

CHAPTER V

CLOSING

5.1. Conclusions

Based on the results of the system design, implementation, and testing that have been conducted, the following conclusions can be drawn :

1. The canteen food ordering system was successfully designed and built on a website basis using the Laravel framework, MySQL database, and Progressive Web Application (PWA) technology, enabling it to be accessed via both desktop and smartphone devices with a responsive interface.
2. The User-Based Recommendation method was successfully implemented in the system to generate food menu recommendations based on transaction history and user ratings. The recommendation process is carried out by calculating the level of similarity between users using the Cosine Similarity method, so that the system can provide more personalized recommendations according to user preferences. Furthermore, the cold start problem was successfully addressed through the Most Popular Food mechanism by displaying the menus with the highest number of orders to new users who do not yet have a transaction history or ratings.
3. The developed system is capable of assisting users in determining their food menu choices and supporting a more efficient ordering process. The validity testing results using the Pearson Correlation indicate that all questionnaire items have an r-calculated value greater than the r-table value (0.361), so all research instruments are declared valid with a validity rate of 100%. In addition, the evaluation results using the Cohen's Kappa method obtained a value of 1.000, which is included in the "Very Good" category, thereby indicating that the system operates in accordance with the designed requirements.

5.2. Suggestions

Based on the results of the research that has been conducted, there are several suggestions that can be used for system development in future research, namely :

1. Developing the recommendation system by combining the User-Based Collaborative Filtering method with other methods, such as Item-Based Collaborative Filtering or Content-Based Filtering, so that the resulting recommendations can be more accurate and diverse.
2. Adding digital payment and real-time notification features to make the ordering process more practical and allow users to obtain the latest information regarding their order status directly.
3. Adding more comprehensive sales analysis and reporting features to assist administrators in monitoring menu performance, ordering trends, and overall transaction activities.
4. Conducting system testing and evaluation with a larger number of respondents so that the results obtained can provide a more representative overview of the user acceptance rate towards the system.
5. This study utilized 30 users with a total of 133 rating data entries. This amount of data was sufficient to implement and test the functionality of the User-Based Collaborative Filtering method within the developed system. However, this dataset is still relatively limited for demonstrating the method's performance on a broader implementation scale. Therefore, future research is recommended to use a larger number of users and rating data to optimize the user similarity generation process and ensure that the evaluation results of the recommendation system are more representative.