The "Smart Grocery" application, developed by Bilal Naseer, Umar Khan, and Daniyal Khan is a comprehensive cooking and meal preparation tool.The app provides a digital platform hosting thousands of recipes, complemented by a virtual pantry feature. This allows users to manage their ingredients efficiently, with the added convenience of linking to supermarkets for purchasing missing items. The application was crafted using Dart and SQLite, ensuring robust database management.

In terms of its release and development timeline, the project witnessed a phased evolution. The first release on October 6, 2023, introduced basic functionalities like login or guest access, recipe viewing, and ingredient checking. The second release, on November 4th, enhanced the app with a virtual pantry for adding or removing items and recommending recipes. Additionally, it included a feature to display supermarkets in Chicago,and be able to purchase ingredients from a store, which addressed the needs of users for missing ingredients.

When compared to the work of a previous group from Fall 2022, "Smart Grocery" shares several functionalities like recipe browsing, ingredient and instruction viewing, and linking to grocery stores for missing ingredients. However, it differentiates in not incorporating a platform for chefs to post recipes and cooking tutorials, or allowing users to add dietary restrictions to their profiles, which were features envisioned by the team that created this report.

The project underwent rigorous testing and inspection to ensure quality and functionality. It included user interface testing, database integration testing, and regression testing that focused on UI responsiveness and database query optimization.

All tests concluded successfully, demonstrating the app's reliability and efficiency. The inspection phase enhanced various app features, identifying minor issues such as camera functionality in the first release but overall validating the app's robustness.

Looking forward, the team identified areas for improvement and expansion. A pressing need is the implementation of a store API for a more streamlined checkout experience. Future additions may include a machine learning algorithm for personalized recipe recommendations and dietary restriction filters. Moreover, as a group we are possibly interested in incorporating features for recipe sharing and creation, aiming to enhance the app's versatility similar to popular platforms like TASTY in the near future.