1. An introduction of your application, including why you want to develop the application and the main functions of your application.

When we are choosing a cell phone, you have to compare their functions and their overall evaluation given by the other users. We develop the application for anyone who is having trouble choosing cell phones. In our application, you can have a quick access to all the popular cellphone information, and you can also filter the cell phones according to your preferences. In addition, we have made some analysis based on a questionaire, so you can know how the public or a particular group of people think of the cell phones.

1. Database design - describe the schema of all your tables in the database, including keys and index, if applicable (why you need the keys, or why you think that adding an index is or is not helpful).
2. Database design - describe the normal form of all your tables. If the tables are not in BCNF, please include the reason for it (performance trade-off, etc.).
3. From the data sources to the database - describe the data source and the original format.
4. From the data sources to the database - describe the methods of importing the original data to your database and strategies for updating the data, if you have one.

We first import our original data through PGAdmin. Since the are several error in the previous data, we use pandas in python to deal with all the errors (all the details are in the python\_modified file). The resource of our database will never be updated, so we decided to update all the data by ourselves or the other users. We can either use PGAdmin or the application to update the data. In our application, we will have a page for data updating. You can input the data according to the format, and the data will be sent into the database.

1. Application with database - explain why your application needs a database.

A database can help our application store and retrieve data in an organized and structured way. This can make it easier for our application to access and manipulate the data as needed. Without a database, our application can’t store a large amount of data and manage the data efficiently, which might result in difficulties on analysing the cell phones.

1. Application with database - includes the queries that are performed by your application, how your application performed these queries (connections between application and database), and what is the cooperating functions for your application.
2. All the other details of your application that you want us to know.