Cover Letter

CSC433 - Software Engineering

Team Possible

Project Name: Pass-it

Deliverable #2: Proposal

3 March 2020

Team Members:

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Project Manager: Alberto Garcia

Low Level Programmer: Franklin Nuth

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Introduction

Description

Pass-it will allow users to create and host an environment that encourages friends to play music freely, one track after another with no disturbances of disconnecting. The application will allow users to like and dislike music data as it is being played if they do not like it. Likes and dislikes will "pass" music up and down a live music data cue. "Pass-it" will allow users to get recommendations on music they might like based upon their likes and dislikes.

Pricing

The pricing model that will be used for the development of this software is the Function Point Analysis Model.

Count Total = 3

Organizational Average Productivity: 10.05 FP/pm

Burdened Labor Rate = 10,000

Sum of VAF ($\Sigma(Fi)$) = 47

Value Adjustment Factor Chart

General System Characteristic	Brief Description	Scale of Influence (0-5)
1) Data Communications	How many communication facilities are there to aid in the transfer or exchange of information with the application or system?	3
2) Distributed Data Processing	How are distributed data and processing functions handled?	3
3) Performance	Was response time or throughput required by the user?	5
4) Heavily Used Configuration	How heavily used is the current hardware platform where the application will be executed?	4
5) Transaction Rate	How frequently are transactions executed daily, weekly, monthly, etc.?	2
6) On-line Data Entry	What percentage of the information is entered On-Line?	4
7) End-user Efficiency	Was the application designed for end-user efficiency?	4
8) On-line Update	How many ILF’s are updated by On-Line transactions?	1
9) Complex Processing	Does the application have extensive logical or mathematical processing?	2
10) Reusability	Was the application developed to meet one or many user’s needs?	5
11) Installation Ease	How difficult is conversion and installation?	3
12) Operational Ease	How effective and/or automated are start-up, back-up, and recovery procedures?	3
13) Multiple Sites	Was the application specifically designed, developed, and supported to be installed at multiple sites for multiple organizations?	4
14) Facilitate Change	Was the application specifically designed, developed, and supported to facilitate change?	4

VAF = 3 + 3 + 5 + 4 + 2 + 4 + 4 + 1 + 2 + 5 + 3 + 3 + 4 + 4 = 47

External Inputs = 6, Average Complexity = 4

- **User Likes**
- **User Dislike**

- **User Queue Songs**
- **Create Room**
- **Invite Other Users With Account**
- **Logging Into Own Accounts**

External Outputs = 1, High Complexity = 7

- **Get Recommended Songs**

External Inquiries = 1, Average Complexity = 4

- **Song Request From Database**

External Interface Files = 5, Low Complexity = 5

- **Main Page**
- **Login Page**
- **Account Creation Page**
- **Default User Page**
- **Room/Playlist Page**

Internal Files = 1, Low Complexity = 7

- **User Account**

FP/pm = (6*4) + 7 + 4 + (5*5) + 7 = 67 * 1.15 = 10.05

Cost Per Function Point = $10,000 / 10.05 = $995.02

Total Estimated Project Cost = $995.02 * 3 = $2865.06

Delivery Date

The final product is to be finished and deployed for demonstration on April 30, 2020 at 2:30pm.

I) Scope

I.A) Possible Issues That May Arise During Development & Possible Solutions

Here is the list of problems that may arise during development with proposed solutions:

- Server-side programming itself. Team Possible shows great promise in Front End Development, but training for Back End Development may be needed. This problem can be minimized through Full Stack Developer notes provided by Franklin, or research on YouTube and the internet.

I.B) Extents and Limits the Project Will Operate In

The extent that the project will extend to is that Team Possible may require unlimited access to hardware if any is provided from the college. The development of the software will be dependent on how easily accessible the hardware is for the team. The limit that may be imposed by the Computer Science department. Because any hardware given to Team Possible may come from them, they make the decision on how much access Team Possible may have to the hardware they need to develop the software.

II) Advantages

II.A) Financial Advantages

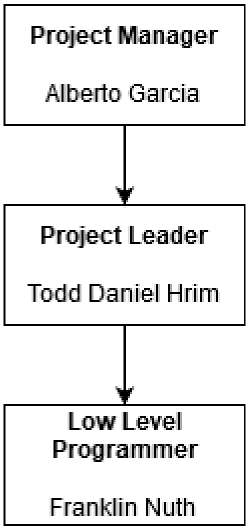
Team Possible is still free to purchase and utilize any software to give to further various aspects of the application. It is also possible that when the application reaches a certain stage where it can harvest user data for advertisers, there is potential for profit when partnering with larger music businesses like Spotify or iTunes and sharing said user data.

II.B) Time Advantages

At the time of writing or revision for this document, there are nine weeks left before the proposed deployment date for the application. Team Possible strives to meet for 2 to 3 hours after class twice a week, and there are options to meet over the weekend if need be. The multiple opportunities that team has should be enough to develop the application, and even add extra features if extra time remains. If a meeting is not physically possible, then the team has a Discord server where they can work synchronously on the project and keep each other updated.

III) Plan Organization

III.A) Organizational Chart

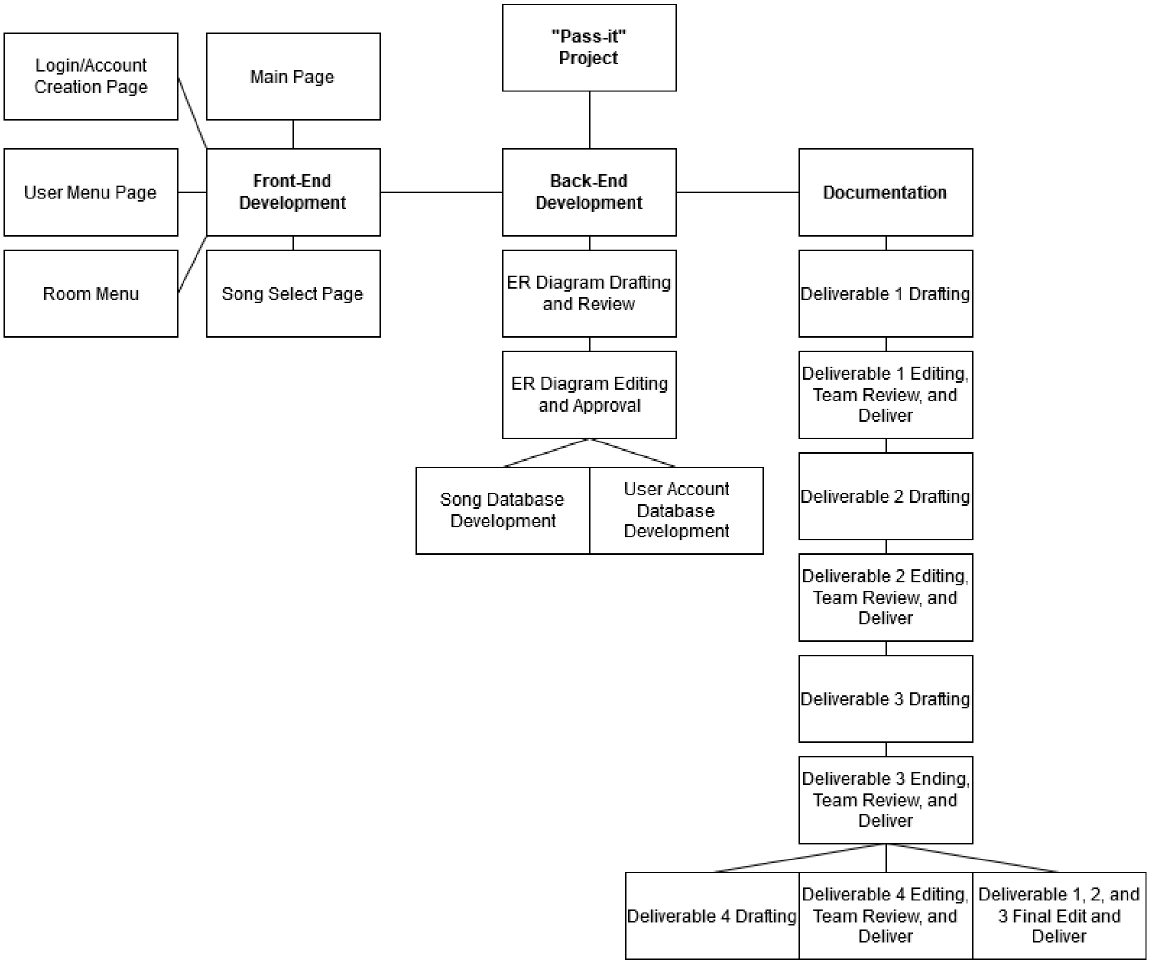


III.B) Development Milestones

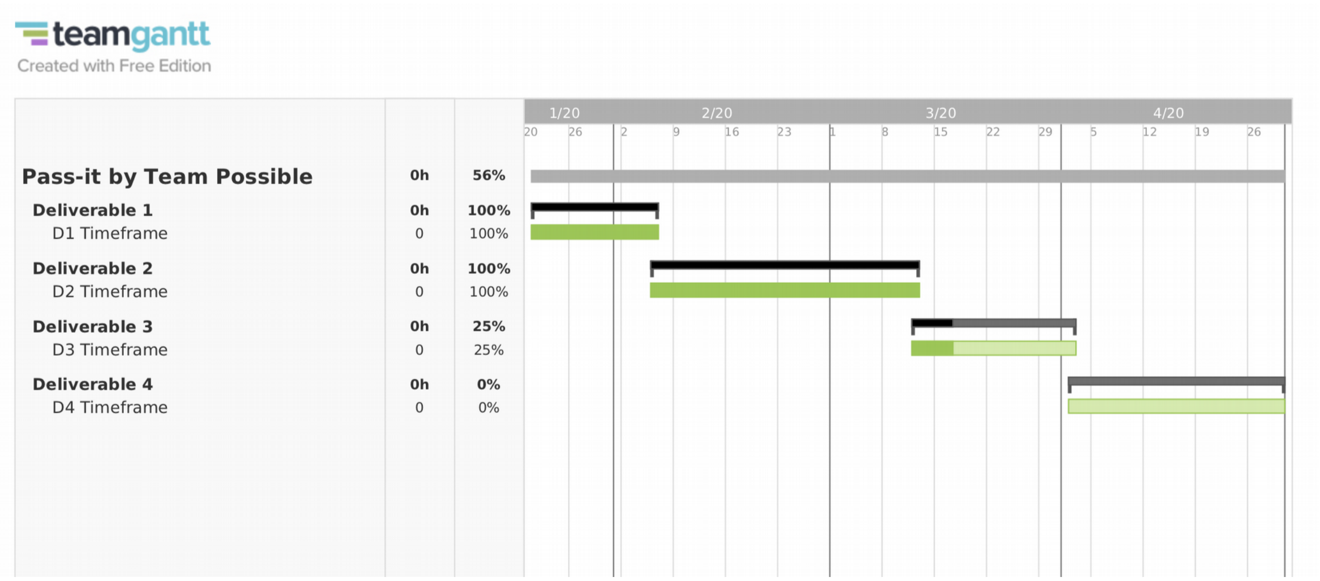
- Deliverable #1 - Requirements Document (Due February 14, 2020)
- Deliverable #2 - Proposal (Due March 3, 2020)
- Deliverable #3 - Functional / Design Specification (Due April 12, 2020)
- Deliverable #4 - Final Product (Due April 29, 2020)

III.C) Work Breakdown Structure

The following graph is a Work Breakdown Structure diagram that Team Possible will follow for the development of the application, along with a Gantt Chart.


"Pass-it" Project
Front-End Development
Back-End Development
Documentation
Login/Account Creation Page
Main Page
User Menu Page
Room Menu
Song Select Page
ER Diagram Drafting and Review
ER Diagram Editing and Approval
Song Database Development
User Account Database Development
Deliverable 1 Drafting
Deliverable 1 Editing, Team Review, and Deliver
Deliverable 2 Drafting
Deliverable 2 Editing, Team Review, and Deliver
Deliverable 3 Drafting
Deliverable 3 Ending, Team Review, and Deliver
Deliverable 4 Drafting
Deliverable 4 Editing, Team Review, and Deliver
Deliverable 1, 2, and 3 Final Edit and Deliver

III.D) Gantt Chart



IV) Deliverables

IV.A) Progress of the Software

Requirements documentation has been submitted and approved by the client on February 18, 2020. The software has also gone through financial estimation and documentation. There are plans to further design the software from a more technical viewpoint.

IV.B) Documents

Here is a list of documents that are generated with the development of the application:

- **Deliverable #1 - Requirements Document:** This document is created on February 13th, 2020. The purpose of this document is to declare an idea for a potential application and have it approved by the client. The idea and information surrounding it are not official and are subject to change.
- **Deliverable #2 - Proposal:** This document was created on February 26th, 2020. The purpose of this document is to declare an official idea for the application and receive

approval of the client with a signature. The document discusses subjects such as scope, advantages, organization, alternatives, and terms or conditions for the application.

IV.C) Method of Deliverables

All deliverables will be given to the client on certain dates for review and grading. The team will strive to continually update each deliverable to reflect the current application and give the client the deliverables through a shared team binder. The client will then go over the deliverable before sending it back to Team Possible.

V) Acceptance

By signing the client signature line at the end of the document, the client approves of the development for the application proposed in this document. The features and procedures discussed here will be carried out and nothing can be changed once this document is signed. It is the responsibility of Team Possible to uphold all promises made.

Team Manager Signature

Client Signature

VI) Alternatives

The website has the potential to become a static website and detached from the internet. In case any hardware or software fails so that the website cannot run, Team Possible can attempt to also create an alternate version of the website that can run without the components needed for a dynamic website such as a server. The alternate version of the website will not be sufficient for deployment but will ensure a live demonstration.

VII) Terms/Conditions

Before using Pass-it, the user must agree to share their first and last name to be registered into the database and use the application. Users must also be 13 or over to use Pass-it.

VII.A) Payment Issues

Because this application will not need any monetary funding, no payment issues should arise.

VII.B) Copyrights

Copyright 2020. Team Possible.

VII.C) Liabilities

Pass-it will be a website application. The purpose of the website for testing and demonstrating the skills Team Possible learned up to that moment. New users that register into the website are responsible for any personal information they enter into their accounts. Team Possible is responsible for the managing of user data and functions of the website.

VII.D) Warranties

In the case that the website becomes unavailable due to hardware or software issues, Team Possible will need at least 24 hours to bring the website back online.

Deliverable #2 Needed Resources Checklist:

- Table of Contents, once the entire document is finished.

- Work Breakdown Structure Diagram, with respective Gantt Chart.

Client Signature