

TherapyBuddy Final Report

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Abstract

This paper will outline the project work done on the TherapyBuddy application created by students for the Software Engineering Principles class at the University of Advancing Technology. This project is used to teach students on how to implement agile processes, particularly the Scrum methodology, into an ongoing project. TherapyBuddy's focus is on fixing some known issues with therapy appointment tracking. Our research here is focused mainly on outlining the process we used to complete the application via documentation and write-ups.

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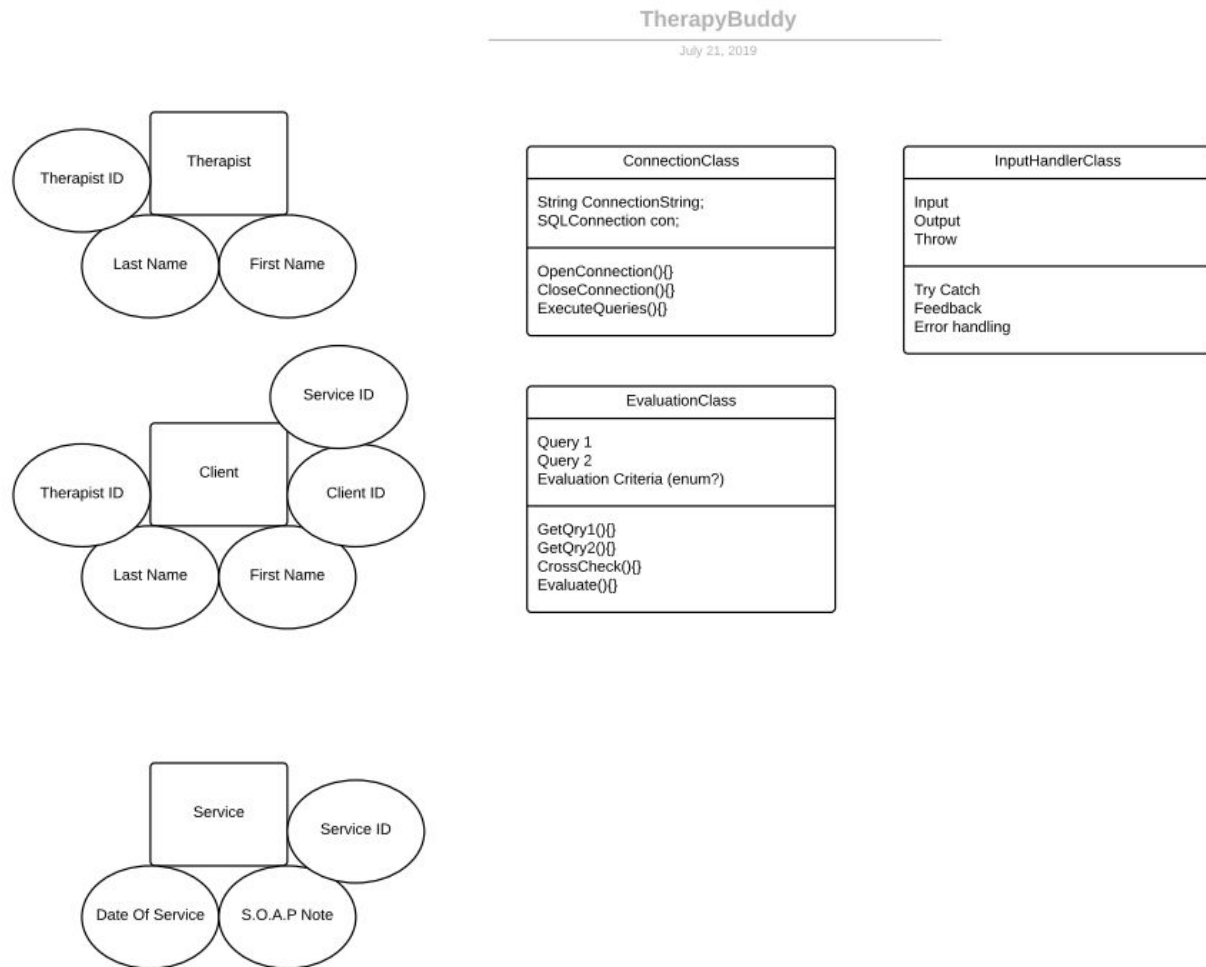
Introduction

TherapyBuddy is an app used to improve upon existing therapy appointment interactions. The main goal of TherapyBuddy is to improve the way therapists keep track of “Soap Notes”, a note required to store information about patients in their chart. TherapyBuddy uses soap notes sections to keep track of patient needs as well as the preferences when coming in for massage therapy (i.e. comes in for specific massages, likes rougher massages, etc.) Other than that, the main use of the application is to keep information stored correctly in a database that can be queried at any point throughout the application. The application will also be able to add new data to the table on a whim.

Justification for Development Methodology

The class was laid out in the Scrum agile methodology so it was easy for us to continue to follow the process in that way. Scrum was the best method we could use for this project because it was necessary for us to put out quick, sprint-based sections of the application both for the assignments as well as staying on top of the development process. The flexibility of the Scrum method was also very appreciated by the team due to scheduling conflicts and bought us time to continuously interact with each other to ensure the app functions properly and our goals are met.

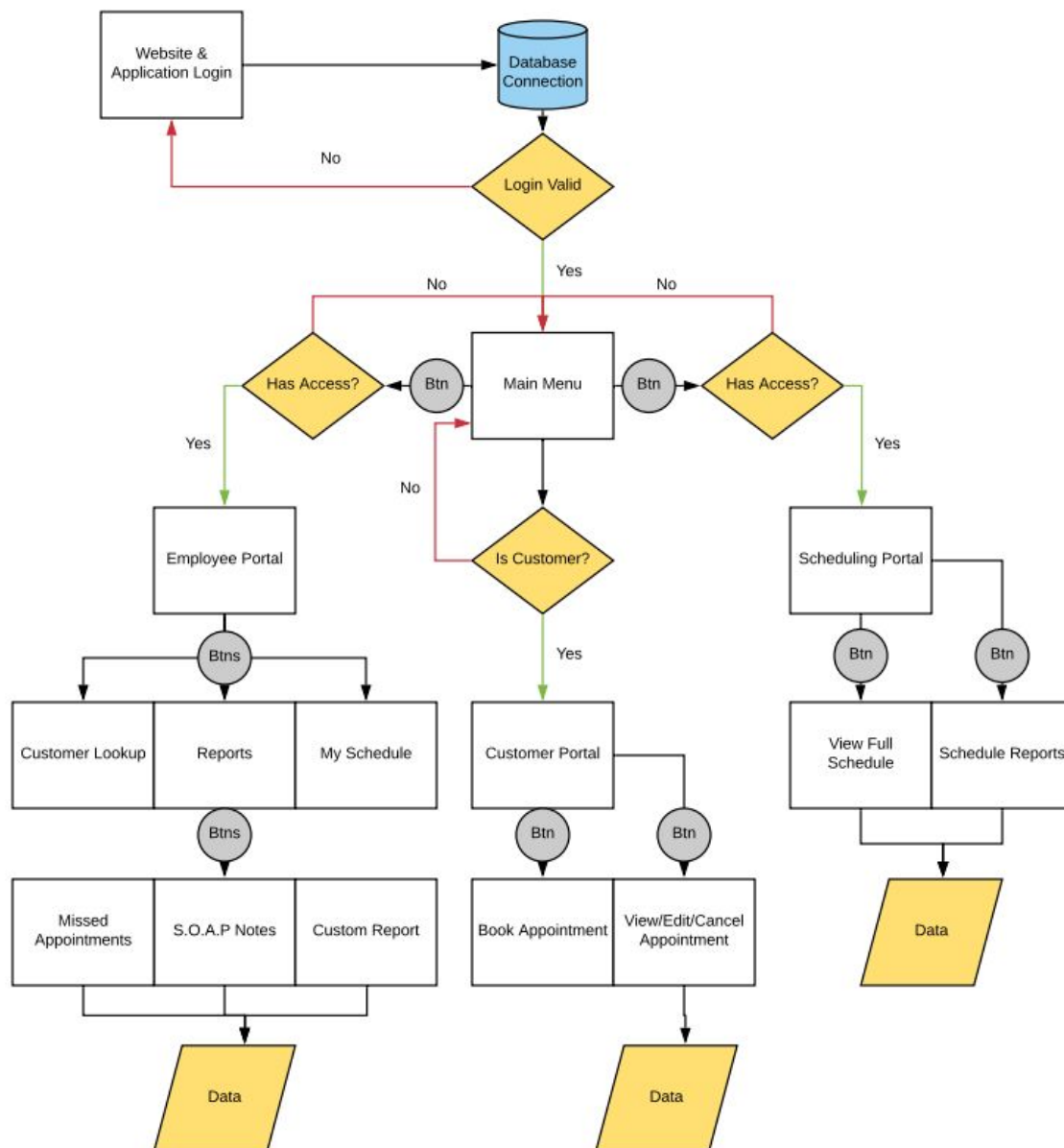
UML Diagrams



Justification for Design Pattern

TherapyBuddy uses the Façade and Singleton design patterns. Façade because the app hides the inner workings using an easy to use UI for end users. On the inside are complex queries and an entire database that the user can interact with, but is not required to know complex coding in order to use it. We also used the singleton design pattern for connecting the application to the database. As Stephen put in the discussion, the singleton is a way to instantiate a class once, and ensure that ONLY one instance of that class is ever created. This makes it perfect for establishing a known connection that won't change over time.

State Diagrams



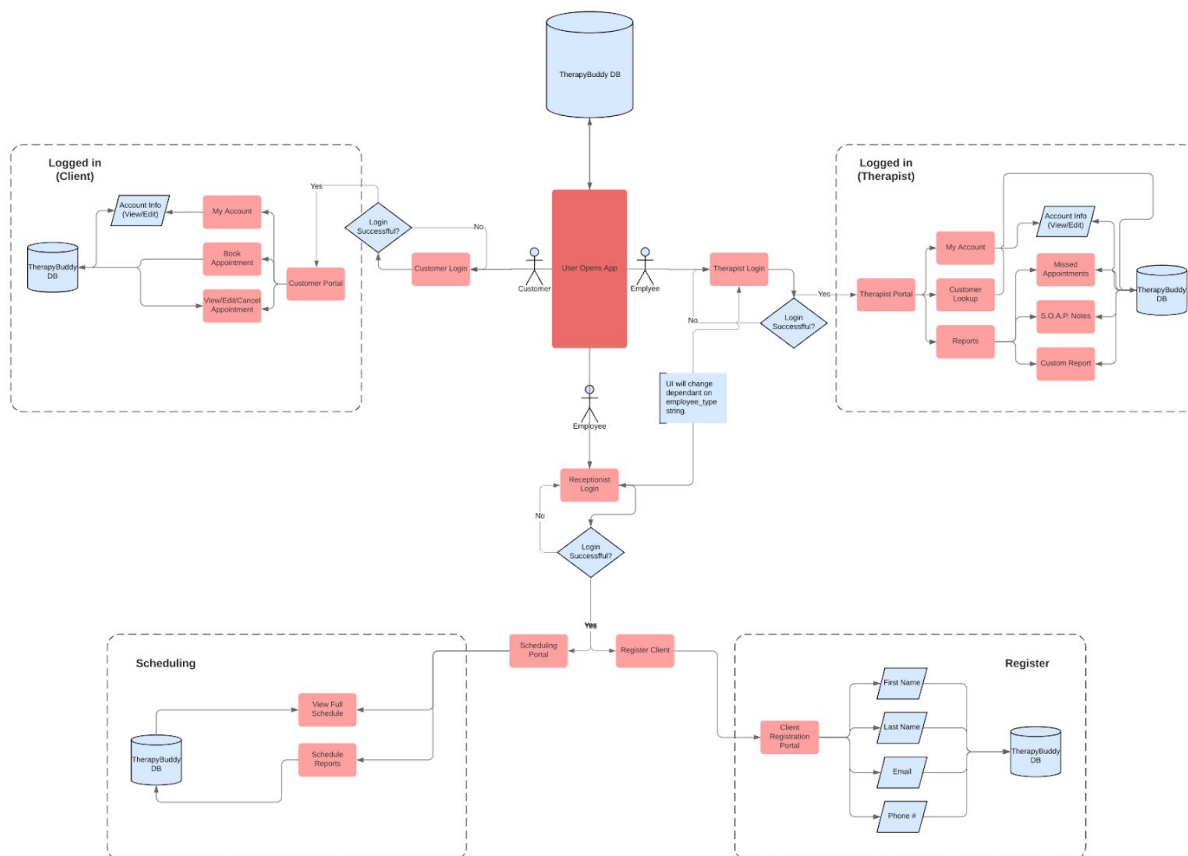
Documentation of Requirements

***Note:** Written by Yasmin for our updated project requirements.*

We are creating a program called Therapy Buddy. Our team is motivated and currently working to design, create, and establish a desktop-based (currently) application to provide the spa industry a workspace to record their data. The goal of the application is to store data like Customer information, Employee information, Scheduling and most importantly S.O.A.P notes, which are required by law. Our goal is to make the application as user friendly as possible. We are currently focusing on UI integration via C# programming language in the Visual Studio IDE. As the project required 3 to 4 people, we initially split tasks for equal responsibilities for 3 people to take care of initiating, planning, managing, SQL Queries, Documentations, GUI and the interface in C#. Not much later than the first week, we were told that there will be another teammate Amanda joining us, so we had to expand our project. She was pleased and excited to join the team and take care of the C# Forms and GUI as she was saying that C# is one her favorite languages to work with. So, we asked Yasmin to see if she could be flexible and change her task to create a website portal for the application/database. Unfortunately, Amanda was never able to participate with us and she stopped communicating after the introduction email she sent us. So, we had to change the scopes once again and drop the website portal for the time being due to the timeframe. Yasmin is now working diligently to design, create and implement the user interface via C# Windows forms. Ryan and Stephen are handling the C# code that ties the UI and

databases together, as well as the SQL database Queries and making sure every piece of data and the elements are collaborating with each other based on the flow chart and the diagram that the team designed.

UX Flow Design



Lessons Learned

Ryan: Having never worked on a coding project in a team before, I learned a lot. I've also never worked on a coding project while following a methodology before. Mostly it was just working on programs for homework until it needed to be turned in. Scheduling difficulties are hard to get around but not impossible as well. I also learned that it's a little difficult to work on a team when distanced for online school but not impossible. It was a great experience though and I learned a lot.

Stephen: I have learned so much in regards to C# and MySQL communication. Database handling, creation, hosting are all things that I had not experience prior to this project. I learned the hard way that having a database split up into multiple databases VS. database with multiple tables is NOT the way to go. I have learned that entity framework does not work in Visual Studio 2019. Lastly, I learned that it is possible to complete a project like this with a team where we are all in different locations and unable to meet in person. Though this was quite a roadblock during the process.

Yasmin:

It was a great experience learning C# and having fun with it. I learned alot about C# forms and its secrets and the way that they can communicate with each other and be connected with each other. As a mobile developer, in the beginning, I was debating to join a desktop

application project, but I now I am happy and proud that I was able to join the project successfully. I learned about software methodologies along with the risk that could be faced during the project. With the ups and downs that I had during the semester, I truly learned how to manage a project while following agile principles and catching up with teamwork. Huge thank you to professor Jill and my team for the great semester.

Resources

Simon, Kneafsey, S., Simon, Ghosh, P., & Kashyap, M. (2016, February 11). The Benefits of

Scrum & Agile. Retrieved from

<https://www.thescrummaster.co.uk/scrum/benefits-scrum-agile/>

Appendix A

Zip files for the app have been added as another attachment for the assignment.