

Therapy Game

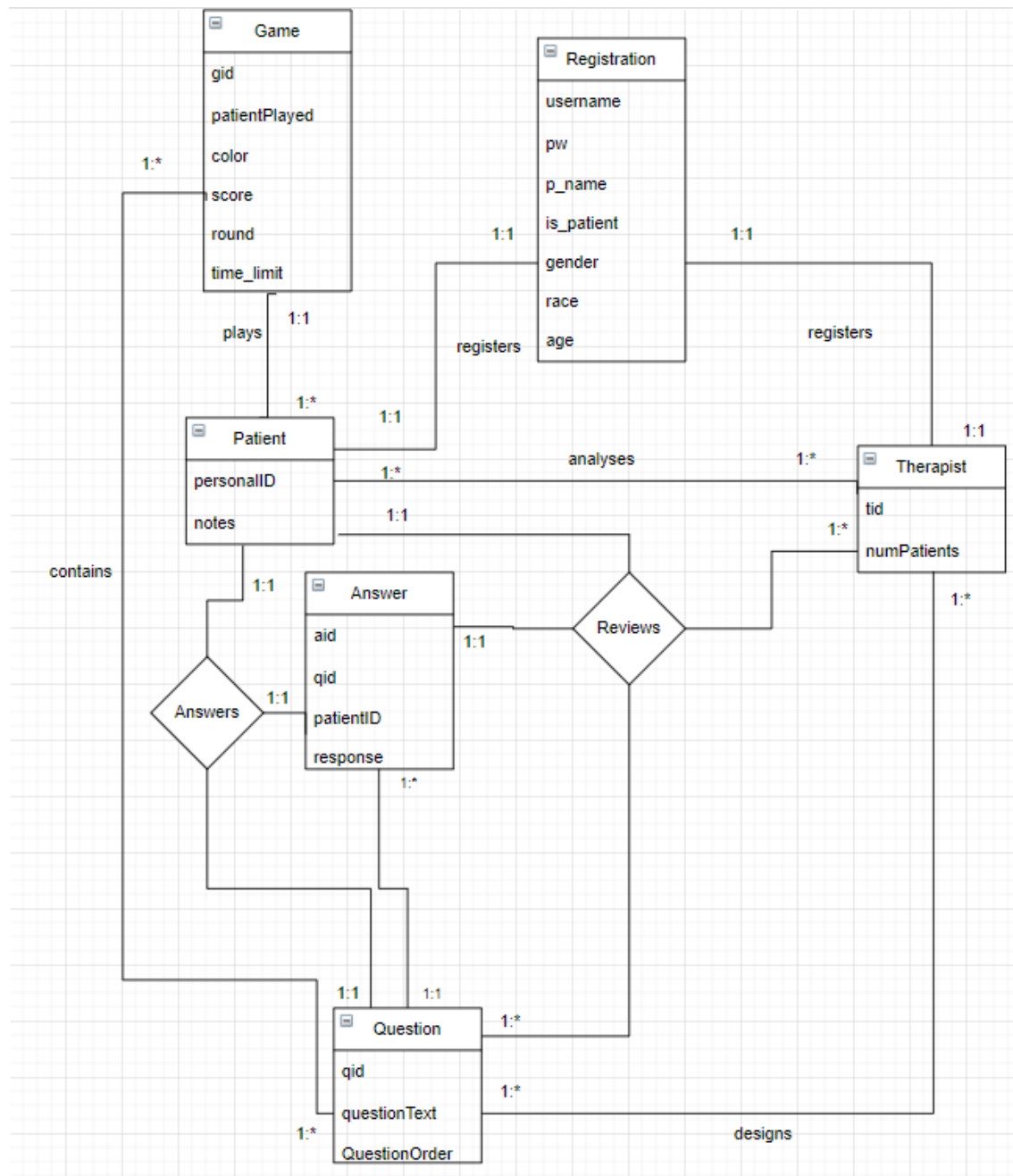
READ ME:

First import PyQt5 using pip install PyQt5. As well as MySQL and the corresponding connecting software. We then Run python script using “Python PythonGUI.py”. Also download pymysql using pip install pymysql. All other libraries don’t have to be installed. We have not used any specific special technologies in building our project.

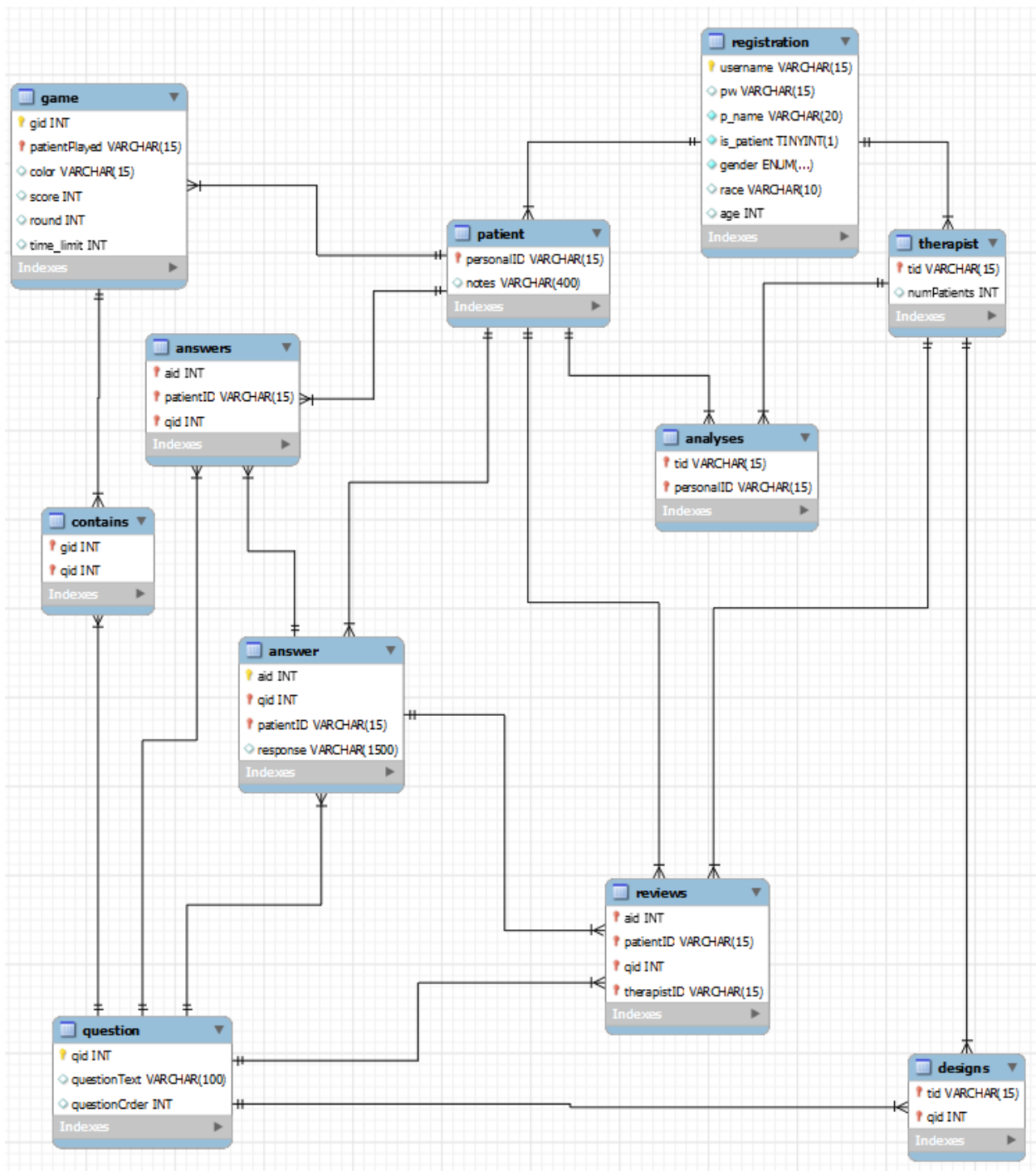
Technical Specifications:

We made the basis of our project using PyQt5 - registration, login, game, and the data viewing system. We loaded (imported) the data from MySQL. We also saved the data and push updates to our MySQL database. In order to collaborate easier, we used Github as well as Visual Studio Live Share to develop our project using our own laptops. As we designed our game to implement a timer, we used the time, sys, random libraries to help us with our task. We ran into the issue that Time.sleep did not work in a while loop, so we used the QTimer.singleShot method to run a certain method in the provided time. As most of our application is based around a game, we decided to create a simple game that only required matching the color of the given to that of 3 button colors to help with easier testing of the application as a whole. We also decided to make use of enum to insert new data (male/female) into MySQL. Mainly took advantage of QWidget, as a mainwindow and QPushButton, Layouts, QLabel, QComboBox, QMessageBox, QLineEdit, QTextEdit to form the GUI. Finally, we made every pop-up window by inheriting a QWidget.

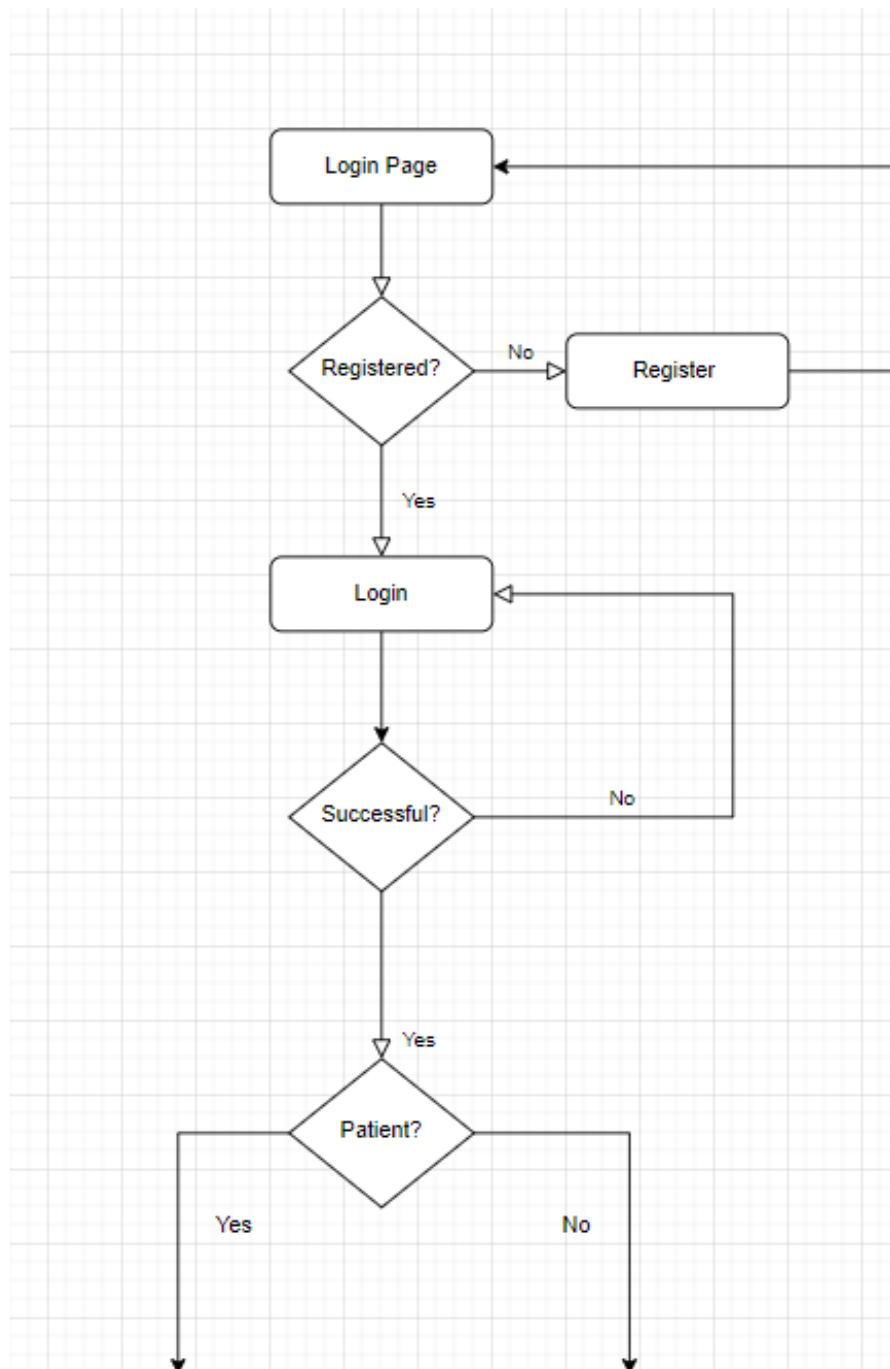
Conceptual Design:

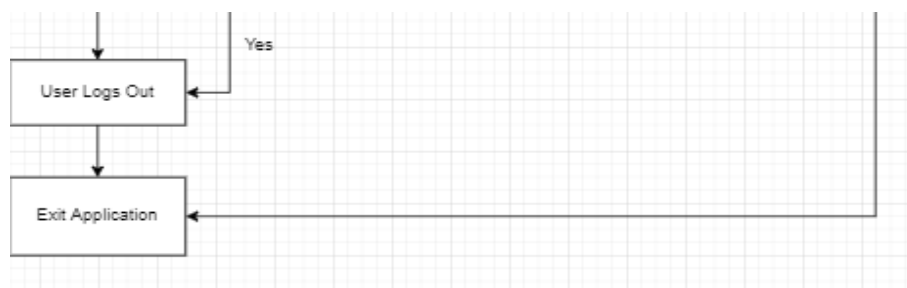
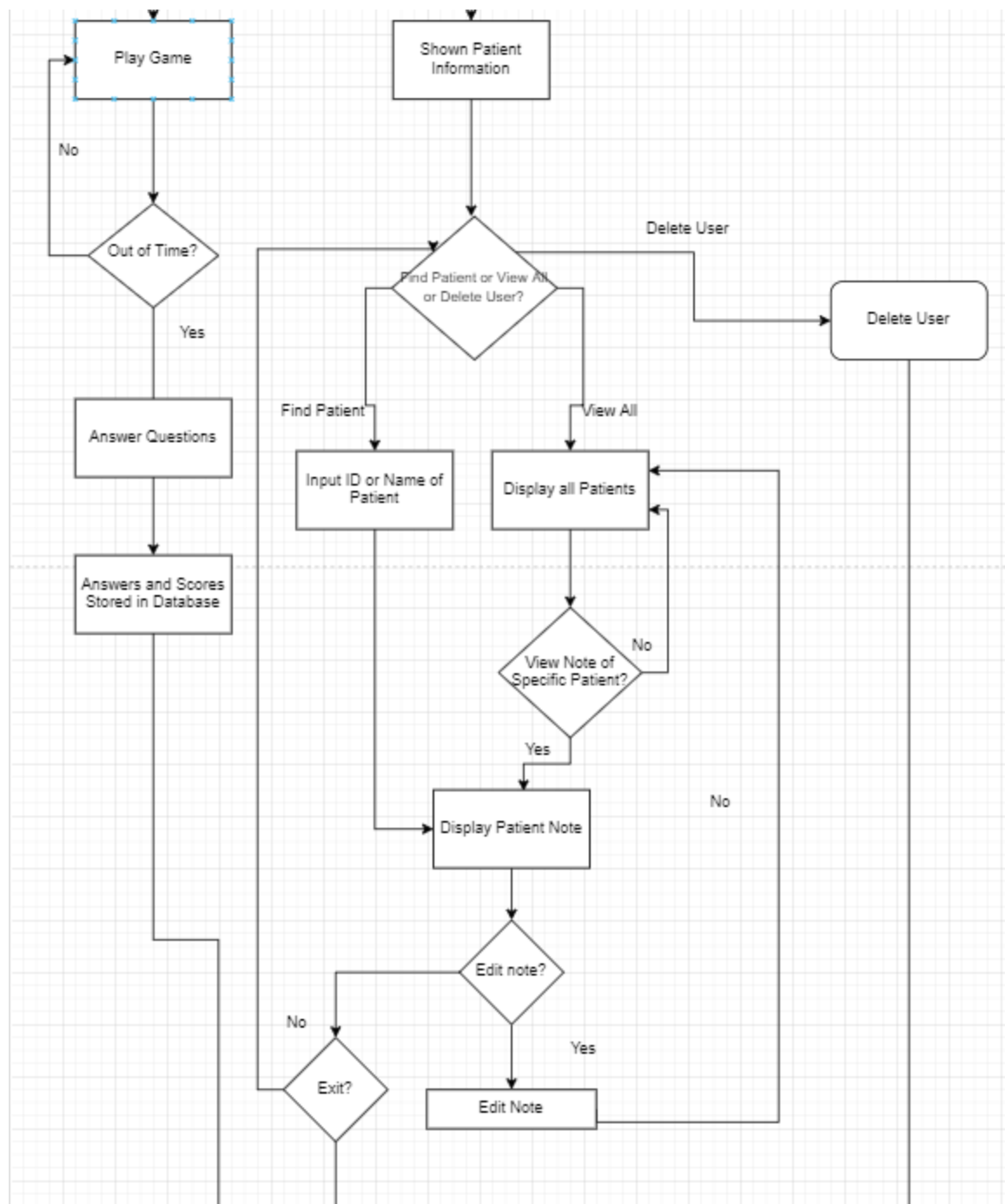


Logical Design:



Flow Diagram:





Example Commands:

Registering

Logging in

Reading question from database

Updating question responses

Creating a game

Updating high score

Reading user information

Searching for a user

Reading notes

Deleting User

Deleting Question

Deleting Note

View Note

Edit Note

Exit Game

Exit Application

etc.

Lessons Learned and Future Work:

We believe that we gained a lot of technical knowledge throughout the process of this project. As we have only taken java-based courses throughout our time at northeastern, more specifically during fundies 2 and OOD, we wanted to try out efforts on a higher-level programming language such as Python. At first, it was a bit shaky because we were not familiar with a lot of the syntax, but in the end, we were able to successfully build a complex product that helped practice our skills in MySQL and Python.

Going into this project we were very optimistic about completing a comprehensive project that involved both our mediums of interests - game design and psychology. We became very ambitious with the project that we wanted to create, which is good, but we also had to consider the amount of time it would take to make such a program. If I were to give advice to those who are creating a similar project, I would advise them to definitely create something that they would be proud of, but don't be overly ambitious with what you will be able to build in a couple of weeks. However, starting earlier does help the process of keeping on track; if you run into issues that take longer than expected to solve, you always have enough time to fix them. After receiving feedback from our project proposal we realized that we had quite a few things wrong in our original design. We sat down and talked about what exactly we were missing in our design and brainstormed how exactly we could tackle these problems. In the end, we were still able to capture the essence of our project, but with a few tweaks, we were able to come up with a more well-founded idea.

Throughout the project, there were moments where we considered tweaking our functionality to better suit the pace of the project. For example, cutting down on the visual aspect of the program. As of now although useful, our product is not especially visually appealing: which can be an area of possible improvement for the future. We also thought about adding complete profiles for registered members such as contact information for patients, as well as a section for debriefing results after analyzing a patient's answers. Another area for improvement would be to add a more enticing game that could be more appealing to the younger demographic. We plan on continuing to work on our project until it can be advertised as a standalone product that can benefit real children going therapy around the world. Hopefully, it will reach that point someday!