THE DESIGN AND DEVELOPMENT OF TABANG: FIRE EMERGENCY RESPONSE SOFTWARE APPLICATION

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Abstract

A timely and efficient response is crucial and must be implemented during times of emergency. Emergencies specifically fire pose notable threats and damage to lives and properties if not responded immediately. In the Philippines, one of the identified issues is the delayed response time with underlying factors: distance of the nearest fire station from the area of the incident, traffic situation, and the availability of fire trucks. In addition, local citizens do not have the hotline and contact numbers of these fire responders from which delayed call for action is experienced. The Tabang app is a fire emergency response software application to improve the responder's response time during operations. Tabang's objectives are: to provide citizen users the ease and convenience to call for help from the nearest fire stations within the location, to guide responders using map routes with less traffic, and to provide information regarding the availability of fire trucks from each station. It will make use of Google Maps API for precise emergency locations, Google Directions API for directions and current traffic situations, and Distance Matrix API to provide travel distance between routes. The Tabang app for citizen users can be accessible to those who have accounts signed up, while the Tabang app for BFP users will be available for those on-boarded fire stations. It will employ Twilio for citizen user verification using OTP via SMS and PostgreSQL as the database for user data storage. The expected outcome of this study is an application bearing these solutions.