

Title: ANDROID MOBILE DISASTER INCIDENT REPORTING APP FOR BARANGAY 76 –A BUCANA USING LINEAR CONGRUENTIAL GENERATOR ALGORITHM AND REALTIME DB FIREBASE

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EXECUTIVE SUMMARY

The researcher's ultimate goal for this study is to provide Barangay 76-A Bucana Davao City residents a convenient and effective way of disaster incident reporting to the Disaster Risk Reduction Management Office and allow them to receive notification reports or updates regarding the safety or any related news or events that may concern all residents within the barangay premises. The researchers took advantage and utilize the fast-growing technologies such as real-time database called Firebase which stores the data online web service, makes it available and displays the data in real time manner. The researchers also used cloud messaging technique in which it allows the admin server to broadcast message privately to a single user or to all of the registered users of the mobile app. The researchers also implemented jpeg image compression algorithm which compresses image data captured in the mobile app before it is stored in the Firebase so that the transmission of data is smooth from user client mobile app to web server. For security and account authentication concerns, the researchers implemented Linear Congruential Generator Algorithm which generates random value code once the user client attempts to register an account in the mobile app. Lastly, Web Audio API is also used for notification purposes in the web server side.

Keywords: HTML5, CSS3, HTTP Protocol, Web Audio API