Assignment P1

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1 QUESTION 1

New in the past couple of semesters is the Ed Discussion Forum, to replace Piazza for some classes in the Georgia Tech Online Master of Computer Science Master's program. The Ed Discussion Forum is intended to allow students the opportunity to post discussion questions and answers to other students and watch class lectures. In the coming sections, I will discuss the community discussion forum aspect from the perspective of the processor and predictor models as mentioned in sections 2.1

1.1 Processor Model

With the perspective of the processor model in mind, the interface for the discussion forum should fit within the human limits and what a person can do. It allows students to create a new thread, search current threads, post questions, answer questions of other students, and mark questions based on categories. With this discussion forum, many experiments in which a user/student posted a question or answered another student's question have already occurred this semester.

As I am writing this section, multiple students and staff have already posted multiple new forum post questions and answers. In assessing how quickly a user could complete the task of posting a question, would depend on how in-depth the question was and any formatting they are interested in adding. The user, as a piece in this process can easily complete the task of posting a question. They would create a new thread by hitting "New Thread" and an immediate response from the system is a task pane appears to clearly show the user where to type their topic name and test for their question. Once they hit the "Post" button on the bottom right, their question or post will appear at the top of the list where they can see that the task has been completed successfully.

1.2 Predictor Model

From the predictor model perspective, the Ed Forum Discussion was designed with the expectation that students or users would read and post questions to other students. The two main pieces the users see when opening the discussion forum are the list of posts in order by date and time and a viewing panel to see the list of previous posts, which is line with what the designers are the forum anticipated. The "New Thread" button is in the top left corner, where people in the US typically look first as they read from top to bottom and left to right. That would be the main task that most users would use as part of this Ed Forum. When clicking on the button, a viewing window pops up to allow the user to post the question.

A post allows the user to add different formatting elements including paragraph style, bold, italics, underline, and bulleted and numbered lists. In addition, it offers the ability to attach images or videos and enhanced elements including adding many symbol options, an image annotator and allows one to preview their post. A majority of users in this class will typically use the basic formatting options to be able to write a couple of sentences and a few lists. Very few will use the enhanced features which are listed further down the row of options. The default settings for a post are set to allow users the quick task of posting a few sentences for their questions, making this easy on the student and what the designers expected of users. As a result of a user clicking the "New Thread" button, it was expected that the users would post a question to the form, typically with a few easy sentences with minimal formatting. This is in line with the experience students/users would have likely experienced in much of their previously schooling and expected as part of their experience in the Georgia Tech program.

1.3 Comparisons

From the processor model, it was understood that users can efficiently post and read questions and answers on the Ed Forum Discussion. The list is clearly displayed when logging in and the "New Thread" button is easily navigable for users to type their question and post to the forum. The post appears visibly at the top of the screen for the user to see that their task was successful. An improvement to this model would be to more clearly highlight the users' posts. The default to

the form is mostly white and black text with a lot of little indicator icons for how many comments, etc. It can be difficult to see one's own posts and could be improved by having user added posts shaded in a slightly different color to show completion of task. With the predictor model, improvements would be related to the experience of the task. One improvement would be to more clearly highlight the "Post" button in the top right corner, which is always visible if you are scrolling in your draft post. It could be expected that many users will be using a laptop and the full screen of the viewing window is not visible to allow them to easily click the "Post" button at the bottom. The "Post" button at the top is easier to click but not as easily noticeable, as this is more related to how a user would experience this task.

2 QUESTION 2

The app being described is the Amazon Music app on iPhone. This app is used while sitting on the couch, walking to the metro, listening to music on an airplane, and socializing with friends.

2. 1 Discuss contexts

While sitting on the couch listening to music by yourself, the app for Amazon Music offers a wide variety of features. The user opens the app and sees a large image at the top that offers a suggested station based on previous listening history. Similar to Netflix, the Amazon music app next displays a list of albums the user might like based off of their listening history. It displays two and a half square images of the album covers to show a couple and make it clear to the user that they can scroll to the right to show more suggestions. After suggested albums, the user can scroll quite a bit on the main page and see hot songs, popular podcasts, recommended albums available on the unlimited version, frequently played songs, playlists for the month based on themes, alternative hits, featured things for the week, podcasts for family and kids, and many more specific categories. While sitting on my couch with the intent to scroll and find something new to listen to, Amazon Music offers a wide arrange of options and suggestions to discover new listen topics. In addition to the main page, there are buttons at the bottom to allow the user to easily navigate to the "Find", "Library", and "Alexa".

While walking to the metro, the suggested station is a nice feature since you may be paying attention to navigating the sidewalk, not getting hit by traffic, and not stepping on cicadas. The app also displays the most recently listened to song at the bottom so the user could quickly press the "play" button to continue listening to the music they were listen to before. This is a nice feature for any of the contexts mentioned above. The user's attention to read and scroll through the app is limited while trying to multitask and focus on walking.

In the settings there is an option for "Car Mode" which starts by telling users not to use app while operating a vehicle. Car mode has a very basic interface which displays a large "play" button at the very top center and an option for "My soundtrack", "Continue Listening", and a few additional music options. This screen display is clear and quick to use since someone driving a car wouldn't be able to pay much attention and would likely want to be able to play music quickly to focus their attention back to driving.

While many of the features of the app such as searching for and listening to new music rely on the user's phone being connected to data or the internet, the app is still available for use while in airplane mode for those who want to listen to music while they fly. It allows the user to download individual songs or albums to be available in the "Library" without being connected to the internet.

2. 2 Describe design alterations

If the app could sense that a user is walking, the app could default to the main play music option since it is likely the user may want to play current or most recent song since their attention may be divided between the app and walking and they don't need to scroll through many options or discover new or hot songs while trying to focus.

The option to switch to "Car Mode" could be more easily available. If the user is driving and forgets to switch modes before moving the car, getting to the settings is a bit difficult since it is in the top corner and then the options pop up from the bottom forcing the user to adjust their hand and hit a few different "accept"

buttons while driving to get to the screen more easily designed to be used while driving.

If the app is being used in airplane mode and note connected to the airplane WiFi, the app could shade out many of the options that aren't available to users in airplane mode such as searching for new music, accessing radio stations, live streaming, and most of the items on the home screen. If in airplane mode, it could be designed to switch to library assuming the user just wants to listen to music.

3 QUESTION 3

Each Georgia Tech student in the Human-Computer Interaction class is required to submit assignments via Canvas for grading. Discussed below will be the process in relation to the feedback cycles discussed in section 2.2.

3.1 Gulf of Execution

The steps of the Guld of Execution include Identify Intentions, Identify Actions, and Execute in Interface. When opening Canvas there is a section called "Assignments" that appears on the left side that helps students easily navigate to the correct page. The assignments then appear in the order they are due. For example, Assignment 1 appears at the top and indicates the due date of May 24th at 9am and that the assignment is worth 20 points. When moving your cursor over the name of the assignment it highlights and becomes underlined indicating that it is clickable to take you to the net page. The intention that Canvas has identified is that students will need to submit assignments for grading. The user then needs to identify the actions. In this case, the student would need to select assignment, then on the next page is a large, highlighted button that says "Start Assignment".

On that page are details about the assignment's submission requirements letting the student know what actions must be taken including the file type and date and time it should be submitted. From there a page pops up that allows students to attach a document with options to upload from multiple sources like their computer, Box, Dropbox, or a Google Doc. There is a clear button that says "Choose File" that when clicked opens a file window to students' files so they can navigate to the correct file to submit. Then it takes you back to the submission page

where a “Submit Assignment” button is located with a yellow background. This is the Execute in Interface stage of the gulf of execution.

3.2 Gulf of Evaluation

Once the user hits the “Submit Assignment” button, the user moves to the Guld of Evaluation phase. Now we look at what actually occurred by looking at the Interface Output, Interpretation, and Evaluation. After the user hits “Submit” The button fades to a less bright yellow color and a circle pops up and spins to indicate to the user that something is happening. It then takes you to a similar page that says “Submitted!” with a check mark and the submission details including the date and time it was submitted with the name of the file that was submitted for grading. The user can interpret that the assignment has been submitted for grading. In order to evaluate it, the student can click the link that indicates the file name, watch it download, and open the file to confirm the correct file was attached. The file pops up in a new tab with options to zoom and scroll to confirm the entire file has been correctly attached and submitted for grading.

4 QUESTION 4

In this section I will describe two similar activities, one that struggles with the gulf of evaluation and one that doesn’t struggle with the gulf of evaluation and how the first one can be improved.

4.1 Gulf of evaluation struggles

One task at my office, that I complete regularly is submitting files including word documents, PowerPoints, and videos to be reviewed by our public release approval board before the items can be released publicly outside of the agency. The system has a main home page that allows the user to click a “submit new case” button. This new page is pretty simplistic and has approximately 40 fields with drop downs, fill in the blanks, and places to attach files. The user has to scroll and then hit submit. Each of the questions is formatted to different lengths so the drop downs all appear at different points on the page. Some are numbered with parts a, b, and c so it is a bit unclear if you are missing a number.

In order to attach a large file, the user has to hit the "submit" button at the bottom and wait for that question to appear in regular text because it is faded out on your first pass through the form. It is unclear to the user how to submit a large file when first looking at it since it just doesn't let you click on it. The only way to discover is to ask someone who has used the system before or try to get through and come back to that section, which is about midway up the page.

When you finally hit submit at the bottom of the page, it is unclear if the case got submitted or if you have any errors on the page. It keeps you on the page where you can continue to make changes and resave but will never take you to a new page even if you continue to hit submit. In order to know if you case is submitted, is by switching to your outlook email from Internet Explorer, to see if you received the email that says the case has been submitted. That email is generated whether or not fields have been left blank or if there is not file attached. The feedback on those potentially missing items comes from an email from a systems administrator, typically the following business day to let you know that items are missing and to resubmit the case after completing the missing items.

4.2 Gulf of evaluation better example

A better system that we use at my office is the system used to submit your travel approval request. Our travel system has about 10 questions to answer before you take international travel. These are mostly "yes" and "no" questions with a few fields to complete. The questions are clearly aligned and formatted so the "yes" and "no" selections appear in a clean column to make it easy for the user to completely. If there are errors on the page, a message appears at the top to indicate that fields are missing and are required before submission.

When you get to the bottom and hit the "submit" button, it takes you to a page that says "your form has been submitted to the security office". Below that is a field where you can select a date and time for your meeting to discuss safe travel abroad. This is a clear indicator to interpret and evaluate that the form has been completed and submitted.

4.3 Lessons

A few lessons can be taken from the second activity to improve the usability of the first activity for the user. To improve the gulf of evaluation, it is important for interfaces to make it clear to the user that the activity has been completed, typically through interface output so the user can interpret and evaluate that the task has been completed. Looking at the second interface, it would be helpful to take users to a new screen or have a pop-up window that states or clearly indicates that their form or submission has been received while in the same internet browser without having to open their email. Alternatively, it could remain on the same page and offer text near the submit button that states a date or time the form has been submitted or indicate with the word complete" it "submitted" to slightly change the look of the form, so the user doesn't have to guess or spend time determining if it has been completed. In order to help the user, interpret that there are potential errors, and the task may be incomplete, the interface could be designed to include a message or take the user to that portion of the page where a question has been left blank or is incomplete.