

History of Jetpack Compose



What is Jetpack Compose?

- Jetpack Compose is a modern toolkit for building native Android UI.
- **Declarative:** Developers describe what the UI should look like, and Compose takes care of the rest.
- **Reactive:** Automatically updates the UI when the underlying data changes.

Early Development

- **2019:** Announced at Google I/O.
- Designed to simplify and accelerate UI development on Android.
- Based on **Kotlin**, leveraging its concise syntax and powerful capabilities.

Key Milestones

- **2019:** Initial announcement and developer preview.
- **2020:** First beta release, offering a stable API.
- **2021:** Official 1.0 release, ready for production.

Recent Updates and Future

- **2022:** Introduction of new components and performance improvements.
- **2023:** Enhanced tooling and integrations with other Jetpack libraries.
- **Future:** Focus on expanding capabilities and optimizing for new Android features.

App Lifecycle in Jetpack Compose

- **Activity Lifecycle:** Core concept in Android for managing the state and interaction of activities.
- **Compose Lifecycle:** Managed within the context of an Activity or a Fragment.

Lifecycle States

- **Created:** The activity is created, and Compose components are initialized.
- **Started:** The activity becomes visible.
- **Resumed:** The activity is in the foreground and interactive.
- **Paused:** The activity is partially obscured.
- **Stopped:** The activity is no longer visible.
- **Destroyed:** The activity is terminated, and resources are released.

Lifecycle Methods

- `onCreate()` : Initialize components.
- `onStart()` : The activity is about to become visible.
- `onResume()` : The activity is now interactive.
- `onPause()` : The activity is partially visible.
- `onStop()` : The activity is no longer visible.
- `onDestroy()` : Clean up resources.

Lifecycle Flow Diagram

```
graph TD;
  A[Created] --> B[Started];
  B --> C[Resumed];
  C --> D[Paused];
  D --> E[Stopped];
  E --> F[Destroyed];
  D --> C;
  E --> B;
```