DETERMINATION OF DIRECTION OF QIBLA USING MATHEMATICAL CALCULATION METHODS

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DECLARATION BY CANDIDATE

We certify this report and the project to which it refers is the product of our own work and that any idea or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with standard referring practices of the discipline.

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ABSTRACT

Nowadays, many Muslims life to perform their prayers had been easier compare to the past due to modern technologies aiding them. One of the important aspect of Muslims prayers is the qibla which is the direction of the Kaabah. It is an important knowledge of knowing the direction the direction of qibla as it is necessary for Muslim to perform the sholat 5 times a day. In recent times , modern technology has greatly improved the life of Muslims that are performing sholat by simply clicking on an apps that instantly tell them the direction of qibla. However, with the rise of counterfeit apps and hacking on smartphones, many Muslims want to find an alternative ways to find the direction fo qibla without the use of technology. The goals of this research is to provide the mathematical calculation method to find the direction of qibla so that Muslims can perform the sholat. To find the method, the research aim to compare two methods which is spherical trigonometry method and vector calculus method to see which method is the best by comparing both method to existing data. For example, Bandar Seri Begawan from Brunei has latitude and longitude of 4.9031 N and 114.9398 E respectively. By using both spherical trigonometry method & vector calculus method, we obtained the result of 290.8611 and 290.8967 respectively. By completing this research, the project will provided Muslim the best calculation method needed to find the direction of qibla.

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