

Beach Suitability App - README

README - Beach Suitability App

Project Highlights

- Discover beaches across India based on activity (surfing, swimming, relaxation)
- Real-time weather, tide, and water quality updates
- Nearby hotel recommendations
- User-generated reviews and photo uploads
- Safety alerts and eco-friendly indicators

Motivation

Tourists often struggle to choose suitable beaches due to lack of consolidated information. This app unifies weather data, safety alerts, beach features, and user reviews into one mobile application, helping users make informed and enjoyable travel decisions.

Technologies Used

- Frontend: Java, Android SDK
- Backend: REST APIs, OpenWeatherMap API
- IDE: NetBeans
- Tools: Git, Postman, Docker
- Architecture: MVC, UML, DFD
- UI: Responsive XML layouts, JS, CSS

Features

- Real-time weather, tide and water quality updates
- User reviews, ratings and beach photos

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- Personalized search and filters
- Eco-friendly beach information
- Light and responsive design

Installation & Setup

1. Clone the repo:

```
git clone https://github.com/your-username/beach-suitability-app.git
```

2. Open the project in Android Studio or NetBeans
3. Run the app on an Android device or emulator
4. Add a valid OpenWeatherMap API key in script.js

Future Improvements

- AI-based beach recommendations
- Offline map support
- Multilingual UI
- Google Places API integration

References

- OpenWeatherMap API
- Android Developer Docs
- Literature cited in the report

Authors

- Atla Srinadh Reddy
- Kakumuri Poojesh

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- N Lakshmi Narayana Reddy
- S R Ramya

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