Timeline:

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| # | Task | Start Date | End Date | Milestone | Predecessors  (Task #) |
| 1 | Research how to Generate QR Codes | 10/31/19 | 11/7/19 | 1 | - |
| 2 | Research how to use Android Studio | 10/31/19 | 11/7/19 | 1 | - |
| 3 | Create the Low-level interface diagrams | 10/31/19 | 11/7/19 | 2 | 1 |
| 4 | Research resources needed for SQL database for our prototype | 10/31/19 | 11/7/19 | 1 | - |
| 5 | Design Database and all the tables needed. This includes account information and other tables that will be needed. | 11/7/19 | 11/27/19 | 2 | 3,4 |
| 6 | Implement Database on whatever platform decided for SQL database. This includes the creation and linking of all tables needed to store information | 11/27/19 | 1/14/20 | 3 | 4,5 |
| 7 | Design app interface for the Dive Masters option. This is the layout of what the Dive Master will see when setting up an account and signature for the database and QR code | 11/7/19 | 11/27/19 | 2 | 3 |
| 8 | Design app interface for the normal Divers option. This is the layout of what the normal Diver will see when setting up their Dive logs | 11/7/19 | 11/27/19 | 2 | 3 |
| 9 | Create app interface for Dive master and link it to the SQL database. This includes testing to make sure there is data flow between the two parts | 11/27/19 | 1/14/20 | 4 | 2,3 |
| 10 | Create app interface for the normal Diver. Includes information from Dive logs and area for a Dive Masters signature | 11/27/19 | 1/14/20 | 4 | 2,3 |
| 11 | Implement the scan of the QR code for the normal Diver and test that it works. This means that the signature from the dive master is in QR form and it can be scanned by any scanner | 11/27/19 | 1/14/20 | 4 | 2,3,9,10 |
| 12 | Refine all parts to be able to communicate with each other | 1/14/20 | 2/1/20 | 5 | 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 |
| 13 | Test Prototype in its entirety. This includes from start to finish what a normal user and a Dive master would experience | 2/1/20 | Ongoing | 6 | 12 |
| 14 | Fix any bugs and minor flaws in the system that may have appeared in the test of the prototype | 2/1/20 | Ongoing | 6 | 13 |
| 15 | Finish any paperwork and presentation documents needed for the senior design fair | 2/1/20 | End of Spring Semester | 7 | 14 |

Milestones

1. All research gathered. This includes how and what to use for the database, refresh on how to use Android Studio, and how QR codes work. The deliverable for this is either in the form of notes or explanation of items that we used in our documents. This is a list of specific things either researched or decided on.
2. Start designing user interfaces and the SQL database. This will be in the form of how tables will interact with each other before coding the table so that we can link tables and have a visual representation of how this will look. Going in and making the SQL table without this could result in a lot of wasted time trying to fix issues. This goes with the interfaces as they will need to be designed before coded in order to reduce unforeseen issues that may arise in the design and transition from pages of the App.
3. Start coding the Database. The deliverable for this will be a fully functioning SQL database that can both send and receive information. This will be made with SQL and will have all parts from the design implemented.
4. Start coding Interface. This will take the longest and will need to be broken up further which is in the task list and Timeline. The deliverable for this will be actual code documents made and progression towards an actual App.
5. First prototype test. The deliverable for this will be the whole app and database doing the function of scanning a QR code and getting a response on the dive log. This will be the most basic form and will not have bells or whistles attached to it.
6. Second prototype test. This will be after all the bugs from the first prototype are taken care of as well as any bells and whistles that have been decided to add on. The main deliverable here is the App without the bugs from the first prototype test. Any additions are more icing on the cake.
7. Final Product with deliverable for senior design. The deliverable here will be everything we have previously done as well as a board to present in the Senior Design Fair. This will consist of the board and the third prototype or the second in a successful state.