**Group Members**

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**Section: A**

**Assignment No: #2**

1. What refactoring Strategies they use?

**Solution**

They use the window manager and folding features jetpack libraries to redesign the UI. And development team learned about the different mistakes through testing.

1. How they apply Re-write.

**Solution**

As one of the first optimizations, they removed all small buttons from the middle of the screen to avoid users having to press buttons within the crease, using the [window manager](https://developer.android.com/reference/androidx/window/WindowManager) and [folding feature](https://developer.android.com/reference/androidx/window/FoldingFeature) Jetpack libraries to redesign the UI and create a tabletop experience for calls. This enabled callers to be shown on the top screen of the foldable, while the bottom screen displayed all of the controls and menu items, which is a **huge improvement for the user experience.**

After this, the team thought about user interactions with Duo across all screen sizes. While swiping to answer a call works really well on a phone, the development team learned through testing that this didn’t work as well on a tablet or foldable. Some Duo users were unintentionally answering phone calls and having to hang up quickly. The team optimized the larger screen experience by implementing buttons on tablets, and dual sliding pucks on foldables. The team was closely monitoring behavior changes as part of this UI improvement, and saw a **decrease in unintentional brief calls on these devices, as well as an increase in call time** on these devices. This UI tweak enabled Duo’s users to have a more seamless calling experience.

1. What is not change in the project? Examine the projects and submit the proof of changes wr.t a) Old Features, b) Newly added changes c) Changes for each version, d) Current state.

**Solution**

1. Google Duo has been upgraded to Google Meet as the one app for video calling and meetings. Available features are different between video calling and meetings. You’re still able to make unlimited video calls with no time limits on your phone. Your conversation history, contacts, and messages remain. Use new Meet app for:

* **1:1 and group video calling:**The classic Duo end-to-end encrypted experience that involves ringing a number or group directly. Your call will have a lock icon and an in-call watermark confirming it is end-to-end-encrypted.
* **Meetings:** The ability to create or join a cloud-encrypted Google Meet meeting with a link when you’re ready.

1. **Access calling features in the new Meet app**

With the upgrade of Duo to Meet, added Duo calling features to the Meet app. The upgrade is an improved app experience and doesn't require a new download for Duo users. You're still able to do everything you've always done in Google Duo, such as:

* Make video calls to friends and family by phone number or email.
* Use fun filters and effects.
* Send messages.
* Ask Google Assistant to call with your existing devices.

**Access meeting features in the new Meet app**

With the update, you can schedule, create, and join a meeting. You also get access to Google Meet’s suite of meeting features and capabilities. This update allows you to:

* Use in-meeting chat.
* Add live closed captions in a video call.
* Apply virtual backgrounds and visual effects.
* Schedule a meeting or set up instant meetings so people can join when they’re ready.
* Engage with larger groups of up to 100 people in a meeting.

1. App engagement improved as well as call time on tablets and foldables increased after these changes. Upgrading the experience and look & feel was critical to the business as communication apps are taking off on larger screens, and it’s important to optimize these experiences to stay competitive. The Duo team plans on continuing to optimize the experience across all form factors.
2. The only real standout feature of Duo is "Knock Knock," which lets you see a live preview of the person calling you before you accept the call. Google says this is "[t]o make calls feel more like an invitation rather than an interruption" and gives you an idea of what someone is up to before you start talking. Finally, Google Duo features a low-light mode to help improve call conditions when it's dark.