
LOW CODE PLATFORM STUDY AND APPLICATION

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WHAT IS LOW-CODE DEVELOPMENT

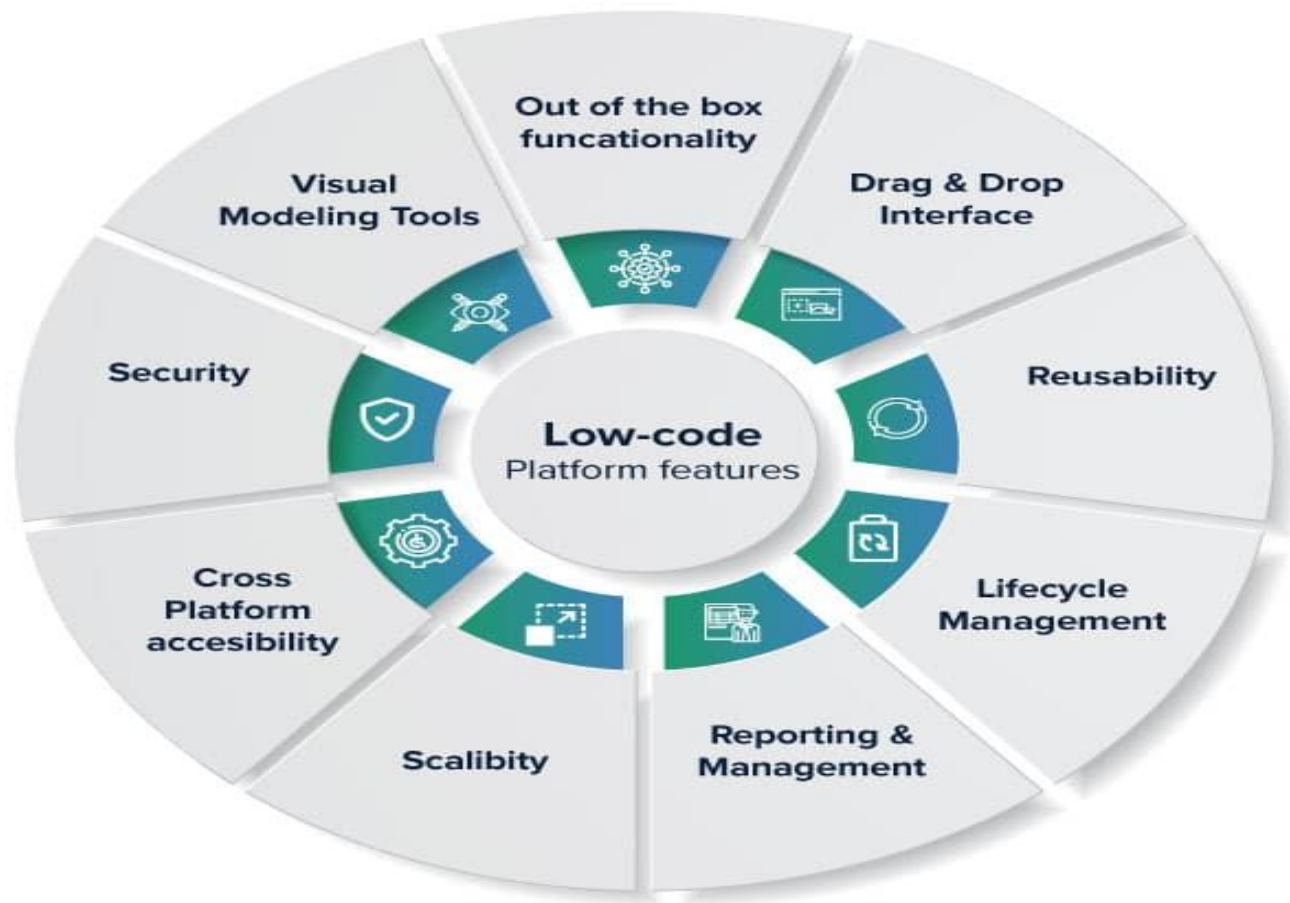
- A low-code development platform (LCDP) provides a development environment used to create application software through a graphical user interface instead of traditional hand-coded computer programming.
- **What does it mean?** It means that the application can be created without coding.
- Low-code development platforms allow you to create applications in a visual way.
- **To put it another way:** instead of writing code, the application is constructed by dragging and dropping predefined graphical blocks in a graphical user interface.

WHY SUCH PLATFORMS STARTED TO EMERGE

- The first one is quite straightforward: a shortage of software developers. The current supply of software engineers is unable to meet business demands. Experienced developers are hard to hire.
- The second reason is productivity and thus directly lowering the time to market indicator. Applications constructed with the use of low-code platforms are usually developed faster than in a traditional software development model. This is because the creator of the application uses predefined blocks.
- Another reason is cost-effectiveness. It has already been pointed out that the low-code approach enables the software to be developed rapidly. In other words, the overall time spent on development decreases.

HERE'S HOW A TYPICAL LOW CODE PLATFORM LOOKS LIKE

- ❖ A visual IDE: An environment for visually defining the UIs, workflows, and data models of your application and, where necessary, adding hand-written code.
- ❖ Connectors to various back-ends or services: Automatically handles data structures, storage, and retrieval.
- ❖ Application lifecycle manager: Automated tools for building, debugging, deploying, and maintaining the application in test, staging, and production.



FEATURES OF LOW CODE PLATFORM

Visual Modeling Tools:

The low code platform is powered by built in components that are capable of presenting any information in a format that is comprehensive to anyone, irrespective of the level of their technicality.

Out-of-the-box Functionality:

It avoids the need to build application core modules from scratch.

Drag and Drop interface:

These interface allows you to drag and drop different components of an application rather than having to build all on your own.

Reusability:

Allowing repeated use of pre-configured modules, components, and functionalities for different applications.

Security:

Without adequate security features, no low code tool can be considered a sufficient solution for software development irrespective of how user-friendly or functional it may be.

Scalability:

This feature ensures that the apps built using the low code approach can easily adapt to the changing business needs, catering just as seamlessly to twenty users or two thousand.

Cross-platform accessibility:

This feature supports the ability to use the low code development platform on any device .

Reporting and Monitoring:

Helps in monitoring processes and workflows of apps, and in turn, track their effectiveness at every step of the way.

Lifecycle Management:

This feature allows the users to access all the information pertaining to an application as well as its development process, and revert to an older version if necessary for better functioning and lifecycle management.

WHAT CAN LOW-CODE PLATFORMS BE USED FOR

- **CUSTOMER ENGAGEMENT APPS:**

Build any enterprise-grade app for different business tasks. These apps can be anything from customer-facing apps to complex business processes for more effective and personalized customer engagements.

- **OPERATIONAL EFFICIENCY OPTIMIZATION APPS:**

Create applications that automate processes to increase the efficiency of operations. These apps provide several benefits to a business including reduced cost and reduced risk of error through automation.

- **BUSINESS PROCESSES:**

Define workflows and build processes for tasks of any complexity to automate operations across several departments.

- **UI, DATA MODEL & BUSINESS LOGIC:**

Define and configure data models, business logic, and UI (user interface) for web applications and mobile devices.

- **AI-BASES SOLUTIONS:**

Build applications that use AI and machine-learning algorithms to process data effectively to minimize manual operations and accelerate efficiency.

BENEFITS

- Shorten development time
- Accessibility for non-technical individuals
- Verification of the working solution directly with clients : The system can be verified based on a working solution instead of static mocks and wireframes.
- Cost of setup is low
- Valuable solutions at speed

DISADVANTAGES

- Limited capabilities :The creator of a system can only use the blocks predefined in a given platform.
 - Performance issues
 - Overall quality and maintainability : In the long run, the lack of an adequate approach in this area may lead to a reduction in the quality of the end product.
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Low Code and No-Code Are NOT the Same

- There is a common misconception that low code and no code are interchangeable terms, but they're not.
- No code platforms are for business people who have no coding knowledge.
- No code uses declarative programming, and is about what not how - you tell the system what you want, and build it.
- Low code platforms can also be used by non-technical people, however at some point, a developer will be required to finish things off.

Low Code	No Code
Use for more complex applications	Use for reporting, analytics and tracking apps
Usually for apps that are foundational or run important processes for a business	Apps that evolve with frequent updates and changes in use-case
Apps with: <ul style="list-style-type: none">• More than 5 years lifecycle• Fewer updates	Can be integrative or stand alone
Can be mission critical	Good for self-deploying apps
Offers more developer control	Mobile responsive

Zoho creator & Google app maker

- Zoho creator is a low-code application development platform that allows users to create custom applications on their own, with minimal coding experience. The intuitive drag and drop interface empowers developers and business users to build web and mobile applications that satisfy all their unique requirements with ease.
 - Google App Maker was a low-code application development tool, developed by Google Inc. as part of the G Suite family. It allowed developers or its users to build and deploy custom business apps on the web.
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ZOHO CREATOR FEATURE SUMMARY

- ✓ Web mobile and native mobile access
- ✓ Marketplace & developer community
- ✓ Easy drag and drop interface
- ✓ Webform
- ✓ 24*7 technical support
- ✓ Data analysis and reporting
- ✓ Hire an expert
- ✓ Record summary
- ✓ Customer portal
- ✓ Email notification and schedules
- ✓ Collaboration
- ✓ Automated workflow
- ✓ Users & profiles
- ✓ Data Import
- ✓ Data Import/Export

- ✓ Chat
- ✓ Single sign on
- ✓ Real time reporting
- ✓ Document storage
- ✓ User access controls
- ✓ Custom forms
- ✓ Custom development
- ✓ Indexing
- ✓ Workflow Management
- ✓ Collaborative review
- ✓ Applications management
- ✓ Enterprise applications
- ✓ Expense claims
- ✓ Order approvals
- ✓ Purchase orders
- ✓ API

WHAT IS DELUGE

Deluge [Data Enriched Language], Zoho's proprietary scripting language, can handle any task a developer may throw at it. With built in wrappers and a powerful execution engine, it has evolved into one of the fastest and most flexible scripting language available .

Deluge - The User-Friendly Faas

Function as a service, or Faas, is a cloud offering that provides infrastructure for serverless development and deployment of application functionalities. It provides the middleware and other development tools to create powerful independent functions. This allows developers to upload chunks of code onto the cloud, which can then be scaled automatically.

HOW DOES DELUGE FIT THE FAAS CURVE



Nothing needs to be configured manually for scripting. Deluge starts running flawlessly as soon as you sign up for zoho service. All the middleware-IDEs compilers, editors and security are taken care off.



All data is stored on the cloud, which allows teams to work together over the internet, from any part of the world. This helps global projet hit the market quickly and eases the software development life cycle.

DELUGE (VS) TRADITION AL LANGUAGES

- **ELEGANT SYNTAX** : The intuitive editor lets you drag and drop syntax, and the guided scripting and code snippets let you skip syntax memorization altogether.
- **POWERFUL INTEGRATIONS** : Built-in-wrappers save a ton of fetching data without writing lines of code set up APIs. The integration can then link a number of third party applications to your Zoho service.
- **SECURITY AND PERFORMANCE** : Our execution engine takes care of security and performance, which lets users focus on building highly efficient application functionalities.

Zoho Creator

Pros

- It has an excellent interface, email, and text integration.
- Create a dashboard of graphs and charts that update in realtime.
- Easily import or export large databases.
- Does a lot of the work for you in database creation and manipulation.
- Control – Zoho allows you complete control and portability over your data.

Cons

- It doesn't show the OTP screen when logging in through the WEB sometimes.
- The product claims that your user data is protected, but there is a flaw with how the dropdown menu data is shared.
- Requires use of proprietary scripting language for app customization and automation.

— GOOGLE APP MAKER

Google first launched App Maker as part of an Early Adopter Program in November 2016. At the time, we described it as a service that “lets users drag and drop widgets around on a user interface that complies with Google’s Material design principles” to create apps that can be “customized further with scripts, as well as HTML, CSS, JavaScript, and JQuery content.” Once apps are live, usage can be monitored through Google Analytics. App Maker hit general availability for all G Suite Business, Ente

GOOGLE APP MAKER ALTERNATIVES

- Google wanted teams to use App Maker for building custom apps that speed up workflows and improve processes, such as requesting purchase orders, filing and resolving help desk tickets, and tracking allocation requests.
- The company argued that IT executives' attention is on security and governance, not on app development. That may be, but Google App Maker apparently wasn't the solution.

Google is pointing G Suite users to the following alternatives:

- If you use App Maker to automate complex business processes: Use AppSheet. App Maker data is stored in Cloud SQL, and App Sheet supports Cloud SQL databases so you can build an application on the existing database tied to your App Maker app.
- If you use App Maker to develop apps: Use App Engine to build and deploy Google Cloud Platform (GCP) applications. App Maker data is stored in Cloud SQL, allowing you to build an App Engine application on the existing Cloud SQL database tied to your App Maker app.
- If you use App Maker for data collection: Use Google Forms, which has many new features that were not available when App Maker launched

Google App Maker





















Pros



- Very easy to use.
- User-friendly.
- No coding required for basic app creation.
- Integrates with Google apps and services.

Cons

- No customizable templates.
- To develop advanced apps, advanced coding knowledge may be necessary.
- Not recommended for beginners.

ZOHO CREATORS AND OTHERS - FEATURE COMPARISON

FEATURES	ZOHO CREATOR	CASPIO	QUICK BASE	OUT SYSTEMS	MENDIX
EASY SETUP					
FULLY CLOUD BASED APP BUILDER					
PAGE BUILDER					
NATIVE MOBILE APPLICATIONS					

FEATURES	ZOHO CREATOR	CASPIO	QUICK BASE	OUT SYSTEMS	MENDIX
AUTO SCALING					
iOS SDK AND Android SDK					
AUTOMATIC UPGRADES AND BACKUP					



REFERENCES

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THANKYOU