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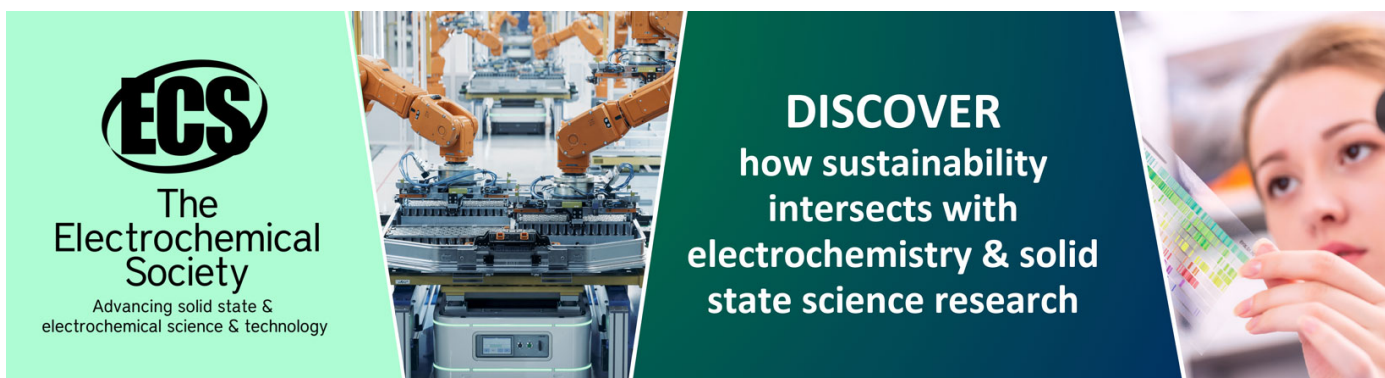
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To cite this article: E Satria *et al* 2019 *J. Phys.: Conf. Ser.* **1402** 077019

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Electronic catalogue for mapping mosque potencies

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Abstract. The existence and purpose of the mosque are vital in Islam. In the mosque, there are some activities related to religious and social life. Although mosque identically used as the centre of religious activity, although there are some potencies can be utilized from mosque such as, economy, education, social, etc. The main idea of this research is to design an electronic catalogue so people can map the information about mosque potencies. In this paper, we use Rational Unified Process (RUP) for research staging and Unified Modelling Language (UML) as a modelling tool. Result of this research is an electronic catalogue application which can provide the mapping of information about mosque potencies and activities related to mosque accurately. We hope with this electronic catalogue, people can be more aware of influences, function, and impact of the mosque to social life around it.

1. Introduction

Places of worship are essential facilities for religious followers [1]. This place of worship is spread in several areas, including in government-owned institutions. There are many activities organized by the management of places of worship, this is intended to make the spiritual life of religious diversity better [2]. Among the places of worship in Indonesia are mosques used to serve Muslim community religious ceremonies [3]. Religious education held in mosques is a form of support for government development programs [4]. Therefore, it is natural that the government gives attention to the existence of mosques and religious activities held therein.

Often information on religious activities published by managers of places of worship is limited to wall information boards. Even though the information may be needed by the community located far from the site of prayer which is the location of the activity, this causes a lack of information on events to the public. Cities that are located far from the place of worship must provide energy and time that is not small to be able to access information in the area of prayer. Information technology, both software, hardware, and computer networks [5] can be used to realize time efficiency [6] in accessing this information.

There are a number of studies that related to the development of technology for the presentation or dissemination of information including digital information boards and web portals which provide information from various online sources [7, 8], online storefronts [9], and online catalogues [10,11]. Some studies provide information regarding the location of the sources of information presented on the map [12-14]. These studies offer technological designs for displaying information related to specific activities or places. It's just that no one has made the place of worship and its activities as the object of information presented in the technology. This research develops a web-based electronic catalogue



application software specifically designed to give information on religious activities held in places of worship.

2. Methodology

The development method used in this research is RUP (Rational Unified Process) using the UML (Unified Modelling Language) technique with stages and research activities as shown in Figure 1. The literature review is conducted to find the space for research problems that can be filled in by this research. The inception to construction phase is carried out to get the design model and its implementation. This research activity ends at the publication stage where the research results are presented in research articles published in online scientific journals.

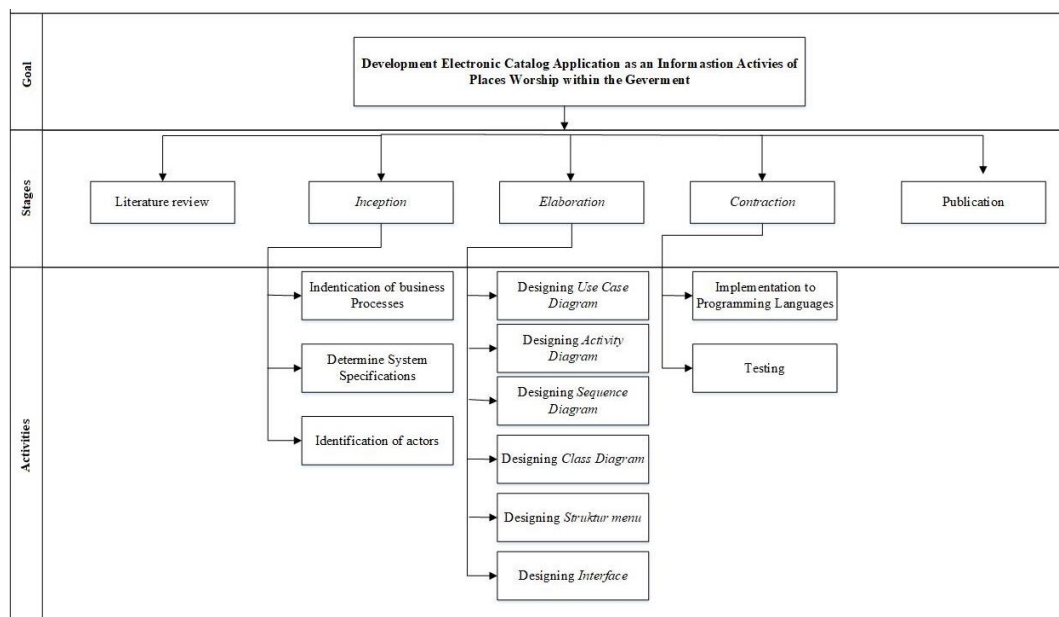


Figure 1. Research methodology.

3. Results and discussion

This research produces a design model presented in the UML diagram, as well as its application in the form of web application software. The online catalogue application created offers religious information sourced from the management of the place of worship. In its application there are available mosque location features that are presented in the form of maps as shown in Figure 2, in harmony with previous studies [12-14]. Data managed in this application includes data on mosques, lecturers, mosque boards, potential mosques, roles and functions of mosques, as well as users and opinions.

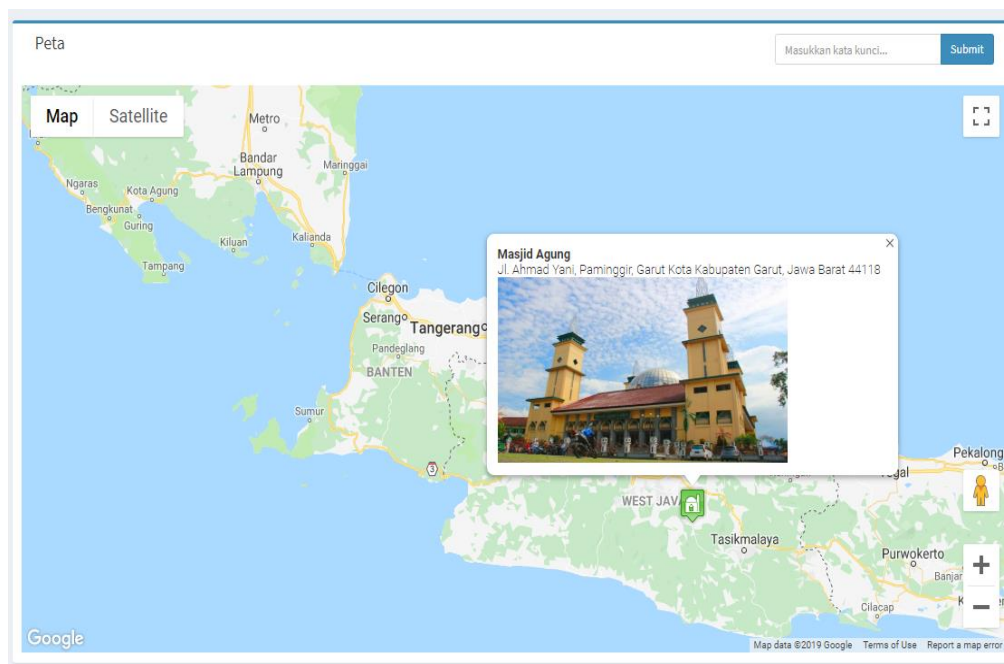


Figure 2. Coordinate point detail display.

Apart from being presented on the map, the application also provides an electronic catalogue containing a list of places of worship as shown in Figure 3. Electronic catalogues give access to information about religious activities and profiles of places of worship.

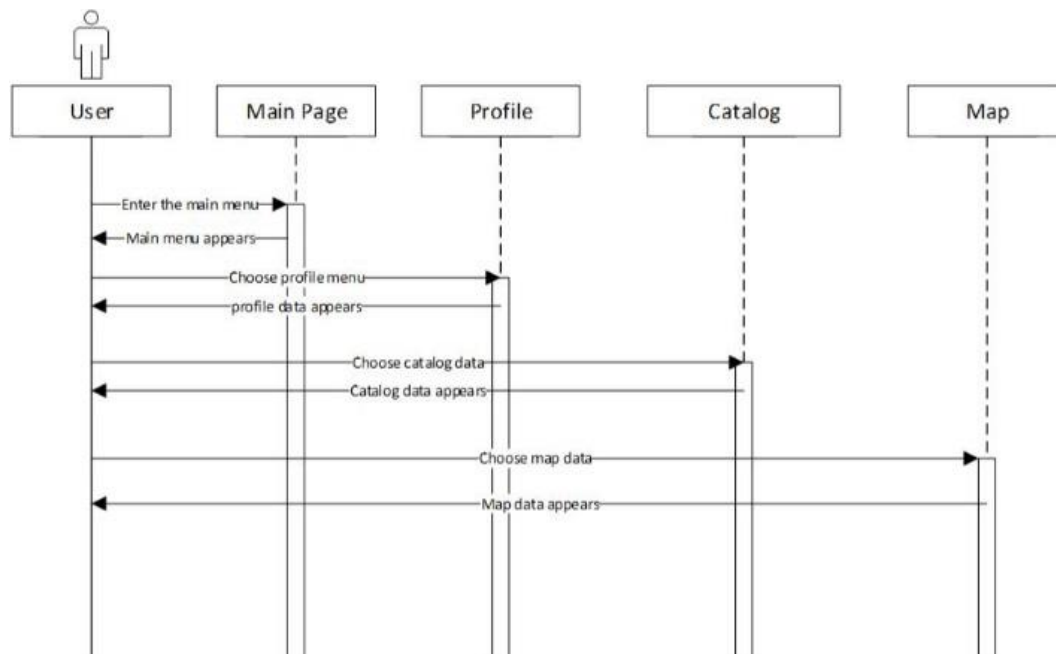


Figure 3. The example of sequence diagram of the user.

Profile data and mosque activities are managed into the application database by mosque administrators through the internet network. Only administrators who have been registered by the admin can access the mosque's data management page. The public can access the information contained on this web page using a computer connected to the internet. This can be quickly done for even remote mosque locations, such as the location of various mosque distances presented in Table 1.

Table 1. Examples of distance between mosques.

No	Mosque	Distance
1.	Annur (admin), Jakarta	0 km
2.	Al-Muhajirin, Depok	39 km
3.	Ibnu Abbas, South Jakarta	15 km
4.	Masjid Agung, West Java	214 km
5.	Islamic Centre, West Java	214 km

The final stage is tested by an alpha test which shows that the overall application works well, the functions contained in the app run according to the instructions given. Furthermore, the beta test is carried out by involving the user, and the response is that the application, including user-friendly, easy to use, the information presented can be quickly and easily obtained. Both of these testing stages provide satisfactory results in accordance with the expected goals. Some users offer suggestions to review more about responsive web display in a mobile view [15], this is needed for mobile application users.

4. Conclusion

This research has succeeded in developing an electronic catalogue application that presents profile information on places of worship and activities. This research developed an app designed only to show the profile and events of the mosque. Future research can modify the design so that other places of worship can be given in an electronic catalogue.

Acknowledgments

The Author would like to thank those involved in this article writing. A special thanks to Sekolah Tinggi Teknologi Garut which supported a lot in the funding of the research.

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