CPET 490 SENIOR DESIGN PROJECT PHASE I

ANDROID GOLF STATISTICS TRACKER

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PROJECT SUMMARY

Project Summary

- Allow users to track and analyze statistical information about their golf game.
- The problem we are trying to solve is to automate statistics tracking for golfers.
- Utilization of voice recognition will key difference between this application and similar ones already on the Android Market .
- Will also feature GPS for tracking distances.

Project Summary

Deliverables

- Android Application
- Final written report
- Presentation

Schedule

- 14 weeks for design, integration, and testing phases to be complete
- 8 weeks to complete the final report and presentation phases

Project Summary

Cost:

- Material cost - $0.00
- Estimated labor cost will be 450 hours each
- Estimated total team labor cost 900 hours
- Estimated non-project labor cost 40 hours

DETAILED PROJECT SCOPE

Detailed Project Scope

- User and GPS input data will be stored to multiple databases in the phone's internal memory
- Manipulate the data from the databases in order to provide statistical information back to the user
- User's statistics then can be viewed in a table format as well as displayed graphically

Detailed Project Scope

Key Enabling Technologies

- Android Platform
- Eclipse Integrated Development Environment Version 3.7.2
- Android Software Development Kit
- Phone's internal microphone, GPS, and touch screen

Key Requirements

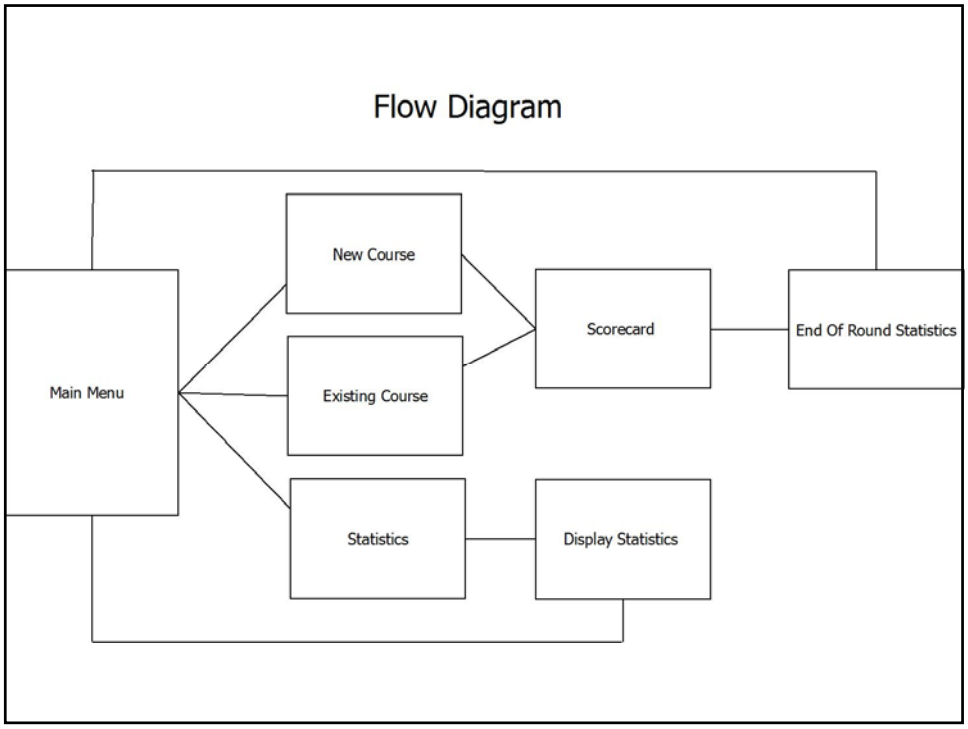
Operational:

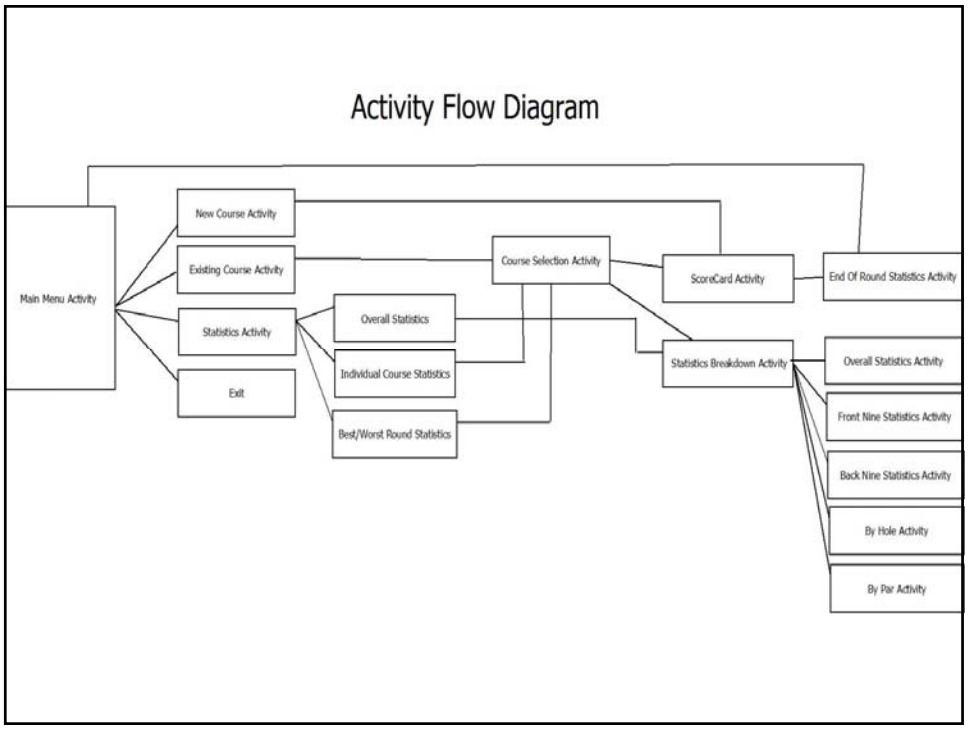
- Read/write data from the databases
- Use GPS to track shot distances
- Use microphone for voice commands
- Track and display user statistics

Functional:

- Read/write data to files using Android File I/O libraries

ARCHITECTURE DIAGRAMS


Flow Diagram
New Course
Main Menu
Existing Course
Statistics
Scorecard
Display Statistics
End Of Round Statistics


Activity Flow Diagram
New Course Activity
Main Menu Activity
Existing Course Activity
Statistics Activity
Exit
Overall Statistics
Individual Course Statistics
Best/Worst Round Statistics
Course Selection Activity
ScoreCard Activity
Statistics Breakdown Activity
End Of Round Statistics Activity
Overall Statistics Activity
Front Nine Statistics Activity
Back Nine Statistics Activity
By Hole Activity
By Par Activity

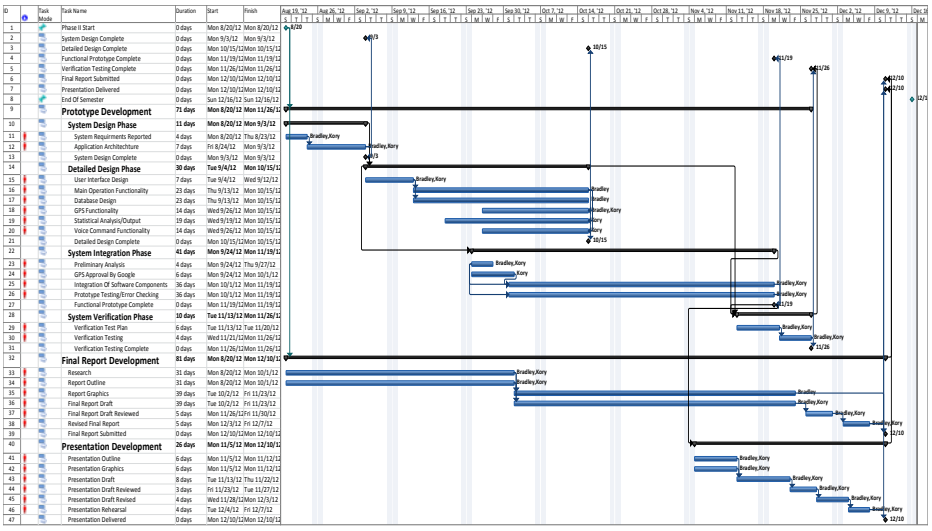
LABOR HOURS AND MATERIALS COST

Cost Schedule	Hours
System Requirements Reported	10
Application Architecture	30
User Interface Design	40
Main Operation Functionality	180
Database Design	40
GPS Functionality	60
Statistical Analysis/Output	70
Voice Command Functionality	8
Preliminary Analysis	15
GPS Approval by Google	2
Integration Of Software Components	200
Prototype Testing/Error Checking	100
Verification Test Plan	10
Verification Testing	30
Research	30
Report Outline	10
Report Graphics	2
Final Report Draft	20
Final Report Draft Reviewed	5
Revised Final Report	5
Presentation Outline	10
Presentation Graphics	2
Presentation Draft	20
Presentation Draft Reviewed	3
Presentation Draft Revised	3
Presentation Rehearsal	2
Presentation Delivered	1
Total:	**908 hours**

Cost Elements	**($) Cost Amount**
Material Costs (est.)	$ 0.00 (no hardware required)
Tool Costs (est.)	$ 0.00 (open source)
Eclipse Indigo IDE v3.7.2	$0.00 (open source)
Android SDK v16.0.1	$0.00 (open source)
Total:	**$ 0.00**

PROJECT SCHEDULE

Schedule Picture



ID	Task Mode	Task Name	Duration	Start	Finish
1		Phase II Start	0 days	Mon 8/20/12	Mon 8/20/12
2		System Design Complete	0 days	Mon 9/3/12	Mon 9/3/12
3		Detailed Design Complete	0 days	Mon 10/15/12	Mon 10/15/12
4		Functional Prototype Complete	0 days	Mon 11/19/12	Mon 11/19/12
5		Verification Testing Complete	0 days	Mon 11/26/12	Mon 11/26/12
6		Final Report Submitted	0 days	Mon 12/10/12	Mon 12/10/12
7		Presentation Delivered	0 days	Mon 12/10/12	Mon 12/10/12
8		End Of Semester	0 days	Sun 12/16/12	Sun 12/16/12
9		**Prototype Development**	**71 days**	**Mon 8/20/12**	**Mon 11/26/12**
10		**System Design Phase**	**11 days**	**Mon 8/20/12**	**Mon 9/3/12**
11		System Requirments Reported	4 days	Mon 8/20/12	Thu 8/23/12
12		Application Architechture	7 days	Fri 8/24/12	Mon 9/3/12
13		System Design Complete	0 days	Mon 9/3/12	Mon 9/3/12
14		**Detailed Design Phase**	**30 days**	**Tue 9/4/12**	**Mon 10/15/12**
15		User Interface Design	7 days	Tue 9/4/12	Wed 9/12/12
16		Main Operation Functionality	23 days	Thu 9/13/12	Mon 10/15/12
17		Database Design	23 days	Thu 9/13/12	Mon 10/15/12
18		GPS Functionality	14 days	Wed 9/26/12	Mon 10/15/12
19		Statistical Analysis/Output	19 days	Wed 9/19/12	Mon 10/15/12
20		Voice Command Functionality	14 days	Wed 9/26/12	Mon 10/15/12
21		Detailed Design Complete	0 days	Mon 10/15/12	Mon 10/15/12
22		**System Integration Phase**	**41 days**	**Mon 9/24/12**	**Mon 11/19/12**
23		Preliminary Analysis	4 days	Mon 9/24/12	Thu 9/27/12
24		GPS Approval By Google	6 days	Mon 9/24/12	Mon 10/1/12
25		Integration Of Software Components	36 days	Mon 10/1/12	Mon 11/19/12
26		Prototype Testing/Error Checking	36 days	Mon 10/1/12	Mon 11/19/12
27		Functional Prototype Complete	0 days	Mon 11/19/12	Mon 11/19/12
28		**System Verification Phase**	**10 days**	**Tue 11/13/12**	**Mon 11/26/12**
29		Verification Test Plan	6 days	Tue 11/13/12	Tue 11/20/12
30		Verification Testing	4 days	Wed 11/21/12	Mon 11/26/12
31		Verification Testing Complete	0 days	Mon 11/26/12	Mon 11/26/12
32		**Final Report Development**	**81 days**	**Mon 8/20/12**	**Mon 12/10/12**
33		Research	31 days	Mon 8/20/12	Mon 10/1/12
34		Report Outline	31 days	Mon 8/20/12	Mon 10/1/12
35		Report Graphics	39 days	Tue 10/2/12	Fri 11/23/12
36		Final Report Draft	39 days	Tue 10/2/12	Fri 11/23/12
37		Final Report Draft Reviewed	5 days	Mon 11/26/12	Fri 11/30/12
38		Revised Final Report	5 days	Mon 12/3/12	Fri 12/7/12
39		Final Report Submitted	0 days	Mon 12/10/12	Mon 12/10/12
40		**Presentation Development**	**26 days**	**Mon 11/5/12**	**Mon 12/10/12**
41		Presentation Outline	6 days	Mon 11/5/12	Mon 11/12/12
42		Presentation Graphics	6 days	Mon 11/5/12	Mon 11/12/12
43		Presentation Draft	8 days	Tue 11/13/12	Thu 11/22/12
44		Presentation Draft Reviewed	3 days	Fri 11/23/12	Tue 11/27/12
45		Presentation Draft Revised	4 days	Wed 11/28/12	Mon 12/3/12
46		Presentation Rehearsal	4 days	Tue 12/4/12	Fri 12/7/12
47		Presentation Delivered	0 days	Mon 12/10/12	Mon 12/10/12

RISK

Top Risks

1. Primary technical risk will be the integration of the GPS features.
2. Primary schedule risk is not having enough time to work on the project because of other classes and work schedules.
3. Primary cost risk will be more time spent on the project than expected.

Questions