CPET 491 Senior Design Report Phase II

Android Golf Statistics Tracker

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- Introduction
- Problem Statement
- Solution Statement
- Project Requirements
- System Design
- Testing/Verification
- Conclusion
- Demonstration

Project Outline

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Background

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- Golfer's currently do not have an easy way to track statistical information
- Similar applications lack an in-depth analysis of statistics and are not easy to use
- Our application is the only one that we saw on the Android Market that utilizes voice commands

Problem Statement

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- Simple graphical user interface
- Voice recognition for data entry and navigation
- GPS for tracking club distances and as a range finder
- In-depth and comprehensive statistical analysis
- "Caddie Feature" where the program recommends a club for the user
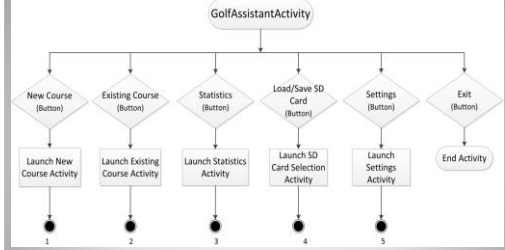
Solution

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- Read/write information to and from multiple databases
- Save/load user data to and from SD card
- Display statistical analysis in tables and graphically (pie charts)
- Keep application under 6 MB
- Support multiple screen sizes
- Support Android versions 2.1 and higher
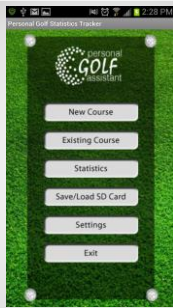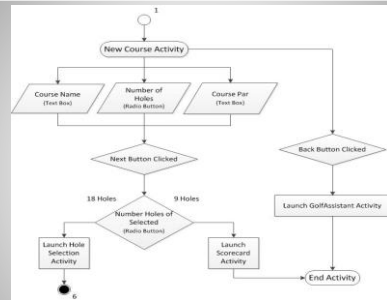
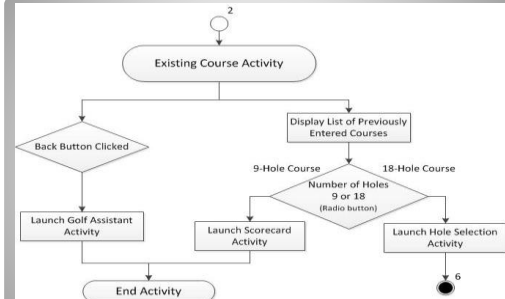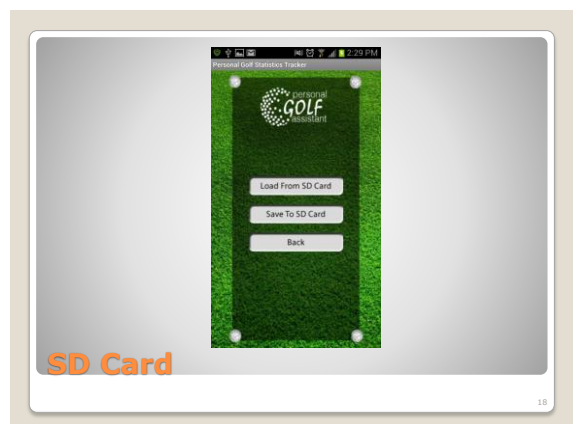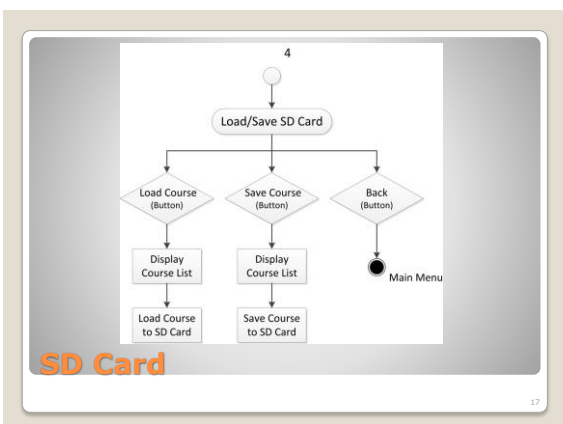## Project Requirements

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System Design

Main Menu

Main Menu

New Course

New Course

Existing Course

Existing Course

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- Voice Recognition
- GPS
- Round Statistics
- Club Statistics

Scorecard

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Statistics

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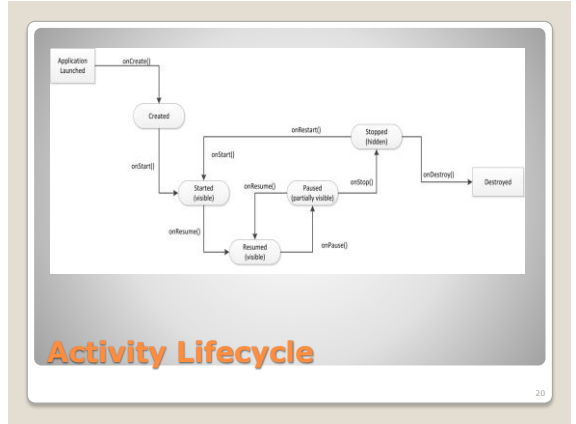**Statistics**

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SD Card

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SD Card

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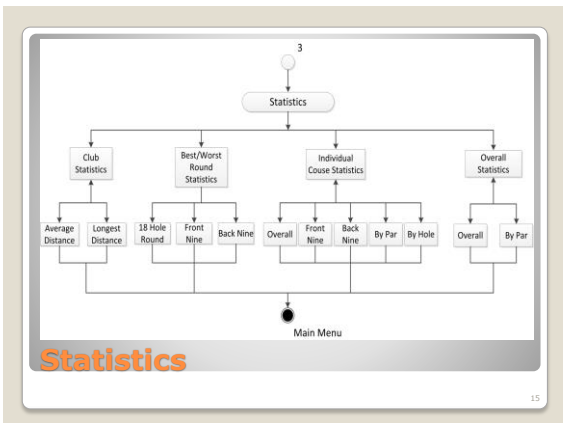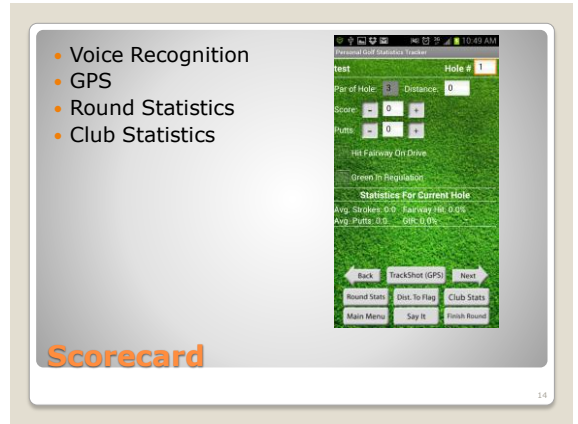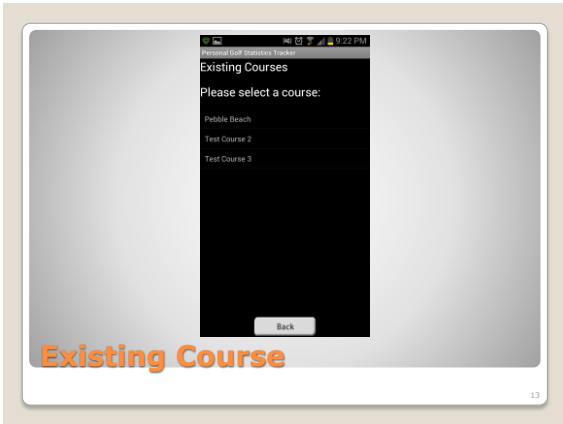
Activity Lifecycle

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Activity Lifecycle

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GPS Tracking

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Accuracy Range
1. 6 m
   - 1-15 data points
2. 8 m
   - 15 - 25 data points
3. 10 m
   - 25 - 45 data points

GPS Tracking

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SD Card

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The default path for the SD card is */mnt/sdcard/* but the problem is phone companies started using built in SD cards for storage which use */mnt/sdcard/* as their default file location

Test Device	Directory
HTC Desire	/mnt/sdcard/
Samsung Galaxy S II	/mnt/sdcard/external_sd/
Samsung Galaxy S III	/mnt/extSdCard/

SD Card

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Testing

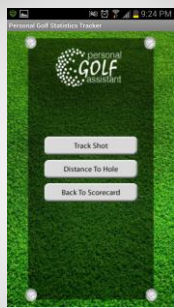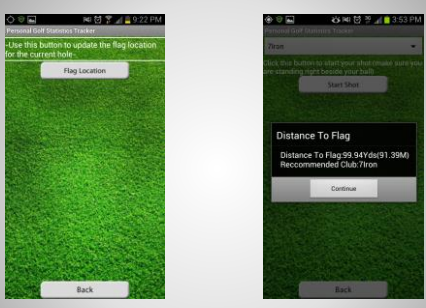| Course Par	68
Par of Holes Played	68
Total Strokes	69
Total Putts	31
Total +/-	(+)1
Avg. Strokes/Hole	3.83
Avg. Putts/Hole	1.72
Fairways Hit	81.82% (9/11)
GIR	61.11% (11/18)
Pars	50.0% (9/18)
Birdies	16.67% (3/18)
Eagles	5.56% (1/18)
Bogeys	22.22% (4/18)
Double Bogeys	5.56% (1/18)
Double Eagles	0.00% (0/18)
Triple Bogeys+	0.00% (0/18)
Hole in One	0.00% (0/18)

Verification/Testing

Conclusion

Demonstration

GPS Menu

Distance To Flag

Track Shot

Track Shot

The track shot aspect of the application allows the user track the average distance for any club selected from the dropdown menu. The application will automatically select the club from the list based on how far they are from the hole.

Test Results