

CHAPTER V

CONCLUSION

5.1 Conclusion

By developing and implementing the new PWA of Forum Kerukunan Umat Beragam, the writers conclude that:

1. Frequent code refactoring can greatly improve both the internal and external quality of the software system. Clean and neat architecture needs to be maintained regularly as the continuing feature addition and code modification.
2. The Progressive Web App approach can be an alternative to the cross-platform framework. It resembles the features of native apps and solves the development hassles like device compatibility, behind schedule deployment, updating issues along with high development cost and time.
3. The robustness of the Progressive Web App by offering faster loading times and smaller installation package proved to increase the average traffic, conversion and engagement rate of mobile websites. It did give users with better user experience by offering seamless offline operation, quick installability, push notification functionality, enhanced security, wider platform, and device compatibility. Also, it doesn't depend on app distribution services like AppStore from Apple, PlayStore from Google and Microsoft Store to deploy. Therefore, there is no behind schedule app distribution, anyone with the link or PWA installed on their devices can easily refresh the website to get the latest updated features.

5.2 Suggestions

Suggestions for further research are listed below

1. For refactoring or even newly developed software projects, the developers are recommended to use SOLID principles as basic guidelines. The 5 principles of Object-Oriented Design which are also part of the adaptive and agile software development by Robert C. Martin that can enable developers to effortlessly maintain and extend the software.

2. Although PWAs proved to improve performance, the full Javascript technology stack can take it to another level. By using stack consists of NodeJS for backend, ExpressJS for routing, GraphQL for API, ReactJS, VueJS or AngularJS for frontend design. Together, it can lower the development time and cost, also make open collaboration with other systems effortless.