Gift Scavenger Hunt

By

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A Proposal Submitted to
The Faculty of The School of Information Technology
In Partial Fulfillment of the Requirements for
The Degree of Bachelor of Science
In Information Technology

University of Cincinnati
The School of Information Technology
College of Education, Criminal Justice, and Human Services

April 2014
Introduction

Gift Scavenger Hunt is an Android Application that is designed to entertain, educate, and keep children active. It has been proven that technology can be an extremely useful and beneficial tool in teaching children. “When used intentionally and appropriately, technology and interactive media are effective tools to support learning and development.” (NAEYC, 2012) Parents and teachers are now combining the use of technology to teach and entertain children. The combination of teaching while entertaining them has proven to be extremely effective. “Technology is not ‘just one more thing;’ it's a vital experience that brings discovery, excitement, and even fun to the classroom.” (Johnson, 2012)

Problem

There are many geo-caching and educational applications currently on the market. However, there aren’t many of these types of applications that are easy to use or have varying features beyond geo-caching. There also are very few that are designed to be appealing to children and families. Currently there isn’t an application that has an easy-to-use user interface, and customizable features that can be used by people of all ages.
Solution

The “Gift Scavenger Hunt” Android app was developed to provide a fun and educational scavenger hunt-type program for children ages 5 to 15 that keeps their minds and bodies active for hours (family can play along too). Instead of solely following a map to a location, “Gift Scavenger Hunt” will give the user(s) the option to use text questions, pictures, and geo-caching on a simple and easy-to-use user interface which allows the game administrator to personalize each hunt. This application will fill the need and void for an easy-to-use scavenger hunt application. Gift Scavenger Hunt will automatically create and email QR codes for clues that are meant to be found, making the application simple and fun to use for the entire family. The application will also have themes, so it can be used all year round without ever having to duplicate activities. The application will function like a standard scavenger hunt, prompting questions or clues, which once found and scanned, will prompt the user to see the next clue until the gift or conclusion of the scavenger hunt is reached.

User Profile

The user will need to have minimal experience with applications and possess the ability to type, text, and take a picture. The user can range from children to teachers, baby sitters, parents, and friends. There is no previous experience required with this type of application. The application can be used during birthday parties, holidays, and anytime the family wants to have fun, learn, and be entertained.
**Technical Elements**

- Platform – Android
- Language – Java
- IDE – Eclipse
- QR Library – ZXing
- Graphics – Designed by Developer
- Device for testing – HTC One, Samsung Galaxy S3, Samsung Galaxy S4
- Data persistence – Stored locally
- GPS mapping – Google Maps™

Data is persisted locally on the device to mitigate security risks and the need for an Internet connection. The QR Library used for the app is ZXing, which was chosen for its ease of use and the availability of training resources available. GPS mapping was completed utilizing Google Maps™.

**Budget**

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<th>HTC One</th>
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User Testing

User testing was completed twice during development. The initial testing was done prior to the graphics being completed and with basic functionality in place. The application was tested with children between the ages of 6 – 13 and their parents. During testing the users were asked for feedback using a formal questionnaire and informal verbal feedback while using the application. The second testing was completed with the same group after implementing changes and completing graphics. After the second round of user testing the application was once again modified to accommodate feedback requests and was finalized for initial release.

Project Timeline

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<td>Testing &amp; Feedback</td>
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Conclusion

Gift Scavenger Hunt is an easy to use, fun, intuitive application. The application is designed to enhance the gift giving experience, as well as, educate and entertain children and families. Gift Scavenger Hunt is intended to fulfill the current need in the market for a customizable scavenger hunt application that offers more than geo-caching.

References


Learner’s signature: Jason A Moore       Date: 4/17/2014
Learner’s printed name: Jason Moore

Advisor’s signature: Russell E McMahon       Date: 4/17/2014
Advisor’s printed name: Russell E McMahon