Catamount Easter Egg Hunt

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Problem Domain:

Based on the recent success of games such as Pokemon Go, this capstone aims to gamify the campus of WCU by creating an application which students can use to participate in a campus wide Easter Egg Hunt, as well as help new students easily find their way around campus.

Implementation:

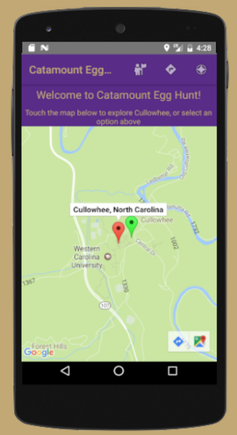
Android Application:
- Android dominates the mobile phone market
- Android provides many useful libraries for development

Google Maps API:
- Used to develop interactive maps

QR Scanning:
- Players scan QR codes to unlock easter eggs

Custom XML:
- Developed customized XML, or eXtensible Markup Language, to hold location and egg data

Main Menu



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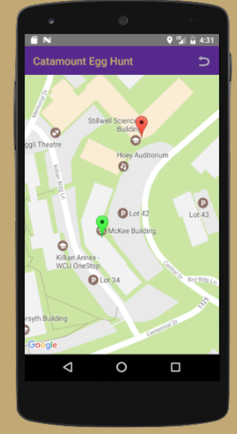

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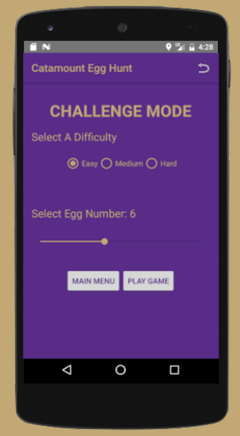

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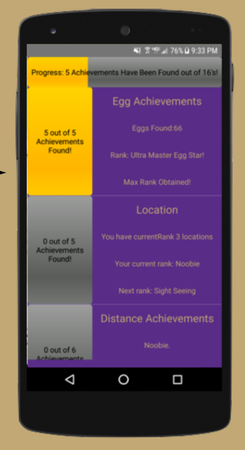

1 Location Finder Mode:
- Users can select campus locations
- Map markers update as user moves
- User is alerted when they reach their destination

2 Egg Hunt Mode:
- Users participate in an Easter Egg hunt for campus locations
- Players are given hints to guide them based on difficulty
- Users must scan a QR code at the egg location

3 Achievements:
- Three achievement categories - egg collection, location discovery, and distance traveled
- Players can upgrade their achievements as they play

Conclusion:

- Our application gives students a fun and interactive way to explore campus
- New and perspective students can use the application to navigate the campus on their mobile devices
- The application was developed so it can be built upon in the future
- The project allowed us to apply many of the concepts learned in the CS curriculum and we gained valuable experience in the Android Framework and in Java