Question 2

Design Description:

The purpose of the application allow up to 10 waiting lists to be created for types of events, with up to 10 customers in each queue.

The method by which I chose to develop the application was by creating two classes and utilising a modified version of the *'Queue'* program that was provided to us during the year. The changes made to this example program involve the calculation of the queue length, as well as providing an export of the queue, in order, as an array to be presented to a different class function.

The logic flow of the general use case is as follows:

-A database, in the form of a CSV file, is loaded into the application to populate the queues initially.

-User is then presented with a display of the queues and a menu to select the queue they would like to operate.

-User may then select the additional options to add & remove customers from the queue, search for a customer by their surname, and rename & clear the queue for other purposes.

Classes

Queue - The queue template that was provided to us during the year was used, as a slightly modified version. This was used to enable adding the Customer class to a queue in order to store data of both their name & phone number.

Customer - The customer class was used to store the name and phone number of a person in the queue. Little processing is done in this and is used for data storage only.

Event - The event class is the enabling class of the system, with any interaction with the queue itself going through methods defined under this class via function calls.

Testing Strategy:

Testing involved inserting data that would be both expected, and unexpected by the application, as well as combinations of both. Validation was used to ensure that data being input to integers was only processed if it was of the correct type.