NPS2001D

Milestone 2

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Q1.
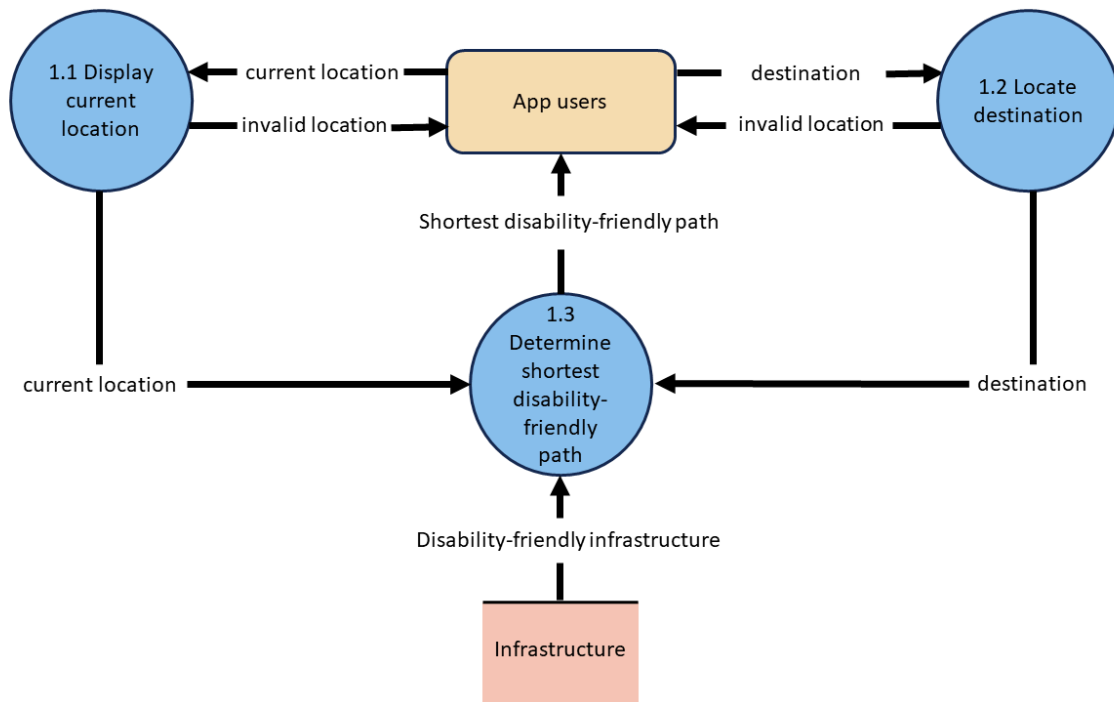
Q2.

Upon downloading and using this app, users can opt to input their preferences such as favourite locations (example: "Home", "Workplace"), accessibility needs (example: Trouble with navigating bumpy terrain) and mobility devices used. The users can modify and delete their saved preferences at any time. These saved preferences for the user's needs will be used to recommend the best route to the users with similar needs.

In the case where users choose not to save their preferences or are heading to new locations, the user will need to input their desired destination.

We utilise the user's location data for step-by-step navigation to the desired destination. In this process, our algorithm will determine the shortest disability-friendly path from the user's current location to the desired destination through a series of disability-friendly infrastructure from publicly available infrastructure databases. The app will display the proximity of the user's current location in relation to the subsequent disability-friendly infrastructure to be reached along the shortest disability-friendly path. The app will continue to reference the user's location as the user moves. Unsaved location data will be automatically deleted after the journey ends, such as when the destination node is reached or when the user opts to end navigation.

Risk Matrix

	Unlikely	Likely	Near certain
Mild	Low	Moderate	Moderate
Moderate	Low	Moderate	High
Severe	Moderate	High	High

Overall Risk Assessment

System: App			
Threat Event	Likelihood	Impact	Risk Level
Loss of Confidentiality	Likely	Severe	High
Loss of Integrity	Unlikely	Moderate	Low
Loss of Availability	Likely	Moderate	Moderate
		Overall Risk:	High

To safeguard against unauthorised access to sensitive information, we employ anonymisation techniques that strip away personal details like names or emails, enhancing user identity protection. Additionally, data aggregation is employed to further anonymise individuals, reinforcing privacy measures.

For enhanced app availability, we consider implementing secure offline mode functionalities. This ensures that locally stored data is encrypted and well-protected, contributing to a reliable user experience even without an internet connection.

References

1. https://utilitiesone.com/privacy-concerns-in-geolocation-data-sharing-platforms
2. https://www.smrt.com.sg/Journey-with-Us/SMRT-Trains/Accessibility
3. https://utilitiesone.com/addressing-privacy-concerns-geolocation-data-and-mobile-apps