HCI Project 3

Group 13

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1.Design Document

1.1Terminology: This web application is a platform to search travel mates for a short trip nearby Gainesville & hence it has been named as 'Gator Companion.' It contains appropriate terminology so that next step can easily be guessed by the user. It constitutes a questionnaire whose combinations of interest can let you search people with similar interests.

Example [Fig 1(a)]: A person who is interested in Daytona Beach & willing to spend more than 100$ is likely to make a match well with a person interested in Beaches with 50$ instead of a person looking for social night with barely 50$ wishing to spend.

1.2Color/Style: Since 'Gator Companion' app falls into category of entertainment the app contains vibrant colors to maintain positive flow. While blue color being the most prominent one, focus is on using more relevant trip icons, entertaining images which tries to create a relaxed impact on users. People actually go for outing to relax themselves.

Example [Fig 1(b)]: The beach background in every web page, icons containing group images gives an efficient look for a travel companion website.

1.3TextElements : The web pages display a text whenever required to facilitate the user. The text work is also done on tab links & on the webpages where person is looking for some content information.

Example [Fig 1(b)]: On 'About' webpage, the app provides a text manual to proceed further.

1.4. GUI elements (icons, windows, buttons, etc.) : GUI of facebook app contains five windows namely Home, About, Places, Feedback & Developer. It has variety of buttons with text & relevant icons to maintain easy linking between web pages.

Example [Fig 1(c)]: The buttons 'I Agree', 'Submit' & icons like 'Login', 'Survey' are used time to time to build this app.

1.5 Any other guidelines: This app contains numerous images for suggesting different places. Vertical & Horizontal Scroll bars has been used to accommodate big text and image elements in fixed window size. Also a database has been maintained to make comparisons among all the entries.

Example [Fig 1(c)]: The 'Terms & Conditions' in 'About' tab is extremely huge to read in one sight, hence it appears in a new window of fixed length with scroll bars to give a sober look to the web page.

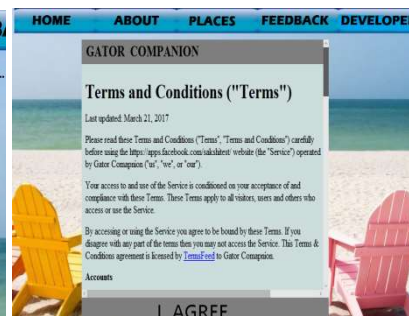
Fig:1(a)   Fig: 1(b)   Fig: 1(c)

2.Weekly feedback on builds

Week 1: We asked two of the participants from our focus group to tell us about the sketch prototype of the web application. One of them was really impressed as he could easily find out what to do next and proceed smoothly. He liked the simplistic, minimalistic approach to find your companion based on few questions. The other participant wanted the website to look more artistic and more appealing. She liked that it was simple but lacked the colours and artsy look.

Week 2: The following week we asked three participants to have a view of the web pages we had designed and asked them if they thought they can find a suitable companion using this application. Tanya, our first participant was not sure if it's suitable for her as she was not confident to travel along with someone not well acquainted too. Her safety was the concern here. The other two guys felt satisfied and were willing to use the application. He really liked the whole idea of having an application to travel with people of similar interests. Troy was excited to use the final website so as to meet more people to hang out with. So all in all participants felt that our web application can solve the purpose with few minor changes.

Week 3: For speak a-loud feedback we asked one of the participant to use the application and tell us about the same. To know how smooth the transitions are and how easily he can perceive the application. He easily started with the application and figured out how to start with the process after logging in. He was happy to see the transition when he had the questions in front of him. We noticed, he ignored the places tab that we have. So, we have to make sure people refer to it too for choosing popular destinations.

Week 4: We then conducted Usability survey (SUS Survey) so as to determine if the users are finding the application useful or not. We got to know that users are liking it but find the application inconsistent. The survey sheets are added to the Appendix-B. We see they are satisfied and happy to know that a website is being made to bring people of similar interests together. Then to get a better idea of the users' satisfaction, we asked another user to fill in SUS Survey to break even the situation.

3.User Feedback

At the end of the 4 weeks, we wanted to know the exact position of our web application after making the changes after getting inputs from the users before. We asked 3 participants to fill out the survey form and then we calculated the final values in the range of 0-100.

For the first user,

Value= (19+10+5)*2.5

= 85

For the second user,

Value= (18+5+11)*2.5

=85

For the third user,

Value=(18+5+9)*2.5

=80

On the scale of 10, the average comes out to be 8.33

After viewing the survey report, we got to know the users are satisfied with the application. Their needs are catered to a great extent.

The Survey Sheets of the users are attached in Appendix-C

4.Weekly Sprint Planning

Sprint Tracking: https://www.dropbox.com/s/eqyo4dajli4jp43/Sprint%20Tracking.xlsx?dl=0

Figure: Sprints Screenshots

	A	B	C	D	E
1	User Story	Acceptance Criteria	Owner	Estimate (hrs.)	Actual (hrs.)
2	Sprint 1				
3					
4	Comparison of previous interfaces with our proposed interface	Find drawbacks & implement in new	Sakshi	2	2
5	Create a prototype of interface - Gator companion	Design a page	Anushka	4	5
6	Conducted a focus group	Collect people to study for feedbacks	Richa	3	4
7	Evaluated feedbacks suggestions.	Extract feedbacks indicating change or upgradation	Sakshi	5	6
8	Incorporated the suggested features in the website	HTML pages	Anushka	3	4
9					
10					
11	Sprint 2				
12					
13	Add login feature and password for access	HTML pages for a new login and the next page	Sakshi	1	1
14	Find algorithms for entries matching	Algorithms for nearest match from options	Richa	5	5
15	Applied weighted algorithms to perform matching	Assign values of the weighted algorithms	Richa	3	4
16	Started with the front-end	Html page.	Sakshi	4	5
17	Learnt php	From videos and lectures	Anushka	7	7
18	Incorporated the html pages and did back-end	Back-end coding on php	Anushka	5	5
19					
20	Sprint 3				
21					
22	Added terms and condition for Security	Various Terms and Agreement Condition	Sakshi	2	2
23	Work done on consent and IRB form	Forms made	Richa	2	2
24	Created feedback form	Qualtrics Survey questions.	Richa	4	5
25	Completed Database for storage of the user's details.	My SQL connections with php	Anushka	5	5
26					
27	Sprint 4				
28					
29	Online hosting	www. webhost000. com - host	Richa	3	4
30	Conducted User studies of the final interface	Presentation successfully implemented	Sakshi	5	5
31	Added 'suggested places' as a new tab	Take various pictures of tourism spots	Sakshi	4	4
32	Refined questions and implemented the table on front end	My SQL, php and host connection	Sakshi	7	7
33	Evaluated Feedbacks and completion	Surveys- feedback	Anushka	4	4
34	Made youtube video	Showing the whole interface	Richa	3	3
35					
36					
37	TOTAL HOURS			81	89

5. Principles
5.1 Analysis

__Novice:__ People who were new to the place (Gainesville) and new to such applications were **satisfied** to finally find out that there is a website **restricted** to Gainesville. They were also happy with the interface that was kept **simple,** for it was easy to access. The application was**less confusing** and the result of the best match was **impressive.**Thus, in nutshell, the application developed was up to 97% of satisfaction level.

__Intermediate:__ The intermediates found the **design** to be **less attractive**. They did give **positive responses** for the **matches** that were correct to whatever they searched. Thus, for the intermediates, the thing they focused more upon were the layout of the applications and no. of correct matches. They also filled out the feedback problem but though focused on the close ended questions rather than open ended questions.

__Experts:__ The experts while focused on the **algorithm** and its layout behind the best match. Moreover, they also focused on maintaining of the **database** and the comparison. They also focused on whether the **style** of the interface is **constant** whenever a new page is opened. Thus, the experts provided minute points for improving the interface and also the match. For example, for the best match rather than comparison from a fixed value, the comparison can be performed for a range.

5.2 Shneiderman's 8 golden rules

1. **Strive for consistency:** Consistency was made throughout the project. For ex- when a new page or a tab was opened the same layout was maintained throughout. Common icons, cursors, colors were used.

2. **Enable frequent users to use shortcuts**: This was implemented by allowing user to use shortcuts while filling the form and the login page. Auto-fill up was used and shortcuts for copying and pasting were allowed.

3. **Offer informative feedback:** Feedback whether for an error or normal operation is important. Error messages were provided whenever, an incorrect email id was entered, name wasn't chosen, terms and agreement were not agreed upon or if login id wasn't valid. Solutions were also provided in the Error message along with the error.

4. **Design dialog to yield closure :** A closure message for every completed action was put up. For ex- when user filled up the feedback form, message was put up for "Thank you. Your response was successfully submitted". Moreover, also when a new user signs up, "Successfully made an account", was prompted after that.

5. **Offer simple error handling:** Beside, providing a solution we mentioned in which line or block, the correction is expected and what has to be replaced with what. For ex- if login email was an error then we mentioned " abc.d@gds.com" expected.

6. **Permit easy reversal of actions:** Ctrl+Z was permitted for undoing the things. Form can be filled again for finding the correct match. Tabs were separately provided like 'Home', 'Feedback' and etc, for easy switching.

7. **Support internal locus of control:** We made sure that the links were connected, for example if a user successfully logins, form a login page then he is redirected to the Terms & Agreement page automatically. It is not like that again we have to go to the home page to click the terms and agreement page. Thus, this was a difference.

8. **Reduce short-term memory load:** To implement this, we have include the path of the current folder above the page. For ex if a user is on login page then the path above shows 'home->about->login.

6.1 Features that are 'central' to the project that have been successfully implemented

- **Connecting Link:** Since this is a app, a developer account is needed & a certified approval from server is mandatory to connect this app to socail media.
- **Hosting:** This app has been successfully hosted on an online secure server to enable user to operate it from any place. It especially needed https server with php assistance.
- **Database of Ques:** It successfully maintains a database of all ques & answers on server.
- **Matching:** On behalf of the calculations, its fulfills its fundamental objective to suggest travel companions.
- **Suggested Places:** This app suggests multiple tourist places in mentioned four categories for reference.
- **Feedback:** A tab on this app takes user to qualtrics survey to record the feedback of the user.

6.2 Features that are 'central' to the project that have NOT been successfully implemented

- **Connecting Friends:** This app works individually for every user & there is no precise connection between two users.
- **Priority of Questions:** The sequence of the the questions has been picked as the generic result of focal group interview to perform weighted average operation. However, every user can have a different priority like budget over destination. Thus it can be improved.
- **Suggested Matches:** The final output contains a list of matches in descending order. Though the best output could be the top 3 matches with their contact links.

- **Chat Box:** A chat box could have allowed user to communicate before finalizing travel companion but the time & domain constraint restricted it.

6.3 Additional features that have been successfully implemented
- **Safety & Liability :** To ensure safety of travel companions & liability issues of management, a 'Terms & Condition' form has been electronically filed by each user.
- **Web page Tabs:** It contains five tabs on every webpage which can let user easily navigate among all the web pages.
- **Step by step guide:** In 'About' web page, app provides 3 step guide which explains how to start using the app.
- **Anonymity of User:** App doesn't make it mandatory to add user name & hence is optional. This preserves the identity of the user who doesn't wish to get it public.

6.4 Estimate the percentage of the completed project

Feature	Available	Feature	Available
Server on cloud	Yes	Chat box	No
Navigating Links	Yes	Connection	Yes
Developers Info	Yes	Login	Yes
links in tabs	Yes	Step by Step Guide	Yes
Share experience	Yes	Informatory Text	Yes

On writing fundamental required features for successfully completing this app, we estimate that most of the features have been successfully implemented. From user point of view, user may or may not require chat box and contact links. Hence the estimates are written below:
Critical Items Completed = 90%
User Needs Addressed   = 95%

6.5 Youtube video demonstrating 'Gator Companion' App

https://www.youtube.com/watch?v=hCLvkQ23qPU

7. What's our Marshmallow?
As learned from the Marshmallow challenge, marshmallow is the toughest portion of the system which needs to be executed time to time to ensure that the system works at every stage. It is derived from the concept that how heavy marshmallow is balanced in the structure. The marshmallow of the Gator Companion App is to integrate all the parts of the system. It was a challenge to synchronize the interface, database, php server and to host them all on online server. It consumed the most of the energy & required repeated verifications to avoid crashing & hence we thus declare it as the Marshmallow of our system.

Appendix A: Initial Prototype of our Interface
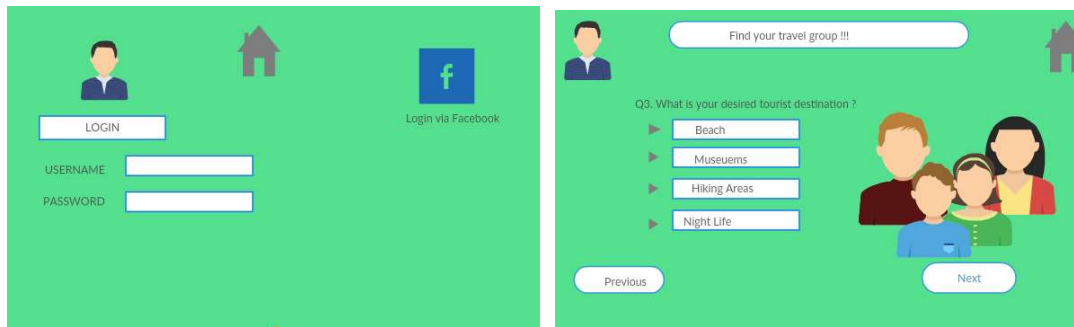
Appendix B: SUS Survey Sheets

	Strongly disagree				Strongly agree
	0	1	2	3	4
1. I think that I would like to use this system frequently		3			
2. I found the system unnecessarily complex		2			
3. I thought the system was easy to use		3			
4. I think that I would need the support of a technical person to be able to use this system		1			
5. I found the various functions in this system were well integrated		2			
6. I thought there was too much inconsistency in this system		3			
7. I would imagine that most people would learn to use this system very quickly		4			
8. I found the system very cumbersome to use		1			
9. I felt very confident using the system		3			
10. I needed to learn a lot of things before I could get going with this system		1			

Fig 1

	Strongly disagree				Strongly agree
	0	1	2	3	4
1. I think that I would like to use this system frequently		4			
2. I found the system unnecessarily complex		1			
3. I thought the system was easy to use		2			
4. I think that I would need the support of a technical person to be able to use this system	0				
5. I found the various functions in this system were well integrated		2			
6. I thought there was too much inconsistency in this system		3			
7. I would imagine that most people would learn to use this system very quickly		4			
8. I found the system very cumbersome to use		1			
9. I felt very confident using the system		4			
10. I needed to learn a lot of things before I could get going with this system		1			

Fig 2

APPENDIX-C

1. USER 01

	Strongly disagree				Strongly agree
	0	1	2	3	4
1. I think that I would like to use this system frequently		3			
2. I found the system unnecessarily complex		1			
3. I thought the system was easy to use		3			
4. I think that I would need the support of a technical person to be able to use this system		0			
5. I found the various functions in this system were well integrated		2			
6. I thought there was too much inconsistency in this system		0			
7. I would imagine that most people would learn to use this system very quickly		4			
8. I found the system very cumbersome to use		1			
9. I felt very confident using the system		3			
10. I needed to learn a lot of things before I could get going with this system		1			

2. USER 02

	Strongly disagree				Strongly agree
	0	1	2	3	4
1. I think that I would like to use this system frequently		4			
2. I found the system unnecessarily complex		0			
3. I thought the system was easy to use		3			
4. I think that I would need the support of a technical person to be able to use this system		0			
5. I found the various functions in this system were well integrated		2			
6. I thought there was too much inconsistency in this system		1			
7. I would imagine that most people would learn to use this system very quickly		4			
8. I found the system very cumbersome to use		1			
9. I felt very confident using the system		3			
10. I needed to learn a lot of things before I could get going with this system		0			

3. USER 03

	Strongly disagree				Strongly agree
	0	1	2	3	4
1. I think that I would like to use this system frequently		2			
2. I found the system unnecessarily complex		0			
3. I thought the system was easy to use		3			
4. I think that I would need the support of a technical person to be able to use this system		1			
5. I found the various functions in this system were well integrated		3			
6. I thought there was too much inconsistency in this system		1			
7. I would imagine that most people would learn to use this system very quickly		3			
8. I found the system very cumbersome to use		1			
9. I felt very confident using the system		3			
10. I needed to learn a lot of things before I could get going with this system		1			

	Strongly disagree				Strongly agree
	0	1	2	3	4
1. I think that I would like to use this system frequently					
2. I found the system unnecessarily complex					
3. I thought the system was easy to use		3			