For the Take-Home project, Please do a small app that meets the following requirements:

1. The layout of the application must be responsive to ensure an optimal user experience. It should adapt to different screen sizes, displaying one column for small devices and 2 or 3 columns for tablets and larger screens.

2. Users should be able to seamlessly add notes to the application, allowing them to quickly jot down important information.

3. The application should provide an effortless way for users to remove notes when they are no longer needed.

4. Users should be able to sort the notes by date, helping them easily find and organize their information.

5. Implement a search functionality that allows users to search for specific text within their notes, making it convenient to locate information.

6. To handle a high number of notes, incorporate infinite scroll functionality, ensuring smooth and efficient navigation through the notes.

7. Add an element of visual interest by randomly generating the background of the application, making it visually appealing.

8. Each note should prominently display a date stamp at the bottom, helping users track when they made each note.

9. The application should retain the state of the notes even after restarting, ensuring that users' data is preserved.

10. If you have the ability to sync the notes with Firestore or another solution, it would be a plus, but it is not mandatory.

For reference, you can explore a similar app on the Google Play Store: link to the app.

Please use Swift. Once you have completed the project, please zip the source code, provide a build file, create a video demo showcasing the application's features, and send them to us.

If you have any questions or concerns regarding this project, please feel free to reach out to us. We are here to assist you.