Blackbear-Consultant’s Sequence Diagram

o Analysis Sequence Diagrams.

o Design Sequence Diagrams.

o Correct variables, methods and parameters.

o For each diagram you need to write a description of the steps

Nontrivial Steps

|  |  |  |
| --- | --- | --- |
| Use Cases | Systems | Non-Trivial Steps |
| View User Statistics | Applications Statistics Menu | 6. The System displays the raw values and graphical image for tasks   1. The System displays raw values and graphical image for ‘Shapes’ task 2. The System displays raw values and graphical image for ‘Letters’ task 3. The System displays raw values and graphical image for ‘Numbers’ task |
| Display Task Progress | Game Selection | 4.1 If no progress has been completed   1. The System displays task has not been started   4.2 If progress has been completed   1. The System displays completion of task   4.3 If progress has been made but failed to finish   1. The System displays failure of task |
| Enter Password | Account Login | 4. The System authenticates the password entered  4.1. If the password is correct   1. The user will be logged in   4.2 If the Password is incorrect   1. The System will prompt user for correct password 2. If the incorrect password is entered three times 3. The System will lock out user |
| Select Game Task | Game Selection | 1. The User selects the dropdown menu to go between task categories    1. The User selects arrows to go between tasks    2. The User selects the start button 2. The System displays the selected task categories 3. The System displays the selected tasks 4. The System starts the selected task |
| Suggest Starting Task | Game Selection | 1. The User will press ‘Start’ to begin suggested task 2. The User will select a different task in select minigame menu |
| Give Prompt (Audio/Visual) | Gameplay | 1. The System will prompt the user with a visual and audio cue   1.1. If the user successfully follows prompt   * 1. System provides a positive visual and audio cue   1.2. If the User fails to follow the prompt  a.The System will prompt the user with additional help |
| Take Pictures | Game Selection | 4.1. If User decides to save photo on device   1. The System saves photo on device 2. Uses saved photo for image in minigame   4.2. If User declines to save photo on device   1. The System will insert the photo into minigame. |
| Get User Permissions | Settings Display | 3. The user:   1. Clicks allow, giving the app permission to use camera and file storage or 2. clicks deny, now allowing the app permission to use camera and file storage.   4. The system:   1. Updates permissions and lets users store photos or 2. does nothing. |
| Click Object | Gameplay | 2. The system processes clicked object:   1. If object selected was correct, sends that information to progress tracker and prompter and new minigame task is given or 2. Object selected was incorrect, sends information to the progress tracker and prompter or 3. Object selected was indicated by prompt and correct. That information is sent to the progress tracker and a new minigame task is given. 4. Object selected was indicated by prompt and incorrect. Information is sent to the progress tracker and a new minigame task is given. |
| Track Progress | Gameplay |  |
| Select Game Mode | Statistics Display |  |
| Select Minigame | Game Selection |  |
| Adjust Audio and Brightness | Settings Display |  |
| Log Out User | Settings Display |  |
| Add User | Account Registration |  |
| Delete User | Account Registration |  |
| Edit User | Account Registration |  |
| Click Username | Account Login |  |

**View User Statistics:**

6. The System displays the raw values and graphical image for tasks

6.1 The System displays raw values and graphical image for ‘Shapes’ task

6.2 The System displays raw values and graphical image for ‘Letters’ task

6.3 The System displays raw values and graphical image for ‘Numbers’ task

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| **#** | **Subject** | **Subject Action** | **Parameters** | **Object Acted Upon** |
| 5. | User | Selects | Statistics Button | Application GUI |
| 6.1 | Application GUI | Requests | Task Data | Data Controller |
| 6.2.A | If Task is Shapes |  |  |  |
| 6.2.B | Data Controller | Checks for | Shapes Data | User Database |
| 6.2.C | User Database | Returns | Shapes Data | Data Controller |
| 6.2.D | Data Controller | Returns | Shapes Data | Application GUI |
| 6.2.E | Application GUI | Displays | Shapes Data | User |
| 6.3.A | Else if Task is Letters |  |  |  |
| 6.3.B | Data Controller | Checks for | Letters Data | User Database |
| 6.3.C | User Database | Returns | Letters Data | Data Controller |
| 6.3.D | Data Controller | Returns | Letters Data | Application GUI |
| 6.3.E | Application GUI | Displays | Letters Data | User |
| 6.4.A | Else |  |  |  |
| 6.4.B | Data Controller | Checks for | Numbers Data | User Database |
| 6.4.C | User Database | Returns | Numbers Data | Data Controller |
| 6.4.D | Data Controller | Returns | Numbers Data | Application GUI |
| 6.4.E | Application GUI | Displays | Numbers Data | User |

**Display Task Progress:**

1. The User selects the ‘Task Selection’ Menu
2. The System opens the ‘Task Selection’ Menu
3. The User swipes between tasks that have been completed

3.1 The User swipes between tasks that have not been completed

1. The ‘Task Selection’ Menu displays the current task, progress of task, and start button

4.1 If no progress has been completed

4.1.1 The System displays task has not been started

4.2 If progress has been completed

4.2.1 The System displays completion of task

4.3 If progress has been made but failed to finish

4.3.1 The System displays failure of task

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| **#** | **Subject** | **Subject Action** | **Parameters** | **Object Acted Upon** |
| 1. | User | Selects | Menu | Task Selection |
| 2. | System | Displays | Menu | Task Selection |
| 3. | User | Swipes | Tasks | Completed Tasks |
| 3.1 | User | Swipes | Tasks | Uncompleted Tasks |
| 4. | Task Selection Menu | Displays | Tasks | Task Selection Menu |
| 4.1 | If no progress then |  |  |  |
| 4.1.1 | System | Displays | ‘Not Started’ | Tasks |
| 4.2 | If progress complete then |  |  |  |
| 4.2.1 | System | Displays | ‘Completed’ | Tasks |
| 4.3 | If progress but failed than |  |  |  |
| 4.3.1 | System | Displays | ‘Failed’ | Tasks |

**Enter Password:**

1. The User clicks on a username
2. The System displays username and text field to enter a password
3. The User enters a password for username
4. The System authenticates the password entered

4.1. If the password is correct

4.1.1. The user will be logged in

4.2. If the Password is incorrect

4.2.1. The System will prompt user for correct password

4.2.2. If the incorrect password is entered three times

4.2.3. The System will lock out user

1. The User is logged in account

5.1. The System displays Game Selection Menu

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| **#** | **Subject** | **Subject Action** | **Parameters** | **Object Acted Upon** |
| 1. | User | Clicks | Name | Username |
| 2. | System | Displays | Password | Text field |
| 3. | User | Enters | Password | Username Password |
| 4. | System | Authenticates | Password | Username Password |
| 4.1. | If Password is Correct |  |  |  |
| 4.1.1. | User | Logs In | Password | Password Text field |
| 4.2. | If Password is Incorrect |  |  |  |
| 4.2.1. | System | Prompts | Password | Username Password |
| 4.2.2. | If Password incorrect three times |  |  |  |
| 4.2.3 | System | Locks Out | Password | Username |
| 5. | User | Logs In | Password | Account |
| 5.1 | System | Displays | Game Selection | Game Selection Menu |

**Select Game Task:**

1. The User selects the dropdown menu to go between task categories

1.1. The User selects arrows to go between tasks

1.2. The User selects the start button

2. The System displays the selected task categories

2.1. The System displays the selected tasks

2.2. The System starts the selected task

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| **#** | **Subject** | **Subject Action** | **Parameters** | **Object Acted Upon** |
| 1. | User | Selects | Task Categories | Dropdown Menu |
| 1.1. | User | Selects | Task | Arrows |
| 1.2. | User | Selects | Task | Start Button |
| 2. | System | Displays | Task Categories | Task Menu |
| 2.1 | System | Displays | Task | Task Menu |
| 2.2 | System | Starts | Task | Start Button |

**Suggest Starting Tasks:**

1. The System will display a suggested task to start working on
2. The User will press ‘Start’ to begin suggested task

2.1. The User will select a different task in select minigame menu

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| **#** | **Subject** | **Subject Action** | **Parameters** | **Object Acted Upon** |
| 1. | System | Display | Task | Suggested Game Task |
| 2. | User | Press | Task | Start Button |
| 2.1. | User | Selects | Task | Minigame Menu |

**Give Prompt (Audio/Visual):**

1. The System will prompt the user with a visual and audio cue
2. If the user successfully follows prompt

2.1. The System will prompt user will a positive visual and audio cue

1. If the User fails to follow the prompt

3.1. The System will prompt the user with addition help

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| **#** | **Subject** | **Subject Action** | **Parameters** | **Object Acted Upon** |
| 1. | System | Prompt | User | Visual/Audio Cue |
| 2. | If User follows prompt |  |  |  |
| 2.1. | System | Prompts | User | Positive Cue |
| 3. | If User fails prompt |  |  |  |
| 3.1. | System | Prompts | User | Additional Help Cue |

**Take Pictures:**

1. The User will press the ‘Camera’ Button
2. The System will activate the camera on device
3. The User will take a picture using device’s camera
4. The System prompts user to save the photo

4.1. If User decides to save photo

4.1.1. The System saves photo on device

4.2. If User declines to save photo

4.2.1. The System will insert photo into task to be adjusted to fit

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| **#** | **Subject** | **Subject Action** | **Parameters** | **Object Acted Upon** |
| 1. | User | Press | Button | Camera |
| 2. | System | Activates | Camera | Device’s Camera |
| 3. | User | Takes Photo | Camera | Device’s Camera |
| 4. | System | Save Photo | Camera | Device’s Camera |
| 4.1. | If User decides to save photo |  |  |  |
| 4.1.1. | System | Saves Photo | Camera | Device’s Storage |
| 4.2. | If User declines to save photo |  |  |  |
| 4.2.1. | System | Inserts Photo | Camera | Device’s Camera |

**Get User Permissions:**

3. The user:

1. Clicks allow, giving the app permission to use camera and file storage or
2. clicks deny, not allowing the app permission to use camera and file storage.

4. The system:

1. Updates permissions and lets users store photos or
2. does nothing.

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| **#** | **Subject** | **Subject Action** | **Parameters** | **Object Acted Upon** |
| 3. | User | Clicks | Allow or Deny | Application GUI |
| 3.1 | If Allowed |  |  |  |
| 4.1.A | Application GUI | Sends | Allow Request | Permission Controller |
| 4.1.B | Permission Controller | Updates | User Permissions | User Database |
| 4.1.C | Application GUI | Displays | Settings Menu | User |
| 3.2 | If Denied |  |  |  |
| 4.2.A | Application GUI | Displays | Settings Menu | User |

**Click Object:**

2. The system processes clicked object:

1. If object selected was correct, sends that information to progress tracker and prompter and new minigame task is given or
2. Object selected was incorrect, sends information to the progress tracker and prompter or
3. Object selected was indicated by prompt and correct. That information is sent to the progress tracker and a new minigame task is given.
4. Object selected was indicated by prompt and incorrect. Information is sent to the progress tracker and a new minigame task is given.

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| **#** | **Subject** | **Subject Action** | **Parameters** | **Object Acted Upon** |
| 1. | User | Clicks | Game Object | Application GUI |
| 2.1 | Application GUI | Sends | Object Information | Game Controller |
| 2.2 | If Object was correct |  |  |  |
| 2.2.A | Game Controller | Sends | Correct Game Object | Track Progress Controller |
| 2.3 | Else if Object was incorrect |  |  |  |
| 2.3.A | Game Controller | Sends | Incorrect Game Object | Track Progress Controller |
| 2.4 | Else if Object was prompted and correct |  |  |  |
| 2.4.A | Game Controller | Sends | Correct Prompted Game Object | Track Progress Controller |
| 2.5 | Else |  |  |  |
| 2.5.A | Game Controller | Sends | Incorrect Prompted Game Object | Track Progress Controller |