a bit easier. One of our team members had previous experience working at a software development firm that used Slack for team and cross-team (mobile department to design department) communication. He argued that Slack differentiates itself from conventional group-chats by having organized channels and programmable commands. The rest of the team jumped into Slack, and are already loving it. We had originally tried to set weekly hour-long meetings but had difficulty finding a time we could all get together. Slack allowed us to compensate for that. We plan on meeting up for shorter sessions after class in the future.

Although Slack is a great tool for communication it would not be fit for the scope of this project. The task of organizing responsibilities is a tedious one and we need a service that will help us assign different jobs to our team members in future sprints. We plan to use Trello, a web-service for the organization of tasks and responsibilities, to distribute jobs to each other and keep us busy. This will increase efficiency and reduce blockage.