# Introduction to ManageEngine AppCreator

**ManageEngine** **AppCreator**

# Index

Welcome to the ManageEngine AppCreator Platform Evaluation Guide. This research document helps application leaders understand the various IT stumbling blocks that businesses today face and how you can address them. The guide further explains why AppCreator is the tool to help you overcome these challenges and drive your company's digital transformation.
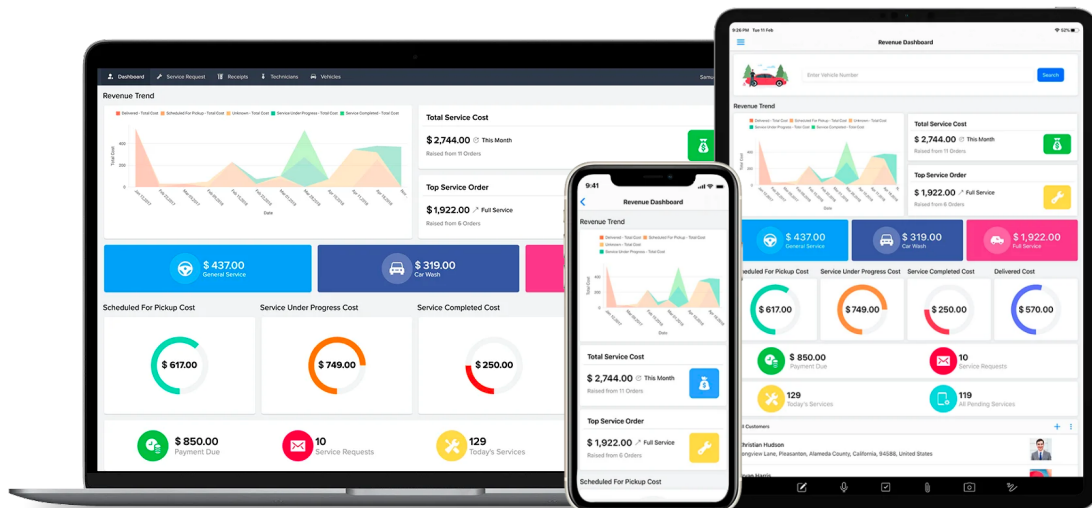
# What is ManageEngine AppCreator?

ManageEngine AppCreator is a powerful low-code application development platform that enables you to deliver web and mobile applications at the speed of your business.

Being a pioneer in the low-code space, many of the world's largest organizations use AppCreator applications to manage their daily operations by streamlining processes, projects, and tasks.

# Built with a purpose

The future of work is digital, and businesses of all sizes need to transform fast. At ManageEngine, we believe every business should be able to conduct their work operations with innovative, custom-built software. That's why we built AppCreator, our intuitive low-code development platform, so companies across industries can transform their ideas into applications to encourage rapid growth and competitiveness.

# AppCreator vs. traditional development methods

Developing apps on AppCreator simplifies and streamlines the entire app rollout process, offering several advantages over traditional development technologies. Let's take a look at how they compare:

| | Traditional programming | Zoho Creator |
|---|---|---|
| Skill set/expertise requirements | **Niche, project-specific skills.** Needs programmers with expertise in programming languages for web (Javascript, Python, CSS, PHP), iOS (Swift), and Android (Java, C++). | **Little to no coding needed.** An intuitive drag-and-drop interface makes it easy for both users and developers to create applications. |
| Multidevice deployment of apps | **Single-OS focused.** The specific programming language, environment, and device-focus must be selected before the project even begins. Businesses will need the capacity to develop for various different operating systems, environments, and devices. Applications need to be developed separately for each platform, and code can't be shared between Android and iOS. | **Builds multiplatform-optimized apps.** Cross-platform app builder helps to build native mobile applications that can be used on iOS and Android devices with multiplatform access. The same application works for mobile, the web, on-premise, and in the cloud. |

| | | |
|---|---|---|
| Speed to market | **Looser timelines.** Traditional software development can take months, with multiple teams building applications from scratch through extensive coding and multiple revisions of prototypes. They offer no guarantees, and often go over schedule. | **Exponentially faster.** Ready-to-use code snippets and templates allow you to accelerate application development by 10x. Building off an existing framework and configuration is significantly faster than writing, debugging, and compiling code, and end-user functionality can be created rapidly. |
| Security and privacy | **Demands application-level security** initiatives, which need to be manually configured by the developer. In traditional coding architecture, the code behind each form or module will need to be edited to build in the necessary defenses. If deployed into production, vulnerabilities need to be found and plugged ASAP, to prevent access to exposed data. | **Safe and reliable, with built-in security features,** like audit logs, user access control, and automated threat assessments. Any new vulnerability identified is fixed in the next update. In turn, all the applications running on the platform automatically inherit the latest security protection, ensuring complete data safety. Provides all the necessary security framework certifications in place, with proven experience in large-scale initiatives. |
| Enterprise application integration | **Limited integration capabilities,** without considerable scripting and testing of compatible code to integrate with new external applications—a significant challenge for enterprises with legacy systems that are vital to their business operations. | **Fast integrations and complete control,** due to a responsive development environment. Easy coupling with external and existing systems, with the help of a wide array of out-of-the-box APIs and smart integration tools. Seamless, cross-platform workflows to safeguard speed and efficiency. |

| | | |
|---|---|---|
| Scalability/revisions | **Requires substantial engineering efforts.** Scaling after deployment demands a collaborative involvement from cross-functional teams—development, testing, production—to build enterprise-scale applications, with developers bridging gaps between business and IT. | **Apps scale with business requirements.** Platform-level upgrades that integrate the latest technologies and features occur regularly. Many leading low-code platforms support scalable architectures, such as microservices, support for extensibility, and cloud deployment through popular computing services. |
| Support | **Needs developers** with expertise in programming languages for web (Javascript, Python, CSS, PHP), iOS (Swift), and Android (Java, C++). | **Lifelong support** is provided at a fraction of the cost, through AMC for the platform. |

# How does AppCreator add business value?

On the AppCreator development platform, IT and business teams work together to build high-quality applications, accelerating time to market.

As an extension, AppCreator provides you with:

### Accessible application development
AppCreator makes code-free business application creation easy and hassle-free, with a straightforward, minimalist style.

Business users can bring innovative ideas to life by just dragging and dropping ready-made elements or code snippets. Meanwhile, developers don't lose their focus struggling through cluttered feature sections and overwhelming coding.

### Intuitive visual builder

The visual development environment lets users create complete applications using a drag-and-drop interface. Visual modeling and interface design enables non-developers to grasp application design quickly, by allowing them to see how their application looks as they build it.

### Automate business workflows

Add business logic to make your AppCreator application more powerful and dynamic. Automate workflows and eliminate repetitive tasks by scheduling them to run periodically. Deluge, AppCreator's powerful scripting language, will help you design and automate workflows with a minimal amount of code.

### Launch native multi-device applications without recoding

Drive agile transformation with AppCreator, a platform that allows you to iterate apps, and release them as soon as the functionality is built.

Businesses can also accelerate time to value by rapidly creating and launching applications, and enhancing and expanding them over time. And application reworks are considerably easier, with the business largely dodging cost overruns.

### Security boost

Built-in security features, like audit logs, user-access control, and automated threat assessments, keep apps built on AppCreator safe and reliable.

### Dedicated portals

AppCreator's dedicated portals ensure you keep your customers engaged and informed, based on their interests, location, and usage.

### Reduce reliance on legacy apps

AppCreator's modern frameworks can build cutting-edge ` consumer-grade applications, reviving your business ecosystem. Outdated legacy applications, although vital to business processes, drain efficiency and keep your IT resources in a constant state of updating and fixing.

### Eliminate backlogs and reduce shadow IT

Businesses can build apps to streamline, automate, and harmonize manual internal processes so that developers aren't overburdened, and can focus on higher-value tasks. Minimizing overwhelming coding needs gives the IT department relief from the pressures of their oftentimes challenging app backlog. This also eliminates the need for businesses to employ untried third-party app developers, or deploy risky third-party apps outside their certified IT infrastructure.

# Where low-code development gets the job done

Software development can be expensive and time-consuming, and not every requirement that calls for new software is mission-critical or customer-facing. Instead of wasting your dev teams' time building scores of redundant apps; simply get someone that understands your business to create the apps they need in the low-code environment. App development on the AppCreator platform can solve a litany of business problems:

- ▸ **Sluggish app development:** Yours might be a growing organization looking to capitalize on new opportunities, but struggle to operate at a digital speed. You're not able to execute on your innovative ideas quickly, and struggle with slow app development.

- ▸ **Project backlogs:** Your organization is slammed with too many projects, and your overwhelmed IT team can't focus on innovation due to their endless app backlog.

- ▸ **Reliance on legacy software:** You work with outdated legacy systems that you installed years ago. They're constantly in a state of updates and fixes, and simply can't keep up with ever-changing customer expectations.

- ▸ **Lack of IT bandwidth:** Your organization's teams have ideas that take advantage of ongoing market trends and need to quickly craft workable applications, but lack the technical expertise.

- **Inability to align business with IT:** You think app rollout would be much easier if your business stakeholders could create prototypes of applications as they envision them, to share with your IT team.

- **Risky shadow IT:** Your organization uses a variety of off-the-shelf solutions to get projects off the ground. Shadow IT threatens internal compliance and security protocols.

- **Teams working in silos:** Separate teams of programmers are required to build for each platform, as the technicalities of each one are different. This adds to your expenses and prolongs the app deployment timeframe.

- **Cost constraints:** Your company has budget constraints, and can't afford skilled or professional developers, or expensive tech solutions.

- **Unhappy customers:** UX is currently on the backburner, and your applications fall short of user expectations.

# AppCreator features

AppCreator, the multiplatform builder for business users, supports creating and managing a broad range of business applications. Powered by a drag-and-drop interface and user-friendly scripting language, AppCreator makes app building incredibly fast, as well as simple. This low-code platform allows you to build custom applications based on your unique business needs.

There are a huge number of features in AppCreator and this list highlights some of the prominent ones, to offer you an idea of its capabilities:

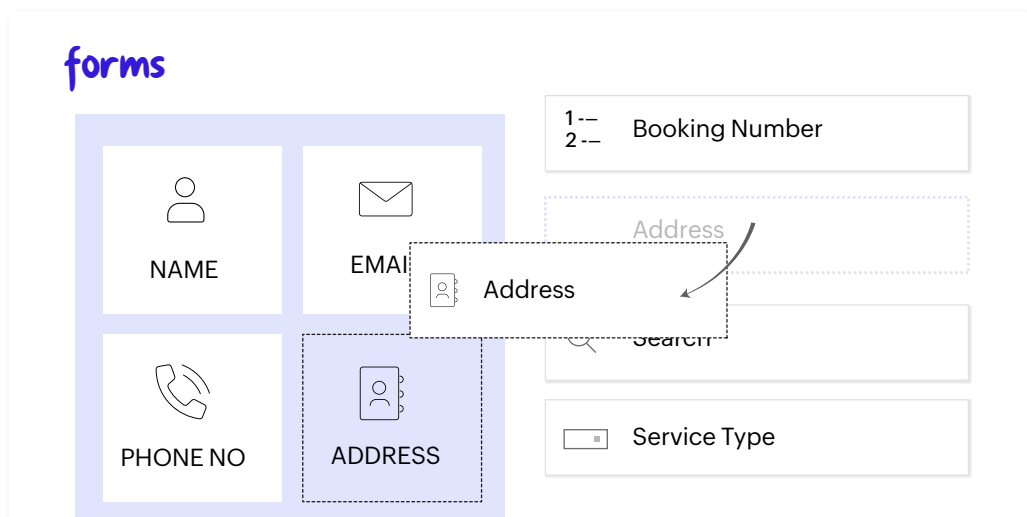| | |
|---|---|
| 1. Forms | 9. Portals |
| 2. Analytics | 10. Multilingual apps |
| 3. Dashboards | 11. Widgets |
| 4. Workflows | 12. Audit trails |
| 5. Notifications | 13. SAML |
| 6. Approvals | 14. SSO |
| 7. Mobile apps | 15. REST API |
| 8. Rebranded apps | |

# 1. Forms

A form is the component of your AppCreator app that enables you to collect and store data. In other words, it enables your users to enter data into your app. This makes forms one of the main points of interaction between your users and your app.

If you relate your AppCreator app with a database, then a form corresponds to a table in the database. If you relate your AppCreator app with a spreadsheet, then a form corresponds to a sheet in the spreadsheet.

# 2. Analytics

A report is a compilation of data collected using a form in the created application. AppCreator incorporates reports as one of the components that completes the purpose of the application you create. A report collates and presents information to help the user analyze, track, or record data. Conventionally, a report comprises information that's gathered and put together with the intention of displaying, viewing, scrutinizing, tracking, or simply recording details. Reports are made up of text, figures, graphics, and/or audiovisual information.

AppCreator offers a range of functions to help create efficient, functional reports that fulfil specific business needs. You can use charts, diagrams, images, and audiovisual files, create criteria to filter information, and arrange data by category. You can also create more than one report based on a single form.
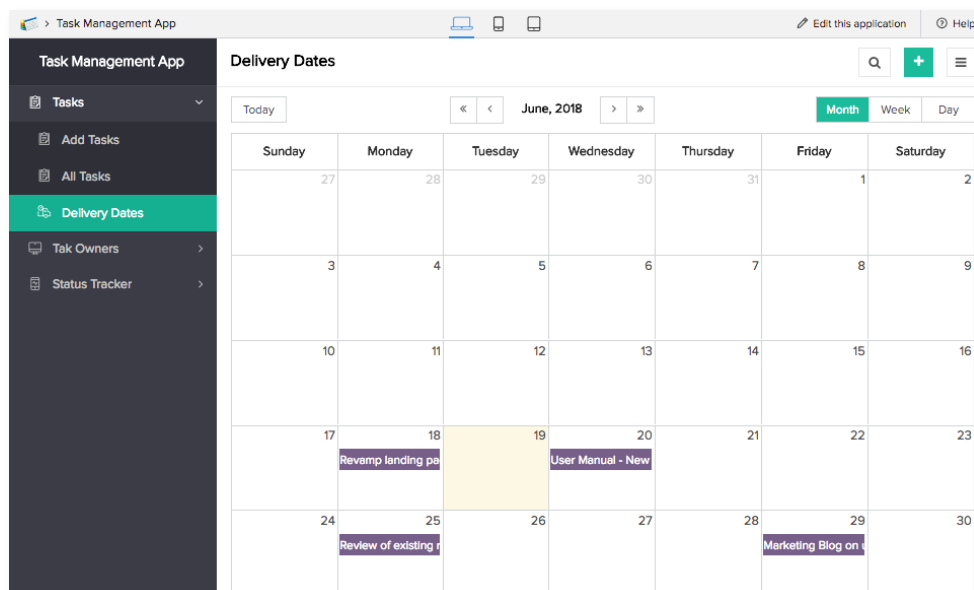
AppCreator gives you many different options to spin your data into meaningful reports that provide substantial information for their intended audience.

a)   **List report:** The records are displayed as rows of information, with fields in the column header and field values in the rows, to form a tabular structure, and also as cards of information with select field values enclosed in each card. It's good for running through many records at once.
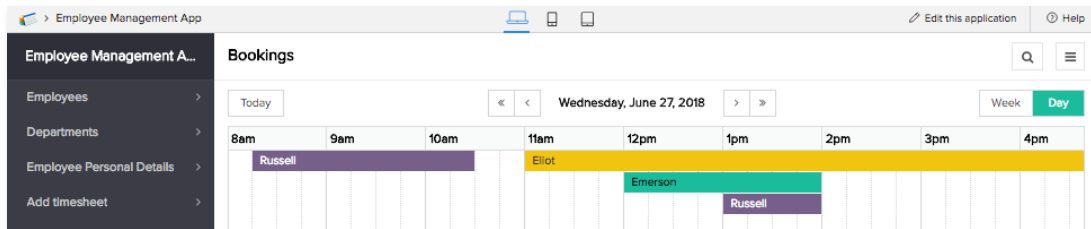


b)   **Calendar report:**  The records are charted based on *date and date-time* field values. It displays a calendar with records present on specific dates in the report. It's best suited for keeping track of events in chronological order.

c)   **Timeline report:** In this report, records are charted based on *date and date-time* field values. It's a higher-level view of the calendar report that captures time frames that relate to the records. It can be used to track longer time spans, like projects.
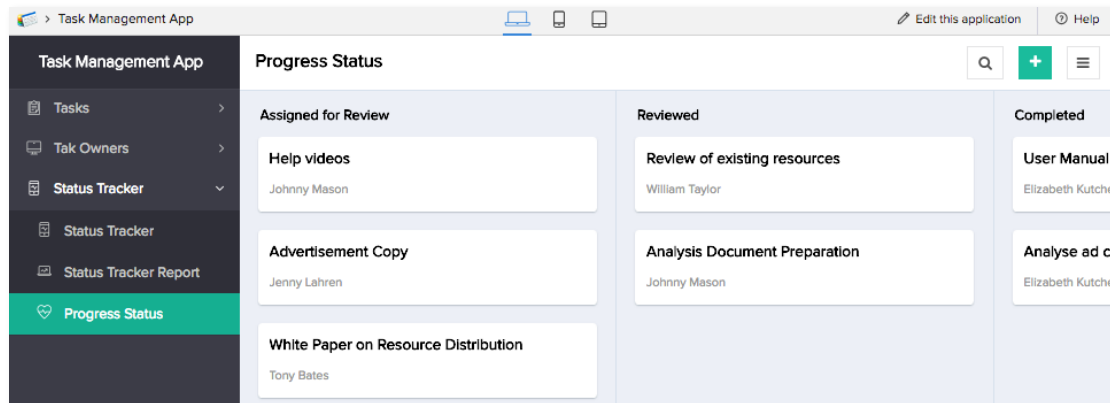


d)   **Spreadsheet report:** This typically captures and displays data as a spreadsheet. It also has the capabilities of a spreadsheet, wherein you can edit, add, or remove records just as you would on a spreadsheet.

**e)** **Kanban report:** This report helps you organize data into categorical entities in a single report, with record sorted into preset groups based on the selected field. This type of report comes in handy when you want to maintain records based on their status, and capture the stages of a process.



# 3. Dashboard

Pages are one of the key components of AppCreator, but you can also build dashboards using a drag-and-drop method. Dashboards help establish a daily data monitoring habit, by sourcing data from multiple apps and offering a comprehensive view of your business's health. They contain charts, reports, and widgets that forecast business trends, and display KPIs for things like projects, customers, profits, and percentages.

# 4. Workflows

A workflow comprises a set of actions executed at specific instances to automate routines in an application. When you trigger a workflow, it executes a set of associated actions.

AppCreator's *workflow* dashboard gives you a high-level overview of all the workflows in the application. You can create, edit, enable/disable, and delete workflows directly from the dashboard page. The workflows are grouped under separate tabs based on the instances at which you want to trigger the workflow.



The components in the workflow dashboard are listed below. (See the above image for reference).

❶  The workflow dashboard will load when you click on the *Workflow* section in the header strip

❷  Click **New Workflow** to create a new workflow.

**❸** The workflows are grouped and listed under separate tabs based on the instances in which they occur. You can switch tabs to view and edit the workflows in the respective sections.

**❹** You can search for a particular workflow by specifying the workflow or action name in the search bar. The search results will display all the relevant results that match the search criteria.

**❺** The workflows associated with a form are listed under the specific form names.

**❻** You can click on a workflow name to view, add, and edit the associated actions.

**❼** Each workflow displays the form activity (add, edit, or delete a record) in which the workflow will be triggered.

**❽** The number of actions associated with a workflow is shown here. Mouse over the text to see the action information.

**❾** You can enable/disable a workflow in the application using the **Enabled/Disabled** toggle button. By default, the status of workflows will be marked as *Enabled.*

**❿** AppCreator displays the date information in which the workflow was created.

**⓫** The *trash* icon will appear when you mouse over an application name. Click on the icon to delete the workflow permanently from the application.

**Understanding form workflows**

A form workflow refers to a workflow triggered when there is an activity on a form. The activities that you can perform on a form are:

- ✓ **Create or Edit** - Create a new record or edit an existing record in the form

- ✓ **Create** - Create a new record in the form

- ✓ **Edit** - Edit an existing record in the form

- ✓ **Delete** - Delete an existing record in the form

A form can have multiple workflows that are triggered when the above-mentioned activities are performed. There needs to be a sequence for the workflows to be executed one after the other—the workflows are executed in the order of creation. Let's assume you've created three workflows in the following order:

1. When the form is created.

2. When the form is created or edited.

3. When the form is edited.

The first workflow *(when the form is created)* is executed first, followed by the second and third workflows. **Click here** to learn more.

# 5. Notifications

AppCreator lets you configure email and SMS notifications to be sent when new form data is submitted, or when existing form data is modified or deleted, or by invoking custom action from reports.

## a. Email notifications

The **Send Email** action can be used to send email notifications when there's an activity in a form. For example, you can invoke a send email action when a new record is successfully added to the database.

AppCreator executes the action for all records by default, whenever there is an activity on the form. You can run the action for select records by setting criteria. Refer to the *Set criteria* page to learn more about setting criteria in a workflow. **Click here** to learn more.

## b. SMS notifications

The **Send SMS** notification action allows you to send customized text messages every time a user submits a new record, or when an existing record is modified or deleted. That means when a user submits or deletes the data in the form, you'll get an instant real-time notification on your mobile phone. An application admin will first have to create a connection with the supported SMS providers to send SMS notifications.

## 6. Approvals

An approval process is a workflow that lets a user approve or reject the record submitted through a form, in a sequential order. The admin of the application can create the approval workflow by specifying the criteria based on which records will be sent for approval, setting multiple levels of approval, and assigning an approver for each level. You can also set action(s) to be performed on approval or rejection. **Click here** to learn more.

## 7. Mobile apps

The application that you build on AppCreator can be accessed via the AppCreator mobile app, or you can download your AppCreator application as a separate mobile app for iOS and Android devices.

## 8. Rebranded apps

The native AppCreator mobile app can be published to the Apple App Store and Google Play Store, provided certain prerequisites regarding developer certification are fulfilled for the respective operating systems.

The native app can also be created in two different variants, for employees and customers, respectively. The app for users is for internal purposes, within the organization. Integration of the native app with ManageEngine's MDM is available. The app can also be configured for external distribution, which will facilitate interactions with customers.

## 9. Portals

A Customer Portal is a great way for an organization to allow its customers to log in to a dedicated internal system to access restricted data set by an admin. Instead of building your own authentication and security mechanisms, AppCreator allows you to create your own portals. Your users will also be able sign up specifically for your portal, instead of needing to sign up for a ManageEngine account.

Your customers can log in to your dedicated portal, access applications shared to them, submit data, and most importantly, view and edit set records. Customer Portals provide you with an opportunity to present your application with a brand identity personalized to your organization.

## 10. Widgets

Widgets are used to extend the capabilities of your AppCreator application, so that you can perform tasks that may not be possible using built-in features. It equips you with additional options to enhance the front-end capabilities of your app.

Widgets enable you to:

- Create and customize features that are specific to your app

- Redefine the way your application interacts with your customers

- Take complete control of the front-end design

- Incorporate third-party apps that cater to your Creator app

## 11. Audit Trial

Audit Trail is a security-related feature in AppCreator which captures the history of changes made to a record, for viewing and auditing purposes. For example, when a user updates a record with new values or deletes an existing record, the updated or deleted record values are logged with the entire activity log, including the old value, modified values, the user who modified or deleted the record, the modified time, and more.

In short, this feature keeps track of the changes made in your application, as well as when, by whom, and how much of the data has been modified. This serves as documentary evidence for the sequence of activities in your application records.

## 12. SAML

Security Assertion Markup Language (SAML) is a framework which helps us to achieve single sign-on (SSO) in a secure and easy manner. SSO is a centralized login system which can authenticate the customer with just a single set of login credentials.

In AppCreator, Customer Portal administrators can simplify password management for their customers using SAML. If the administrator already stores the login credentials of their customers in a SAML provider, then they can configure the Customer Portal to be authenticated based on those credentials. The administrator can also configure SAML for multiple portals, to enable customers to access all the portals using the same credentials.

## 13. SSO

SSO is an authentication service that allows a user to use a single login to access multiple applications. SSO uses Security Assertion Markup language (SAML) for exchanging authentication between the applications.

## 14. REST API

AppCreator provides REST APIs that allow external websites to interface with AppCreator applications. Users can build their web applications in PHP, JSP, ASP, Perl, or in any other programming language and store the data in AppCreator. REST APIs can be used to perform simple add, delete, and update operations.

# What can you make with AppCreator?

AppCreator is a low-code application development platform that empowers you to build enterprise-class applications that run on mobile, tablet, and the web. You can build any business process management application using AppCreator. Its drag-and-drop interface enables you to create custom, multiplatform business applications, ranging from simple call logs to complex Enterprise Resource Planning (ERP) software that integrate with your existing processes.

Accelerate the development process using our rich ecosystem of intuitive visual builders, code editors, and prebuilt templates. With AppCreator, businesses can collect data, automate processes or workflows, analyze data in reports, collaborate with other users, and even integrate with external applications. Here are some of the business applications that can be built on AppCreator.

a. Point of sale

b. Quotation management

c. Project tracker

d. Construction management

e. Sales management

f. Event organizer

g. Volunteer portal

h. Material management

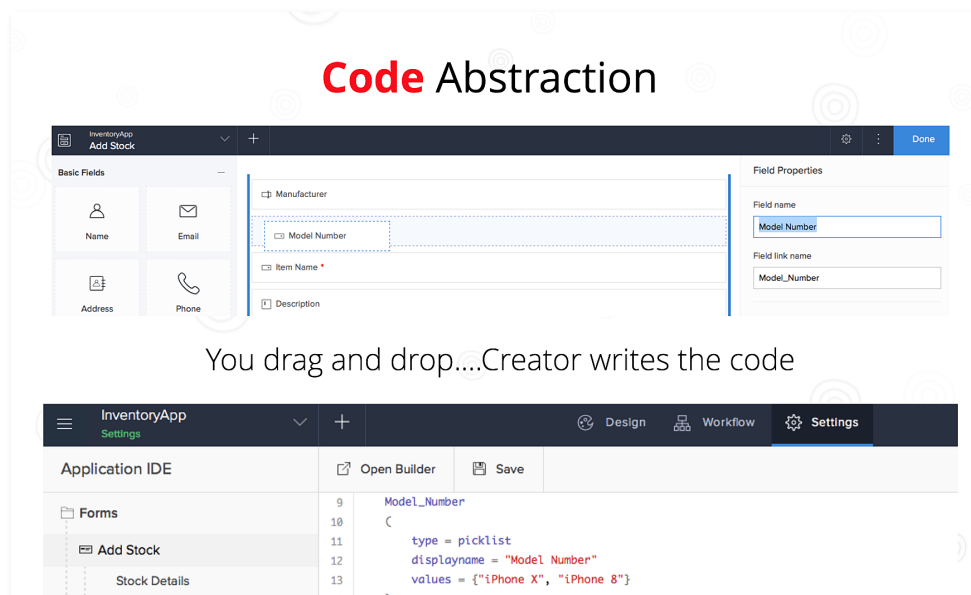i. Approval system

j. Support desk & more

# What AppCreator isn't suited for

AppCreator is an application to build custom business apps. However, it's not recommended for building things like social media, digital wallets, ecommerce, live tracking, or gaming apps. AppCreator's workflow component is based on AppCreator form events, and currently AppCreator does not support live tracking. AppCreator is geared toward building Business Process Management (BPM) tools and applications.

# Enterprise capabilities

AppCreator is a scalable and secure platform with end-to-end low-code development tools catering to the entire spectrum, from citizen developers to professional developers to:

- Create custom web and mobile apps
- Extend custom app or third-party app, and
-  Integrate by connecting and exchanging data with a third-party app



Code Abstraction

You drag and drop....Creator writes the code

# On-premises

As a low-code platform, AppCreator lets you build powerful, customized applications and host them on your own servers.

AppCreator On-Premises helps you:

- Stay compliant with data privacy regulations

- Take ownership of your software

- Gain flexibility with multi-deployment options

- Protect critical data with secure solutions

*Sample use case*

When an industry, or a public or private sector organization wants their resources or data stored on in-house IT infrastructure, AppCreator On-Premises provides exactly the solution they're looking for.

# AppCreator development tools

## Sandbox

- AppCreator Sandbox provides a temporary replica of an application, and keeps it isolated from the actual application and its users. You can make changes to applications, review them, and choose which changes to publish to the live application.

- Sandbox is useful when changes need to be tested before going live on a complex application.

### Sample use case

When a company needs to create a new module, or make changes to the existing process flow of their current application without effecting the current business or application service, a sandbox provides your developers with a platform for preliminary testing. This enables developers to make small or interim changes, test them, and rollout the application enhancements separately or all at once.

# Schema builder

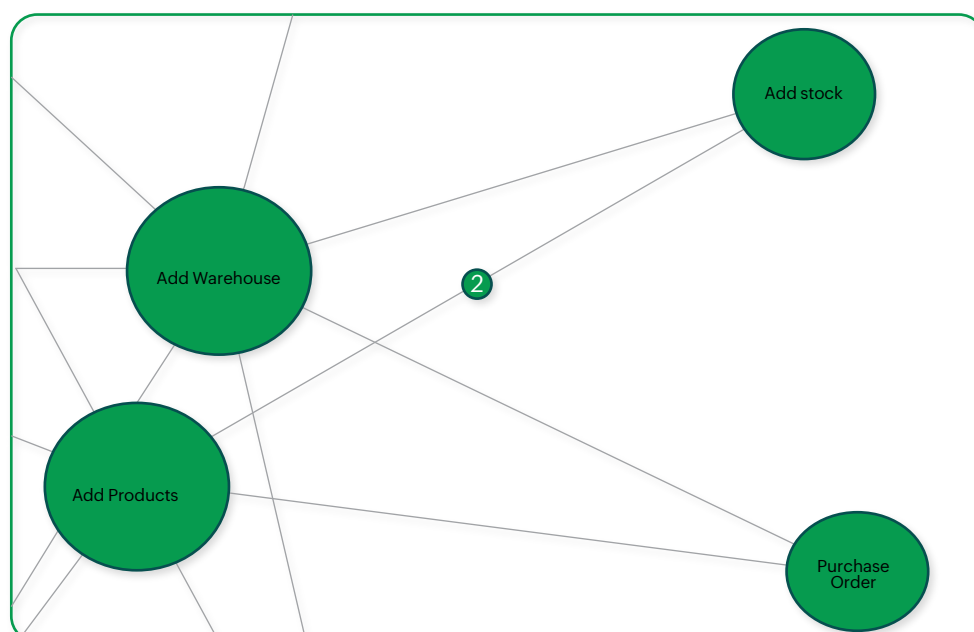Our schema builder provides you with a holistic view of the forms and logical structure of your application's database. The modules in the application interact via relationships that are visually represented in the schema builder.



The term *relationship* here refers to the link that is created while using a *lookup* or a *sub form* field to enable one form to access the data stored in another form.
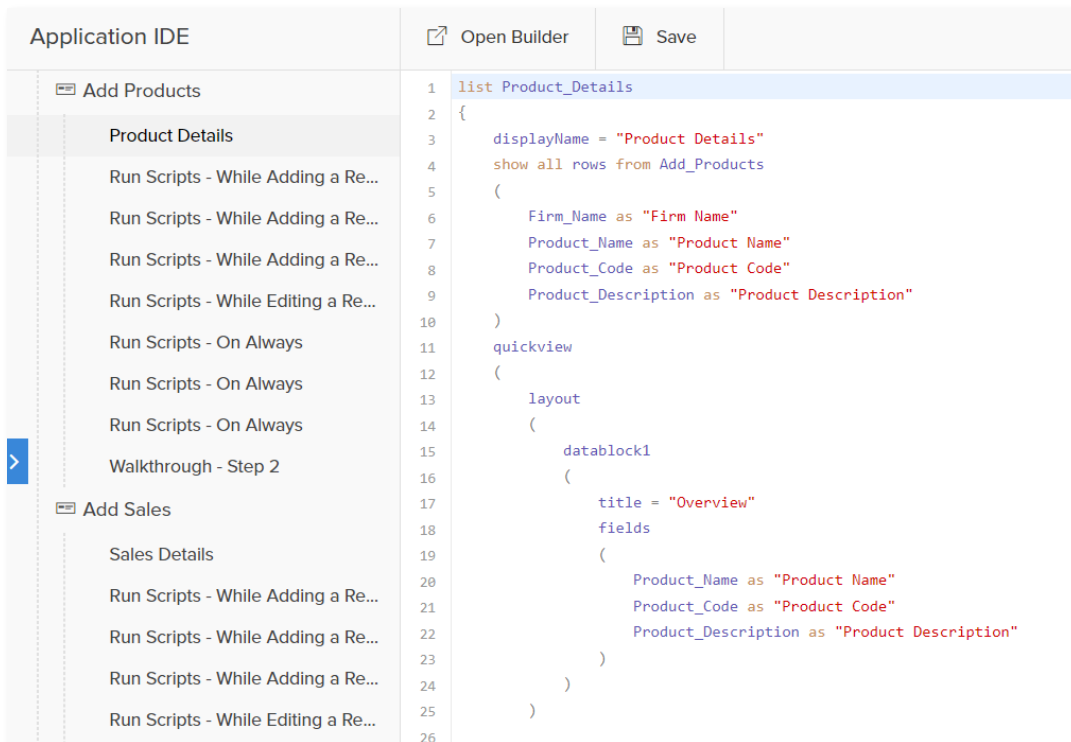
# Application IDE

- AppCreator's application integrated developer environment (IDE) displays the skeletal framework of forms, reports, pages, schedules, and workflows in your application in Deluge.

- Click **Settings** to navigate to Application Settings.
  Then click **Application IDE** under *Developer Tools.*

Attributes displayed in each component are:

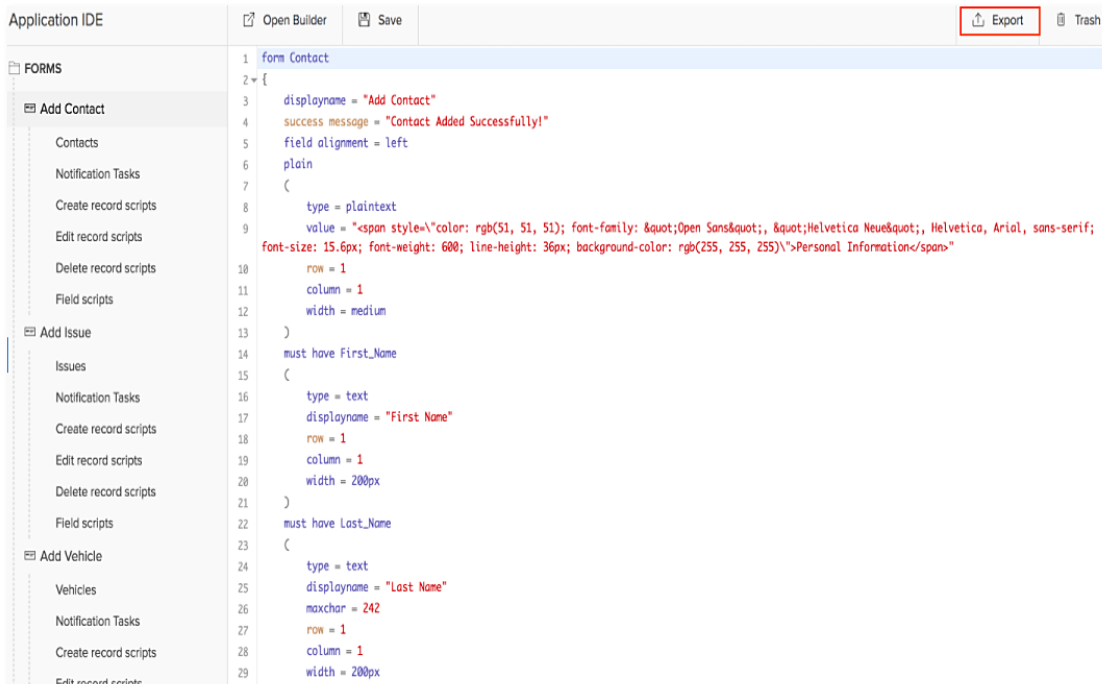| Forms | Reports | Pages | Workflows |
|---|---|---|---|
| Attributes of the form, such as the field type, field name, success message, whether the field is hidden or visible, functions, schedules, and custom scripts, are displayed in Deluge. | Attributes of the report, such as the report type, layout type, header options, and more, are all presented in Deluge. | Attributes of the page, such as components, widgets, the display settings, and action settings are displayed in Deluge. | All the schedules and automations configured in your application are displayed using Deluge scripts. |

- Users can view the scripts for each component individually and modify them if required. Click the required component under *Application IDE* to view its back-end script.

# Deluge Script (DS) file

- AppCreator's Deluge Script (DS) files store, in text format, the structure of a AppCreator application, which includes forms, fields, reports, pages, Deluge scripts, schedules, sections, and application-level settings.

- Click the **Settings** icon on top, and select *Application IDE* under *Developer Tools.*

- The DS file of an application can be exported from the application IDE in Application Settings. Inversely, a DS file can be used to create an application using the import feature.

- Click the **Export** button on the *Application IDE* page. Your application's Deluge Script (.ds) file will be downloaded to your device.

```
Application IDE          Open Builder    Save                                                          Export    Trash

 FORMS                   1  form Contact
                         2 ▾ {
    Add Contact          3     displayname = "Add Contact"
                         4     success message = "Contact Added Successfully!"
       Contacts          5     field alignment = left
                         6     plain
       Notification Tasks 7     (
       Create record scripts 8        type = plaintext
                         9        value = "<span style=\"color: rgb(51, 51, 51); font-family: &quot;Open Sans&quot;, &quot;Helvetica Neue&quot;, Helvetica, Arial, sans-serif;
       Edit record scripts        font-size: 15.6px; font-weight: 600; line-height: 36px; background-color: rgb(255, 255, 255)\">Personal Information</span>"
       Delete record scripts 10        row = 1
                        11        column = 1
       Field scripts    12        width = medium
                        13     )
    Add Issue           14     must have First_Name
                        15     (
       Issues           16        type = text
       Notification Tasks 17        displayname = "First Name"
                        18        row = 1
       Create record scripts 19        column = 1
       Edit record scripts 20        width = 200px
                        21     )
       Delete record scripts 22     must have Last_Name
                        23     (
       Field scripts    24        type = text
    Add Vehicle         25        displayname = "Last Name"
                        26        maxchar = 242
       Vehicles         27        row = 1
       Notification Tasks 28        column = 1
                        29        width = 200px
       Create record scripts
       Edit record scripts
```

# Logs

- Logs are automatically produced, time-stamped documentation of the history of actions in the application. They are recorded for statistical, security, and debugging purposes. Click **Settings** to navigate to Application Settings and select **Logs** under *Developer Tools*.

- Application owners can refer to logs to check an application's performance and keep track of actions executed in an application, or in the event of action failure.

### Logs

All Success and Failures in this application has been logged here. You can check and correct the failures before it affect your production.

| Message | Details | User | Time (GMT 5:30) | Type | |
|---|---|---|---|---|---|
| Error in executing "html_snippet" in the page "Invoice" | Invoice → html_snippet | Creator POC Creator POC | 21-Oct-2020 14:59 | Page | Full log |
| Error in executing On Create / Edit - On Validate script. | Attendance → On Create / Edit - On Validate | Creator POC Creator POC | 21-Oct-2020 14:54 | Form Actions | Full log |
| Error in executing On Create / Edit - On Validate script. | Attendance → On Create / Edit - On Validate | Creator POC Creator POC | 21-Oct-2020 14:50 | Form Actions | Full log |
| Error in executing On Create / Edit - On Validate script. | Attendance → On Create / Edit - On Validate | Creator POC Creator POC | 21-Oct-2020 14:49 | Form Actions | Full log |
| Error in executing On Create / Edit - On Validate script. | Attendance → On Create / Edit - On Validate | Creator POC Creator POC | 21-Oct-2020 14:49 | Form Actions | Full log |
| Error in executing On Create / Edit - On Validate script. | Attendance → On Create / Edit - On Validate | Creator POC Creator POC | 21-Oct-2020 14:47 | Form Actions | Full log |
| Error in executing On Create / Edit - On Validate script. | Attendance → On Create / Edit - On Validate | Creator POC Creator POC | 21-Oct-2020 14:44 | Form Actions | Full log |
| Error in executing On Create / | Attendance → On Create / Edit - On | Creator POC Creator | | | |

# Mobile platforms

- AppCreator is a low-code platform that helps users rapidly create and deploy mobile applications with minimal coding.

- It features an intuitive drag-and-drop interface and extensive customization options with guided scripting, making app development fast, simple, and efficient.

- Supports Android, iOS, and Web apps.

# Widgets

Widgets are used to extend the capabilities of your AppCreator application so that you can perform tasks that cannot be accomplished using the built-in features. *For example,* you can develop and deploy interactive user-interface components, including multistep forms and image sliders.

# Widgets enable you to:

- Create and customize features that are specific to your app

- Redefine the way your application interacts with your customers

- Take complete control of the front-end design

- Incorporate third-party apps that are supported by AppCreator.

# AppCreator Security

## Control user access
Admin users can control and restrict their internal users by setting up permission restrictions under settings.

## Ability to add roles in apps
Each organization has different roles to be played in your hierarchy. This feature allows business users to create and assign roles to perform customized actions according to your requirements. Based on the hierarchy reporting and data access, permissions can be predefined and adjusted depending on what you need.

Users

Add and manage your users permission and their roles in this application. You can also define the visibility of records for each users.

Users    Permissions    Roles    Data Sharing

Expand All    Collapse All                    ADD ROLE  ▾

⊟ Default
  ⊟ Chief Executive Officer
    ⊟ Chief Financial Officer

# Audit trails

The changes made to a record are often found within the *audit trail* option in the application settings. When a user updates a record with new values or deletes an existing record, the updated or deleted record values are logged with the whole activity log, including the old value, modified value, user who modified or deleted the record, and more.

In short, this feature keeps track of the changes made in your application, as well as when, by whom, and how much of the data has been modified.
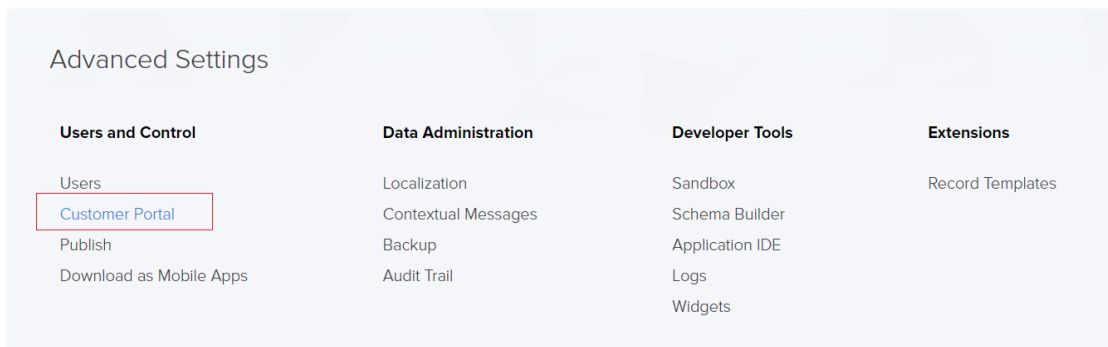


# SAML

SAML stands for Security Assertion Markup Language. It simplifies federated authentication and authorization processes for users, identity providers, and repair providers. SAML provides an answer to permit your identity and repair providers to exist separately from one another, which centralizes user management and provides better access to SaaS solutions.

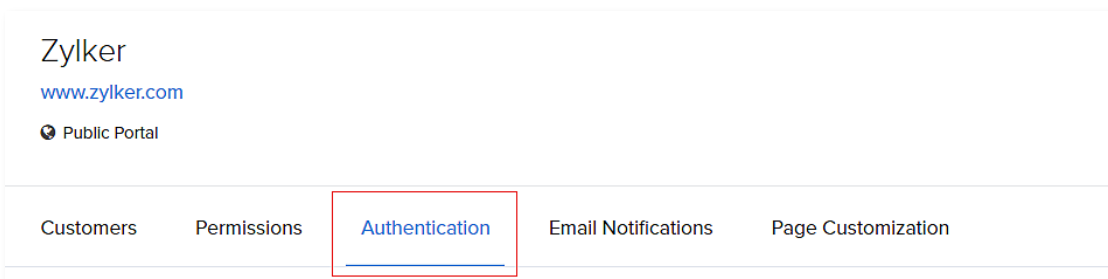# How SAML works in AppCreator Customer Portals

When a customer accesses their portal URL, they'll be redirected to the configured login URL for authentication. The identity provider (IDP) then returns a SAML response specific to the customer after successful validation. The received response is going to be decoded via the configured public key. If the response indicates successful authentication, the customer is then logged in to the portal.

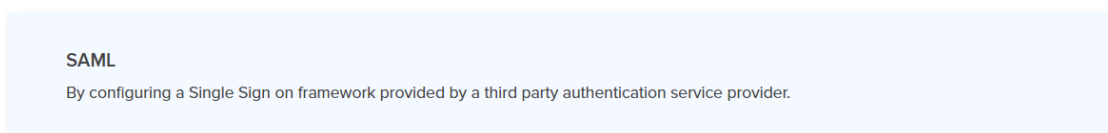To configure SAML authentication for customer portals:

1. Navigate to the *Settings* page.
2. Click the **Customer Portal** option found under *Users and Control*



3. Click the **Authentication** option on the customer portal page.



4. Click the **SAML** option.

**5.** Under the SAML Authentication tab, the ACS URL and Entity ID will be displayed. These two values must be copied and used in the SAML provider. The parameters required by AppCreator customers for SAML configuration are the Login URL, Logout URL and Public key. These three parameters will be generated by the SAML provider. Copy the values of the three parameters from your SAML provider and paste them in the given fields. The public key can also be saved as a text file and uploaded here.

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**SAML Authentication** ✕

SAML is a framework which help us to achieve Single Sign-On in a secure and easy manner. Learn how to configure SAML in your portal here

**Service Provider Details**

ACS URL        https://zylker.localzohocreatorportal.com/accounts/csamlresponse/1001146319

Entity ID        zoho.com

**SAML Configurations**

Login Url        https://

Logout Url        https://

Public key

          [ Configure ]   [ Cancel ]

---

3. Click **Configure** to complete the process.

Now, if a customer tries to access the customer portal by using the Portal URL they'll be redirected to the Login URL, which has been provided by the SAML provider. The authentication of the customer will be done by the SAML provider and, if successful, then the customer will be logged in to the customer portal.

# SSO

Single sign-on (SSO) is technology which mixes several different application login screens into one. With SSO, a user only has to enter their login credentials (username, password, etc.) on one occasion on one page to access all of their SaaS applications.

Single sign-on (SSO) is secure and easy. It's a centralized login system which can authenticate the customer with just a single set of login credentials.

SSO is a centralized login system which can authenticate the customer with just a single set of login credentials. In AppCreator, Customer Portal administrators can simplify password management for their customers using SAML.

# Security configurations in AppCreator

AppCreator provides security configurations, as described below:

- ▶ Windows integrated authentication

- ▶ Network-based security

- ▶ Network zones

- ▶ Client authentication with SSL certificates

- ▶ On-premises security is largely your responsibility, and yours alone. This means constant monitoring and maintenance.

- ▶ You get to retain all of your data and remain in control of what happens to it.

- ▶ Complete on-premises security includes both physical and network security measures, especially if you need to stay within compliance.

- ▶ On-premises allows you to configure your system the way you like it, but this means you need a high level of expertise.

Security measures and resources are also limited by location.

## About Us

At ManageEngine, we've always worked towards a single purpose—enabling problem solvers of varied technical skills to build business solutions that make a difference.

To empower users to build and deploy custom applications 10 times faster than conventional methods, ManageEngine AppCreator was developed and comes equipped with features like a drag-and-drop interface, predictive analysis, and prebuilt integrations.

Use AppCreator to build tailor-made solutions from scratch to kick-start your digital transformation.

## Contact Us

We'd love to talk with you! Reach out to us at
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**ManageEngine** )
**AppCreator**