Heuristic Evaluation

Structure of the individual report

Part I: Your Name

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Part II: Project Description

The evaluated application is **Outdooractive**, a mobile tool designed for hiking and outdoor navigation. Its core functionalities include access to specialized maps, the discovery of existing community-led itineraries, and a tracking feature to record new activities in real time. The app also features a route planner for creating bespoke itineraries from scratch and a ‘Favorites’ system to organize and save trails.

Part III: Evaluation Execution

The evaluation was conducted by simulating the perspective of a standard user ("Immediate User" with no prior experience with this specific application) on a Xiaomi Redmi Note 10S.
To explore critical functionalities and identify potential usability frictions, the evaluation focused on the following key tasks:

1. Navigating the menu to locate and change distance measurement units (Task 1).
2. Executing a complete tracking process, from initialization to saving the route (Task 2).
3. Adding a specific trail to the 'Want to do' collection via the detailed route card, and verifying the confirmation feedback (Task 3).

The inspection followed **Jakob Nielsen's 10 Usability Heuristics**. Each interaction was analyzed against these principles, and violations were documented with their corresponding severity ratings.

Part IV: List of Violations

1. **H2 Match between system and the real world**
   Where: ‘Settings’ Menu > ‘Language & Region’ list item, Task 1.
   What: The option to customize distance units (km/miles) is nested under "Language & Region". The primary label title makes no reference to "Units"; this information is relegated to a grey subtitle (‘Units and languages’).
   Why: The categorization follows a system-centric logic rather than the user's mental model. In the real world, a user’s preferred language and their preferred unit of measure are distinct concepts. The current labeling fails to speak the user's language by hiding a functional task under a regional category.

Severity: 3.

2. **H6 Recognition rather than recall**
   Where: 'Settings' Menu > 'Language & Region' list item, Task 1.
   What: The keyword "Units" and is excluded from the high-contrast section title ("Language & Region") and is only visible in a low-contrast, grey subtitle.
   Why: The visual hierarchy minimizes the visibility of critical navigation cues. Users typically scan bold headings to find features (Recognition); by burying the keyword in grey subtext, the system forces the user to meticulously read every description or memorize the menu structure from previous use (Recall/Search effort), significantly increasing the interaction cost.
   Severity: 3

3. **H8 Aesthetic and minimalist design**
   Where: 'Track' recording flow, Task 2.
   What: The user is asked to select the "Activity" (e.g., hiking, pilgrim trail) when starting the recording. However, the system redundantly requests the exact same information in the save dialog upon stopping the track.
   Why: This redundancy violates the principle of minimalism by forcing data re-entry. Every extra unit of information in a dialog competes with the relevant units. Asking for the same data twice increases the interaction cost without adding value.
   Severity: 1

4. **H1 Visibility of system status**
   Where: Lock Screen / Notification Center (during active recording), Task 2.
   What: When the device is locked or the screen is turned off to save battery, there is no persistent notification, icon, or widget indicating that the tracking process is active in the background.
   Why: The system fails to provide continuous **feedback** on its status during a critical, long-duration task. This absence creates **uncertainty** (user anxiety), forcing the user to repeatedly unlock the device to verify the app hasn't crashed or paused. This unnecessary friction interrupts the physical activity and undermines trust in the system's reliability.
   Severity: 3

5. **H1 Visibility of system status**
   Where: Route details page, Bottom Sidebar 'Bookmark' menu, Task 3.
   What: Upon selecting a collection (e.g., "Want to do") to save the route, the only visual feedback is a subtle color change of the list icon from grey to green.
   Why: Reliance on color alone to convey state changes is a significant usability flaw and an accessibility violation. Users are forced to double-check their action, increasing cognitive load. A redundant cue, such as a checkmark appearing on the right side, is required for immediate recognition.
   Severity: 2

6. **H3 User control and freedom**
   Where: Confirmation Toast Notification (after adding a route), Task 3.
   What: The confirmation message ("Added to Want to do") provides a link to "View Collection" but conspicuously lacks an "Undo" action.
   Why: This design fails to support quick error recovery. If a user adds a route to the wrong list by mistake (a "slip"), they are forced into a cumbersome, multi-step process to correct it: re-open the menu, locate the list, and tap again to deselect. An "Undo" button in the toast is a standard pattern that minimizes the cost of these inevitable errors.
   Severity: 3

7. **H4 Consistency and standards**
   Where: Confirmation Toast dismissal interaction, Task 3.
   What: The notification can be dismissed by swiping from Left to Right, but the reverse gesture (Right to Left) has no effect.
   Why: The interaction violates standard mobile platform conventions (e.g., Material Design), where temporary notifications typically allow bidirectional dismissal. Restricting the gesture to a single direction without visual affordance makes the interface feel rigid and unpredictable, breaking the user's mental model of how "dismissible" elements should behave.
   Severity: 1

Part V: Summary and Recommendations

Report in the table below the total number of identified violations.

Heuristic	**# violations**
H1: Visibility of system status	2
H2: Match between system and the real world	1
H3: User control and freedom	1
H4: Consistency and standards	1
H5: Error prevention	
H6: Recognition rather than recall	1
H7: Flexibility and efficiency of use	
H8: Aesthetic and minimalist design	1
H9: Help users recognize, diagnose, and recover from errors	
H10: Help and documentation	
HN: Non-heuristic issue	

Overall, Outdooractive proves to be a robust tool with a rich feature set for outdoor navigation. However, the evaluation reveals a recurring friction between the system's logic and the user's mental model, particularly for a novice user. While the core functionality works, the interface often lacks the "forgiveness" and immediate feedback required for an app designed to be used on the move. The usability issues identified, ranging from hidden settings (H2, H6) to redundant data entry (H8), suggest that the design prioritizes technical implementation over user workflow efficiency.

A critical area for improvement is **system visibility and feedback in outdoor contexts** (H1). Subtle cues like the "grey-to-green" color change are insufficient. It is highly recommended to implement redundant coding (using both color and shape/icons) to confirm actions and to ensure persistent system status visibility (e.g., lock-screen widgets) during tracking. This would significantly reduce user anxiety regarding whether the app is working correctly in the background.

Finally, the interface should aim for greater **flexibility and user control** (H3)**.** The lack of "Undo" mechanisms in toast notifications and the rigid gesture controls make the system feel unforgiving of minor slips. Implementing standard "Undo" actions and streamlining workflows, such as removing the redundant request for activity type, would lower the interaction cost.