ILLO

SEQUENCE DIAGRAMS

Root Digital

Timer Duration

USER

Enter

Activity Interval

Enter

Productivity Interval

User Data

Timer Controller

Save Change

Reset Timer

Report change

Reset Timer

Set Data

Report

Change

The user can enter the desired time for the Activity interval. The Value is saved in User Data under the associated activity set data. This change is reported to the timer controller which resets the current timer and sets it to the applicable value meaning if the timer is in the same state as the changed interval type. The rest interval entered will only be saved to userdata, as it is not tied to a specific activity set. This change is reported to the timer controller which resets the current timer and sets it to the applicable value meaning if the timer is in the same state as the changed interval type.

Timer Usage

USER

Button press

Start

User Data

Timer Controller

Resume Timer

Start

Productive

Timer

Set Data

Validate

Button press

Pause

Stop

Timer

Button press

Next

If productive next

If Activity next

Validate

Start

Activity

Timer

Validate

User can start the timer, which will validate with User Data for productivity interval, and validate for Activity interval, to be sure of the duration of the timer, then the timer will resume its valid time, or set to correct time and begin. User can pause the timer and it will stop the timer. User can press next and will start the next productive or activity interval, and validate the time and activity that is next up.

Design Sequence

USER

Enter

int: Activity\_Duration

Enter

Int:

Productivity\_Duration

User Data

Timer Controller

SetInterval(Int, Activity)

Reset

Timer()

SetTimer(Productivity\_Duration)

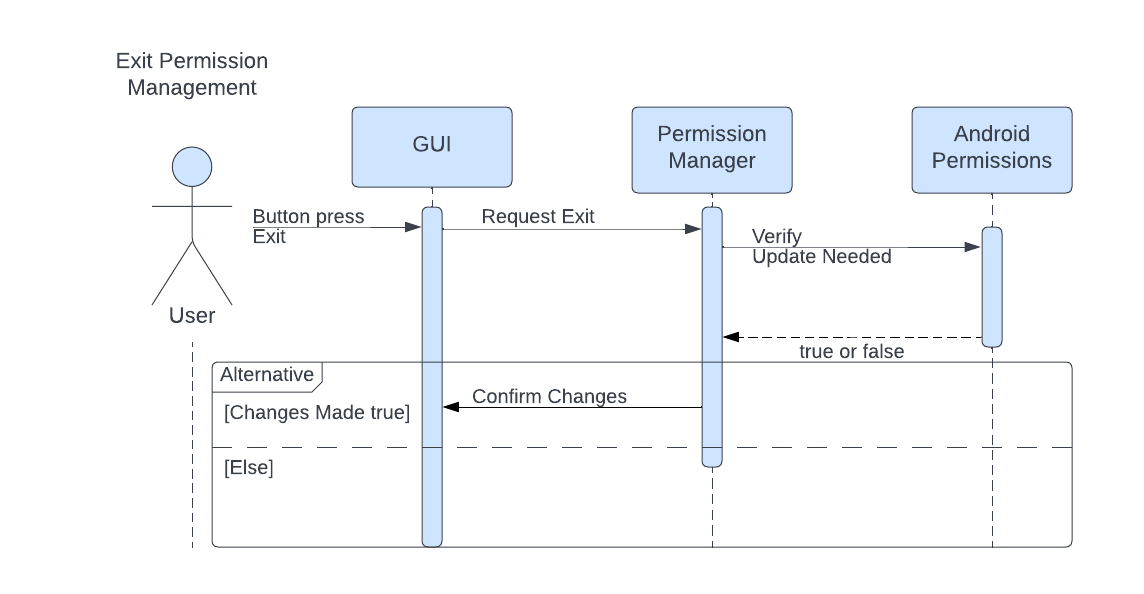
Reset Timer()

Set Data

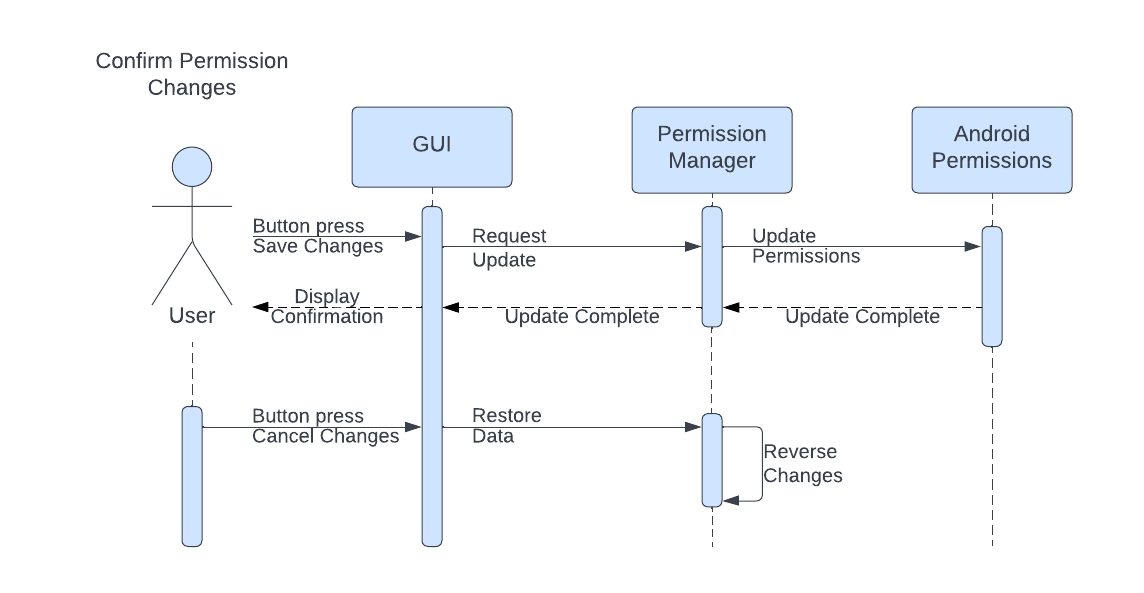
SetTimer(Activity\_Duraction)

The user can enter an integer value that corresponds to seconds. That value will set the activity duration in Set Data, a subclass of Userdata. The timer controller will reset after it receives the new activity duration. The user can enter an integer value that corresponds to seconds. This value will notify the timer controller which will reset after it receives the new productivity duration.

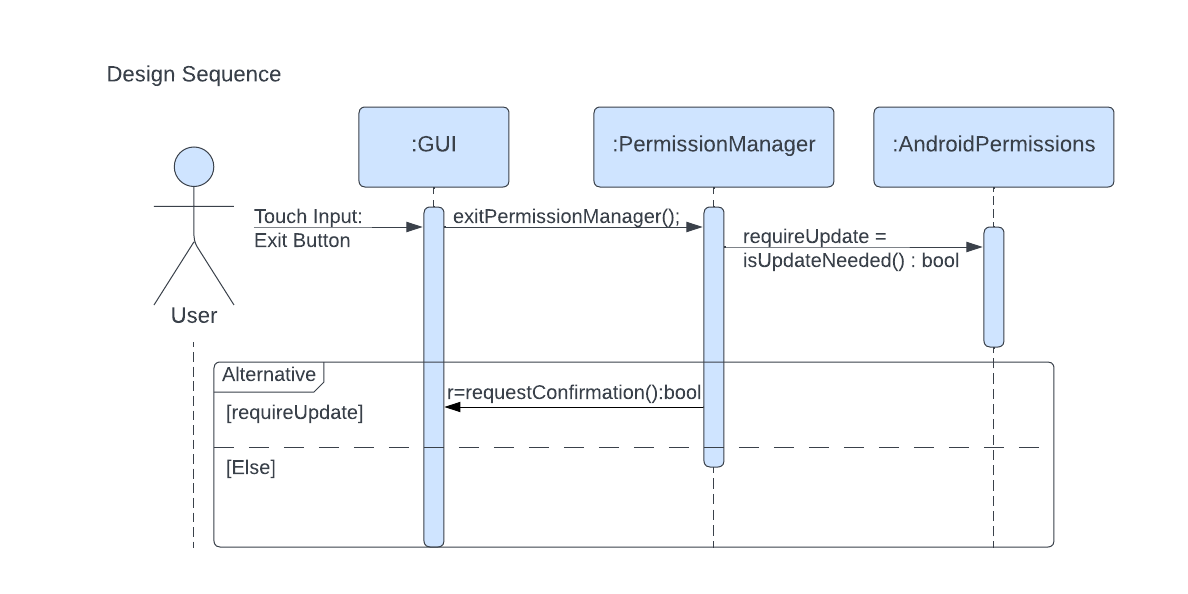




The user can press a button to exit from permission management. Once pressed by the user, the GUI sends a request to the Permission Manager to exit, this request is done to ensure that no other actions are required by the user before exiting. When the Permission Manager receives this requests it checks whether the user has made any changes by verifying current permissions with the saved Android permissions. If any are changed then Permission Manager will have the user confirm them. However, if none are changed then the Permission Manager will simply close out.

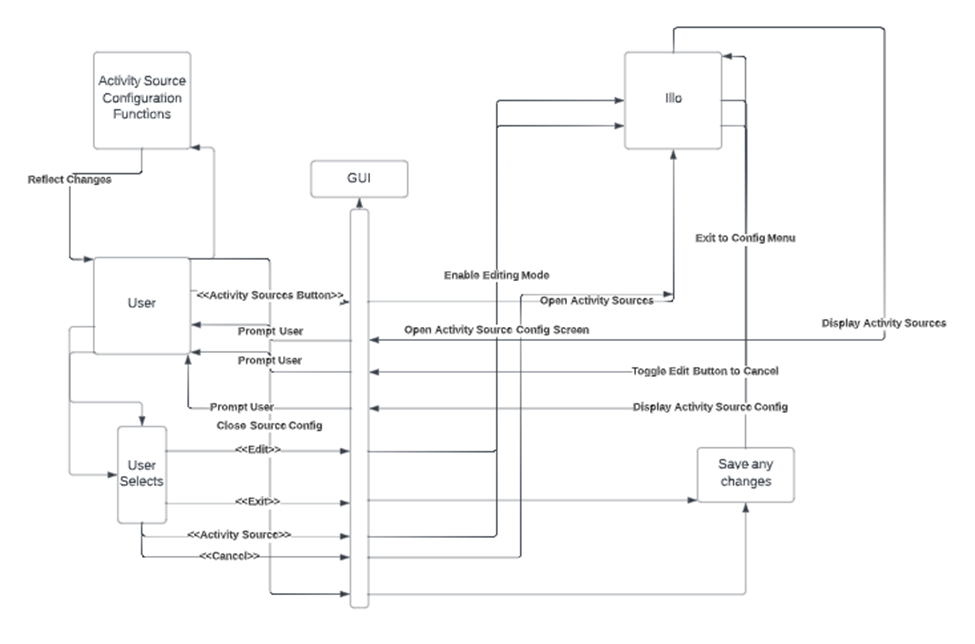


The user can press a button to save the changes made while in permission management. Once pressed by the user, the GUI sends the request to save the changes. Permission Manager receives this request and updates the saved Android Permissions. Once completed, a confirmation of the update being successfully is displayed to the user. The user can also press a button to cancel the changes they made. Once pressed by the user, the GUI sends a request to restore the permissions to their former state. When received by the Permission Manager, permissions are changed to reflect their initial state.



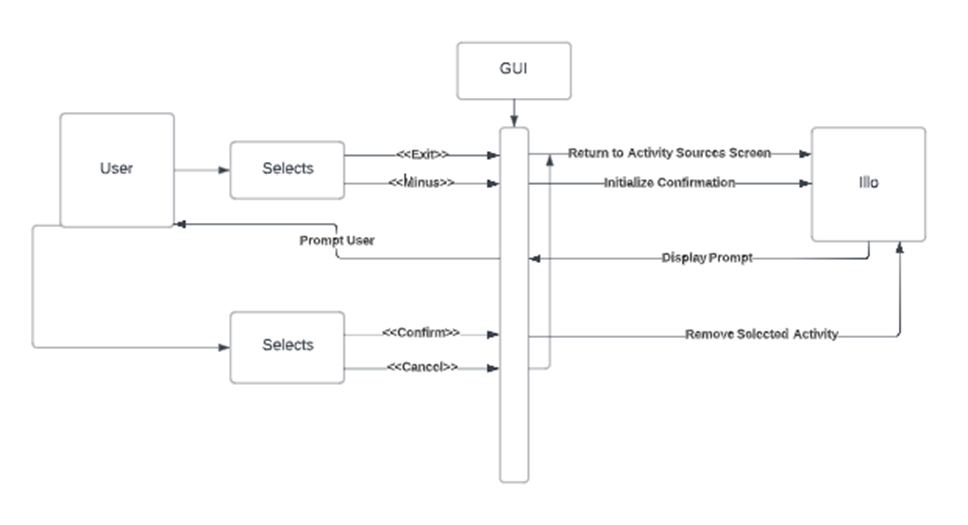
Through the GUI the user can provide touch input to call a function to exit from PermissionManager. This function will instruct PermissionManager to verify whether any changes were made and need to be reflected in AndroidPermissions. By using the isUpdateNeeded() function, a boolean value is returned and assigned to the ‘requireUpdate’ variable. If requireUpdate is true, PermissionManager will call a function that will begin the process of confirming whether or not the user would like to save their changes before exiting. Else, PermissionManager will simply exit.

Edit Activity Source



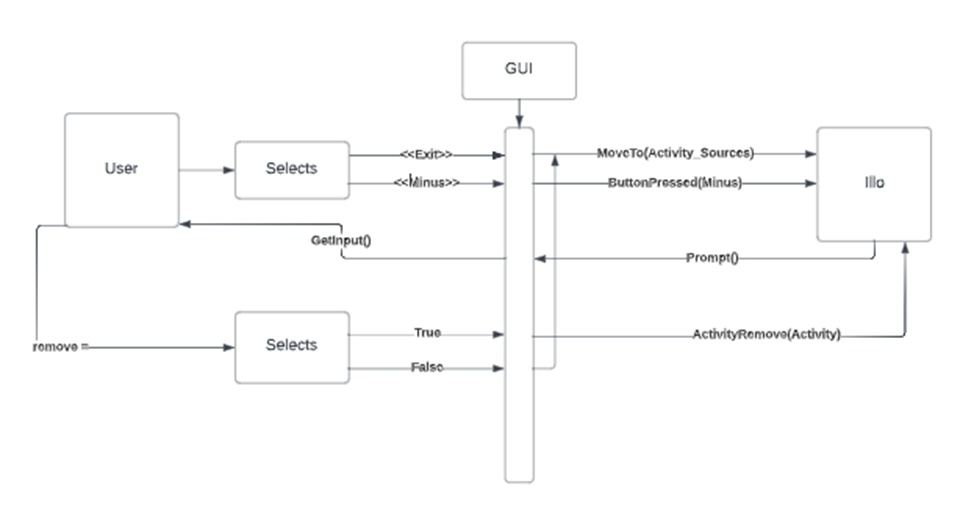
While Illo is on the Configuration Screen, the user may select the activity sources. The button press will be registered with the GUI and will alert the app of what to do. The system will open the Activity Sources Screen, and tell the GUI to display it. At this point, the user may choose to exit the screen, which will save the changes, and return to the Configuration Screen. Or, the user may select the “Edit” button. Selecting this button will toggle the edit button into a “Cancel” button. At this point, if it is pressed again, the button will be toggled back. But, if an activity source is selected, the Activity Source Configuration screen will be shown. Here, the user will be able to make various edits (covered by other use cases) to their Activity Source. Exiting the Activity Source Configuration will the changes to the activity source, and return the user to the Configuration Screen.

Remove Exercise from Activity Source



While Illo is in the Activity Source Configuration Screen, the user may select the “-“ button next to any existing exercise, otherwise, they may exit the screen. Exiting will return the user to the Activity Sources screen. However, if the minus is selected, the user will be prompted with a confirmation to remove the exercise. If this is confirmed, the exercise will be deleted, else, the user will be brought back to the Configuration Screen.

Design Sequence for above



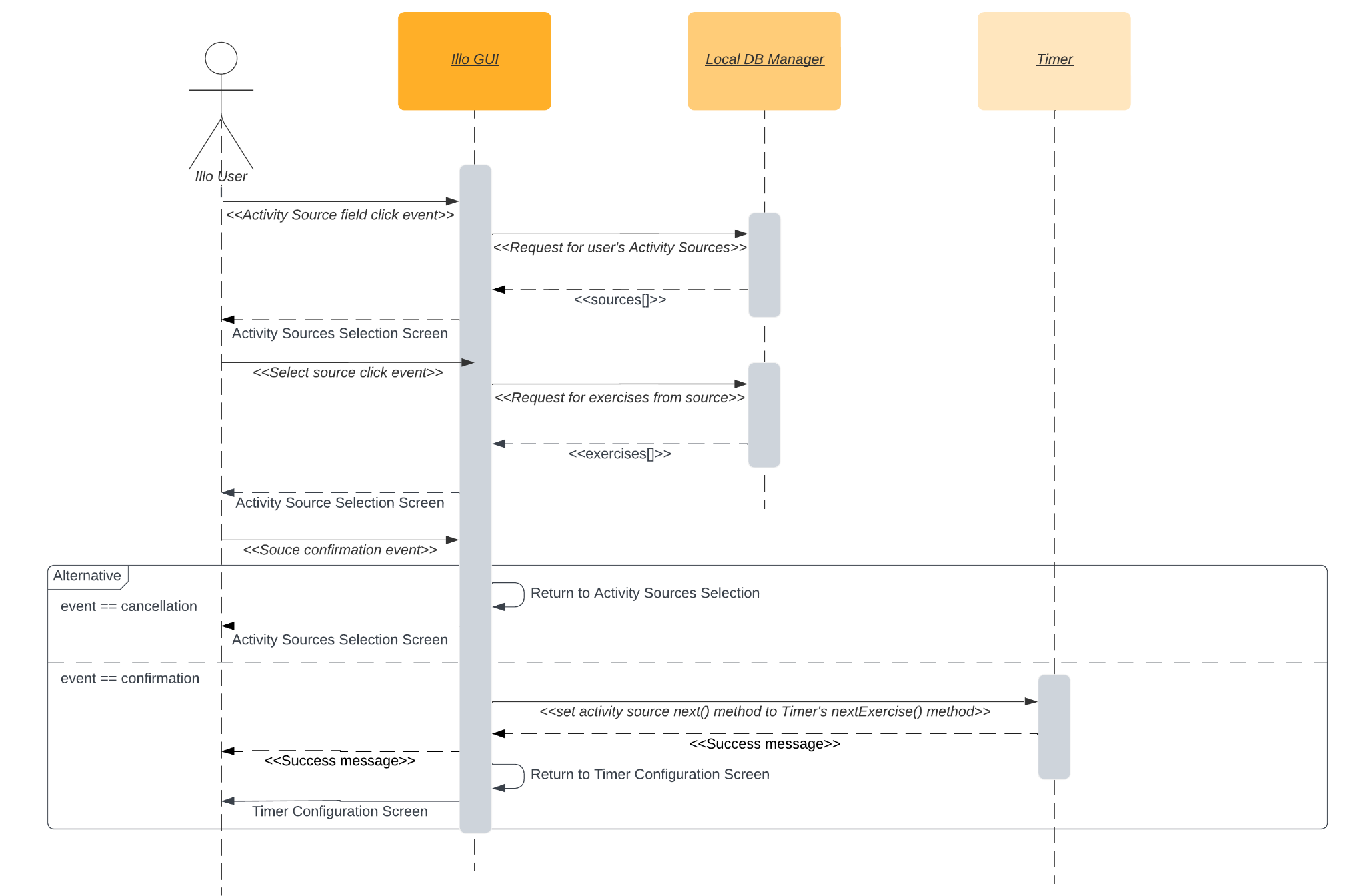
While Illo is in the Activity Source Configuration Screen, the user may interact with the “minus” button on the GUI corresponding to a specific exercise. Not doing so, and instead opting to leave the screen via various methods will return the user to the previous screen (Activity Sources Screen). Choosing to interact with this UI object will prompt the user with a confirmation window, their choice will be reported to the GUI, which will report it as either true or false to the system. If the answer is false, the user will be brought back to the configuration screen, otherwise, the exercise object selected will be removed from the Activity Source’s data structure.

**Use Case: Set Activity Source**

*Analysis Description*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # | Subject | Subject Action | Parameters | Object Acted Upon |
| 1 | User | selects | Activity Source field | Illo GUI |
| 2.1 | Illo GUI | retrieves | Activity Sources | Local DB Manager |
| 2.2 | Illo GUI | presents | User’s Activity Sources | User |
| 3 | User | selects | an ActivitySource | Illo GUI |
| 4.1 | Illo GUI | retrieves | Exercises[] from given Activity Source | Local DB Manager |
| 4.2 | Illo GUI | presents | Exercises[], confirm/cancel buttons | User |
| 5 | User | confirms | ActivitySource | Illo GUI |
| 6.1 | Illo GUI | retrieves | next() method from ActivitySource | Local DB Manager |
| 6.2 | Illo GUI | sets | The timer’s nextExercise() method to the retrieved next() method | Timer |
| 6.3 | Illo GUI | sends | Timer Configuration Screen | User |

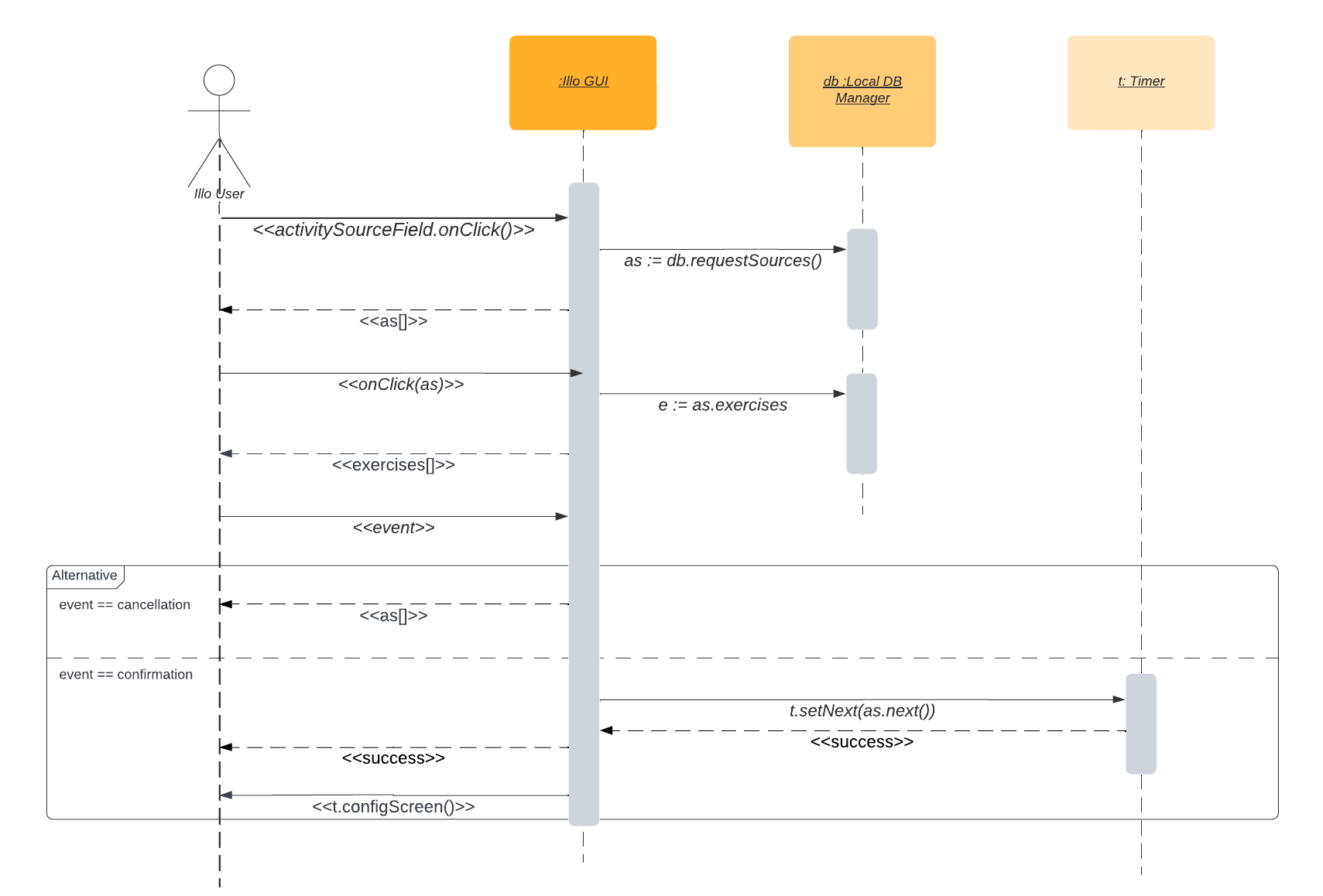
Analysis Sequence for Above



*Design Sequence Description*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # | Subject | Subject Action | Parameters | Object Acted Upon |
| 1 | User | *onClick()* | activitySourceField | Illo GUI |
| 2.1 | Illo GUI | *requestSources* |  | Local DB Manager |
| 2.2 | Illo GUI | renders | as: Activity Sources | User |
| 3 | User | *onClick()* | *as* | Illo GUI |
| 4.1 | Illo GUI | *exercises* |  | Local DB Manager |
| 4.2 | Illo GUI | presents | *exercises* | User |
| 5 | User | *onClick()* | Confirmation event | Illo GUI |
| 6.1 | Illo GUI | *setNext()* | *as.next()* | Timer |
| 6.2 | Illo GUI | sends user to | *t.configScreen()* | User |

Design Sequence for Above



**Use Case: Make New Activity Source**

*Description*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # | Subject | Subject Action | Parameters | Object Acted Upon |
| 5 | User | enters | *Activity source name, activity source type (*Exercise set | Workout) | Illo GUI |
| 6.1 | Illo GUI | saves | new ActivitySource(*name, type)* | Illo Local DB |
| 6.2 | Illo GUI | generates | Edit-Exercises-Screen for new ActivitySource() |  |
| 6.3 | Illo GUI | presents | Success message for creation of new ActivitySource() | User |
| 6.4 | Illo GUI | sends to | To new edit screen for the activity source | User |
| The expected, but not necessary, behavior is that the user proceeds to edit the new Activity Source. See the **Edit Activity Source** use case. | | | | |

Analysis Sequence for Above

