PetPal

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TASK#	PROJECT TASKS WHICH REQUIRE SOFTWARE TOOLS
1	Development of the Mobile App Using Flutter
2	Database Management System
3	User Interface Design

SOFTWARE TOOLS FOR TASK 1:

Tool Cost/Training/Functionality Data

Tool	Android Studio	VS Code	IntelliJ IDEA	Emacs
Cost	Free	Free	Free	Free
Training Days	10	5	10	20
Functionality	90	85	80	65

Normalized Cost/Training/Functionality Data

Tool	Android Studio	VS Code	IntelliJ IDEA	Emacs
Cost	0	0	0	0
Training Days	50	25	50	100
Functionality	100	94	89	72

Normalized Tool Graph

Tool	Cost	Training Days	Functionality
Emacs		100	72
IntelliJ IDEA		50	90
VS Code		25	95
Android Studio		50	100

Cost ■ **Training Days** ■ **Functionality**
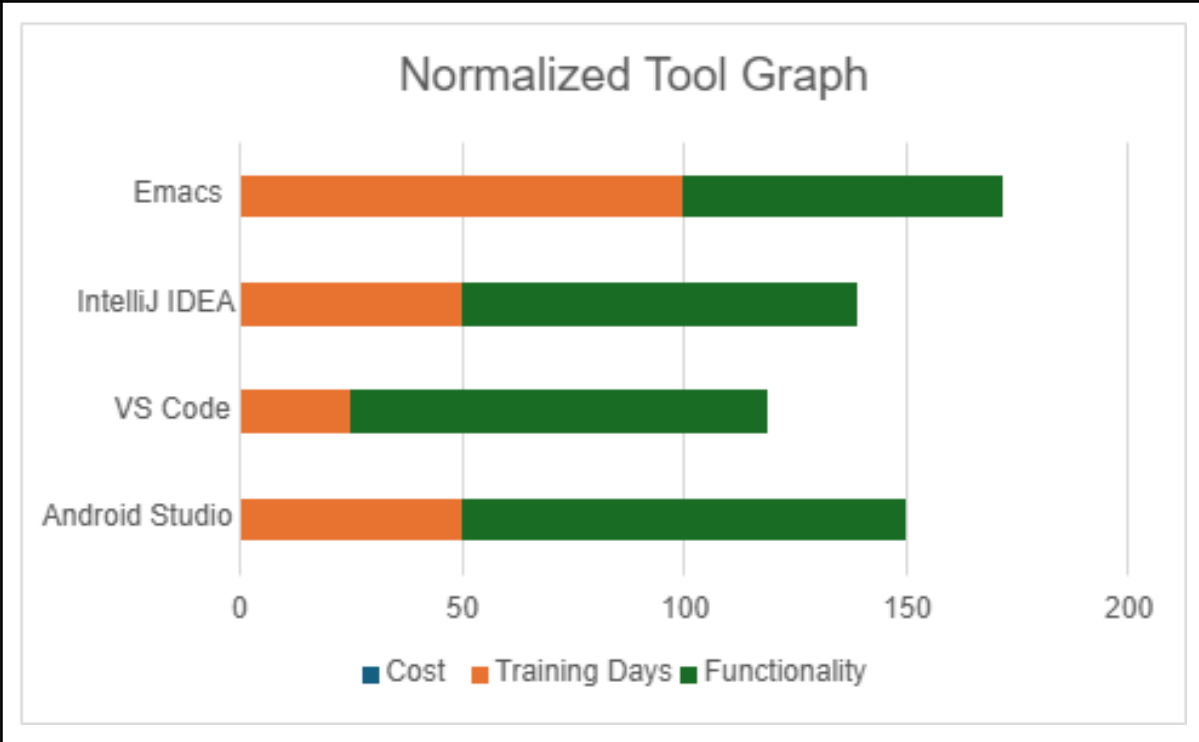
Which tool has been selected? Why?

We chose Android Studio because, despite being more resource-intensive than some alternatives, it offers the most comprehensive Flutter development environment. As the official Google-supported IDE, it provides seamless integration with the Android SDK, built-in emulators, and advanced debugging tools, ensuring a smooth development process. While the learning curve may be slightly higher, its powerful features, robust performance monitoring tools, and deep platform integration make it the best choice for building high-quality Flutter applications. Additionally, Android Studio's extensive documentation and strong developer community provide valuable support, helping to resolve technical challenges efficiently and streamline development.


SOFTWARE TOOLS FOR TASK 2:

Tool Cost/Training/Functionality Data

Tool	MySQL	PostgreSQL	MongoDB	Firebase
Cost	$2,140/y	$0	$684/y	$1,000/y
Training Days	10	15	18	10
Functionality	76	85	86	72

Normalized Cost/Training/Functionality Data

Tool	MySQL	PostgreSQL	MongoDB	Firebase
Cost	100	0	28,27	49,30
Training Days	56	83	100	56
Functionality	88,4	98,8	100	84,6

Normalized Tool Graph
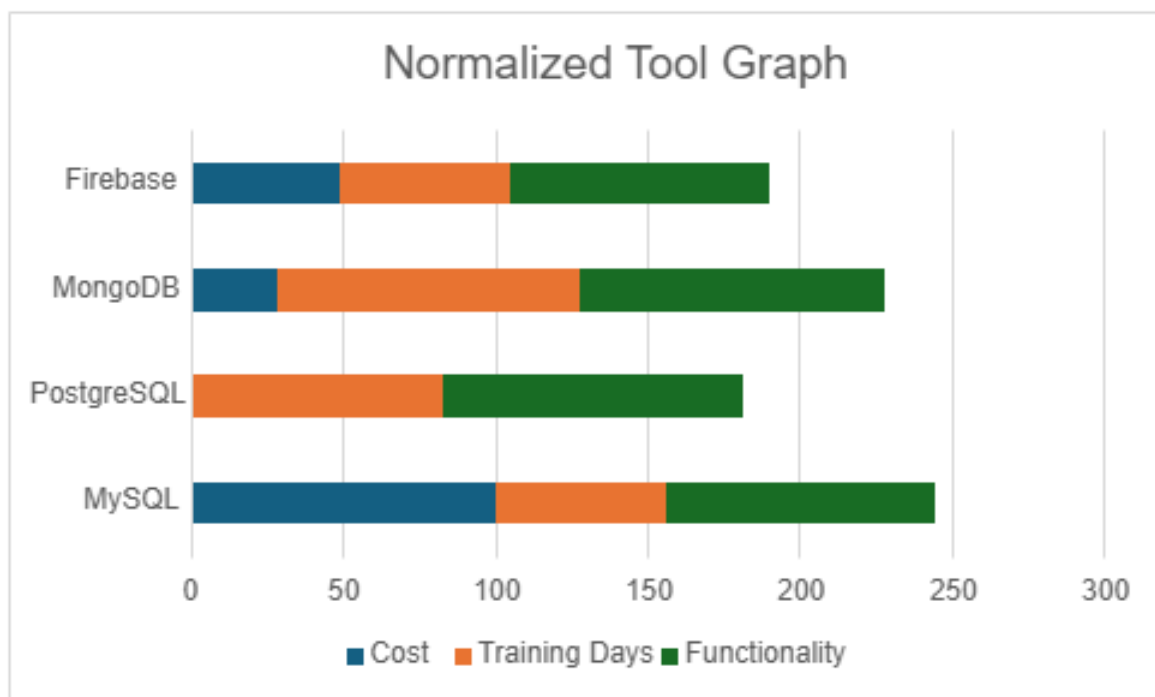
Which tool has been selected? Why?

We chose Firebase because it provides real-time data synchronization, which is essential for tracking live updates on animal locations and health status. Additionally, Firebase is designed to work seamlessly with Flutter, making it the perfect backend solution for our mobile application.
Flutter's official Firebase plugins allow for fast and efficient integration, enabling us to implement features such as authentication, cloud storage, and push notifications with minimal effort. This combination reduces development time, enhances performance, and ensures smooth user experience across different devices.
By using Firebase and Flutter together, we can build a scalable, responsive, and easily maintainable application, ensuring that all critical data is updated in real time while keeping the app lightweight and efficient.

SOFTWARE TOOLS FOR TASK 3:

Tool Cost/Training/Functionality Data

Tool	FRAMER	SKETCH	FIGMA	IN VISION STUDIO
Cost	$300/y	$250/y	$450/y	$500/y
Training Days	10	8	8	8
Functionality	90	60	85	75

Normalized Cost/Training/Functionality Data

Tool	FRAMER	SKETCH	FIGMA	IN VISION STUDIO
Cost	60	50	90	100
Training Days	100	80	80	80
Functionality	100	66	95	84

Normalized Tool Graph

User interface Design Tools
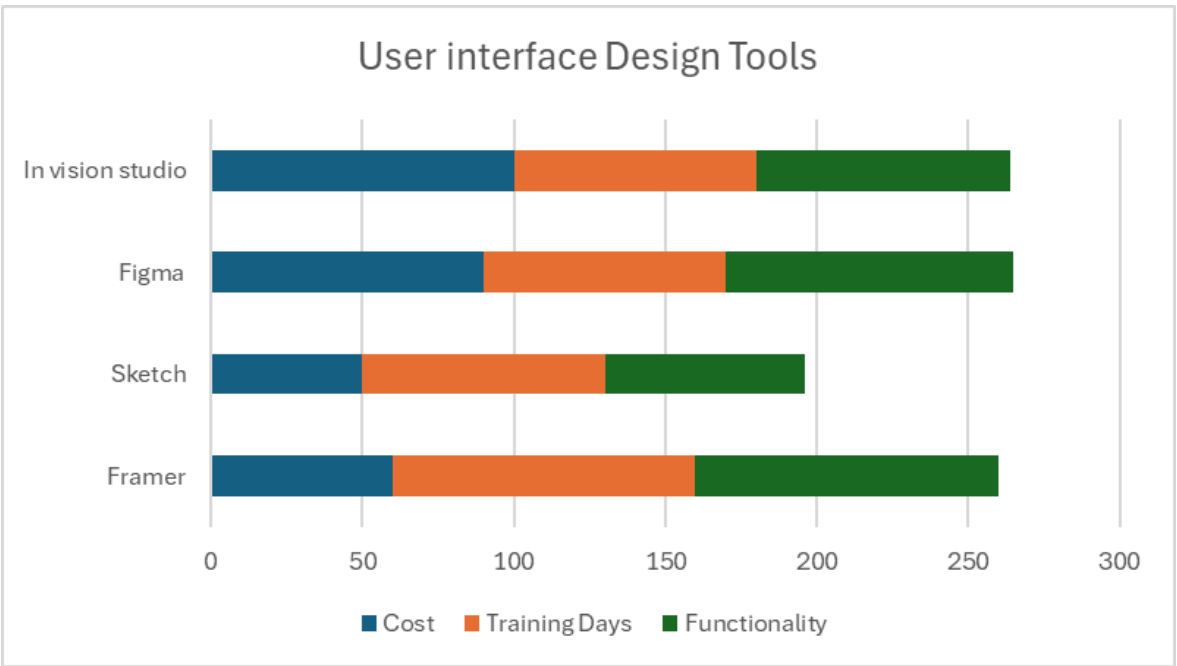
Which tool has been selected? Why?

We chose Figma because Figma offers powerful collaboration and design tools for team-based projects like PetPal. Its cloud-based structure makes it platform-independent and accessible from any device, allowing for a quick start without complex setups. Additionally, Figma's interactive prototyping features are ideal for testing the app's user experience (UX).

Figma will be used to design all screens of the PetPal mobile app, including a real-time animal location map, animal profiles (name, photo, health status, vaccination details), an adoption request form, and refill alerts for smart food and water bowls.

With extensive plugin support, tasks such as creating color palettes, adding icons, and exporting assets are streamlined, optimizing the design process.