

Build Numerous Applications (Web/Mobile)

# No/Low Code Automation



 **Smart App Builder™** Whitepaper

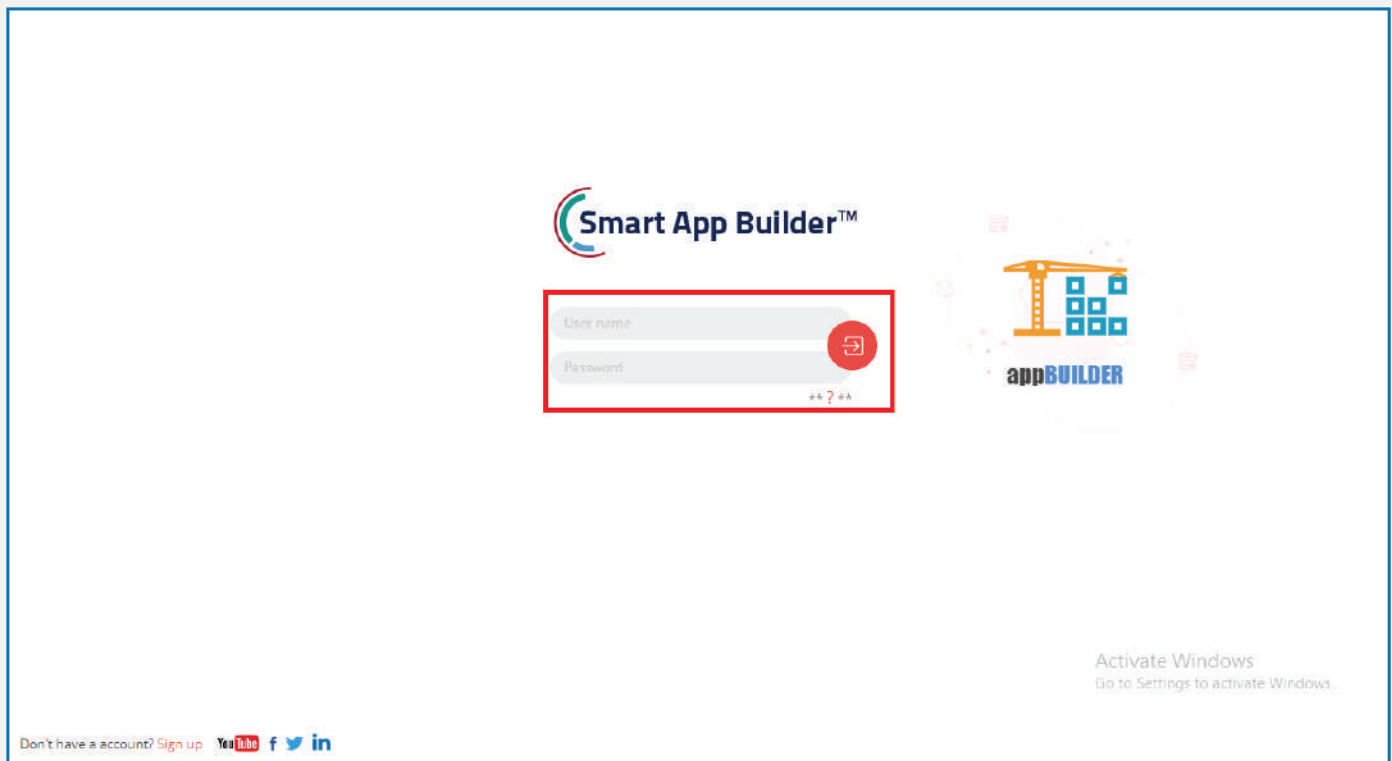
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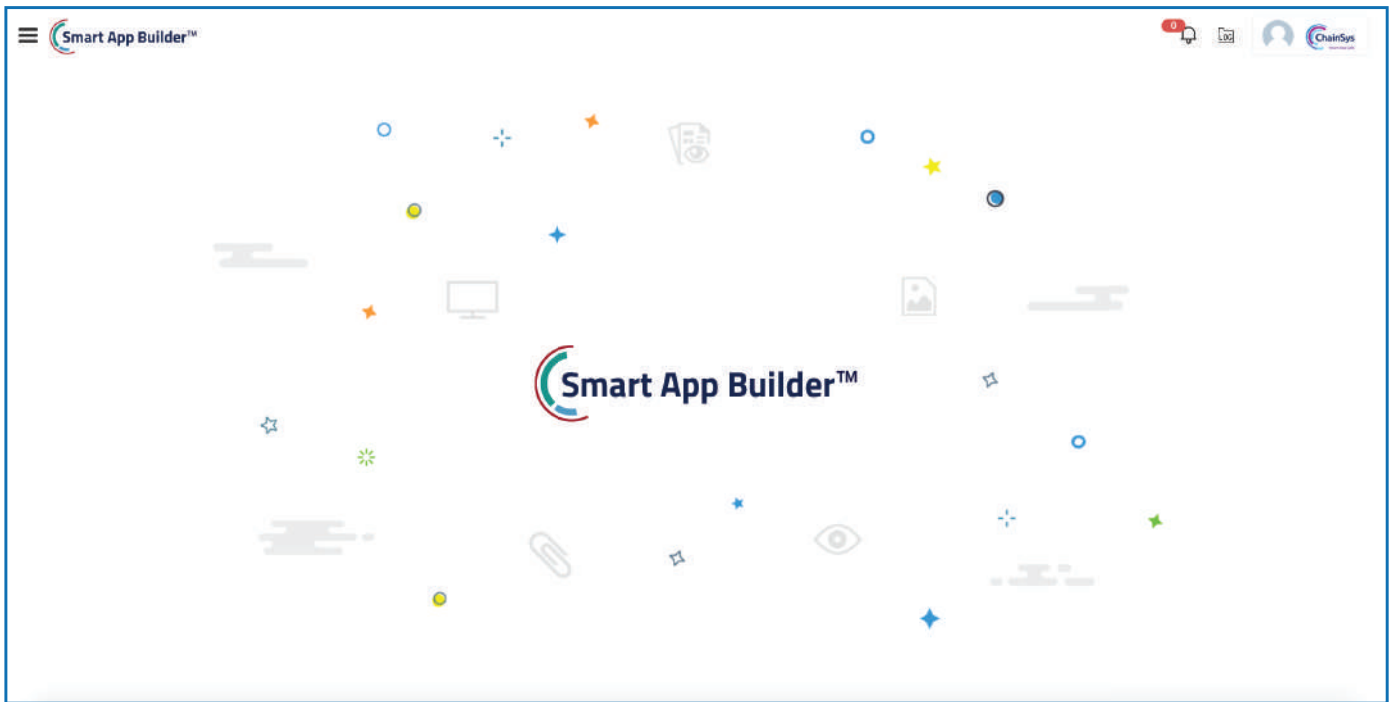
# Introduction

The Smart App Builder application is a master tool with which several dynamic applications can be created with the required customizations in a seamless fashion. The key advantage of this application is that the essential ERP applications can be constructed by the end-users using a simple drag and drop functionality and it doesn't require any programming knowledge.

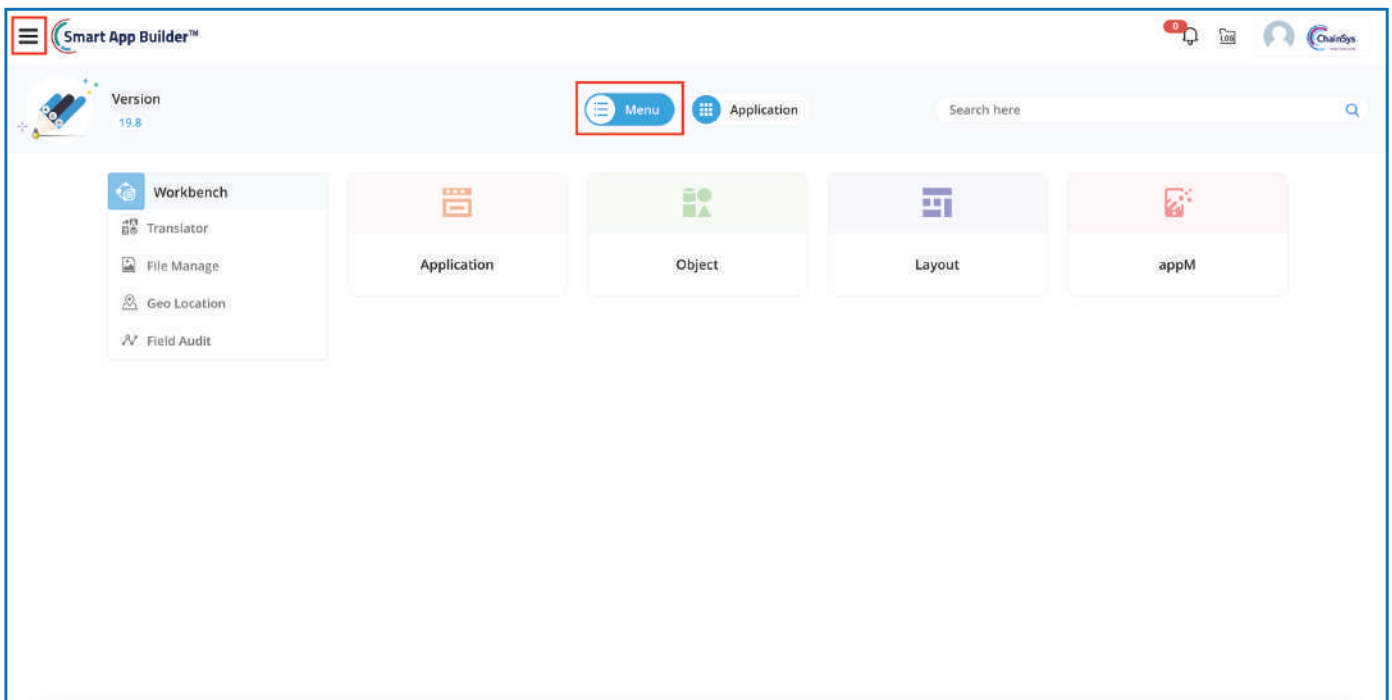
## Login

The image shows the login page of the Smart App Builder application. At the top center is the "Smart App Builder™" logo. Below it is a login form with two input fields: "User name" and "Password". The "Password" field has a red eye icon to toggle visibility. To the right of the form is a circular graphic with the text "appBUILDER" and a stylized building icon. At the bottom left, there is a link "Don't have an account? Sign up" and social media icons for YouTube, Facebook, Twitter, and LinkedIn. At the bottom right, there is a "Activate Windows" watermark with the text "Go to Settings to activate Windows."

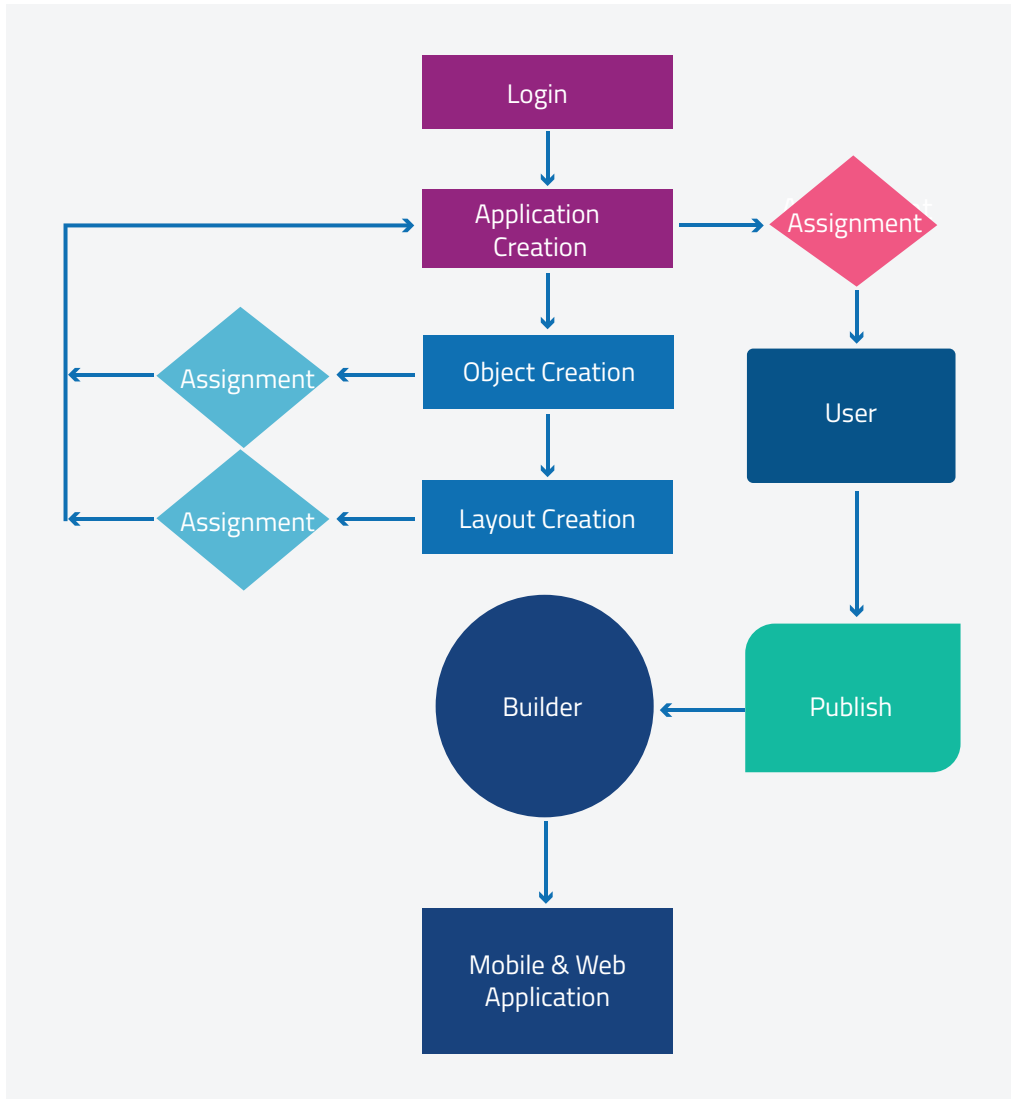
- Enter the **User name** and **Password** in the respective fields so that the home page will be displayed as shown below.



- Click on the **Menu icon** from the top left, so that the menu options will be displayed on the left pane as shown below.



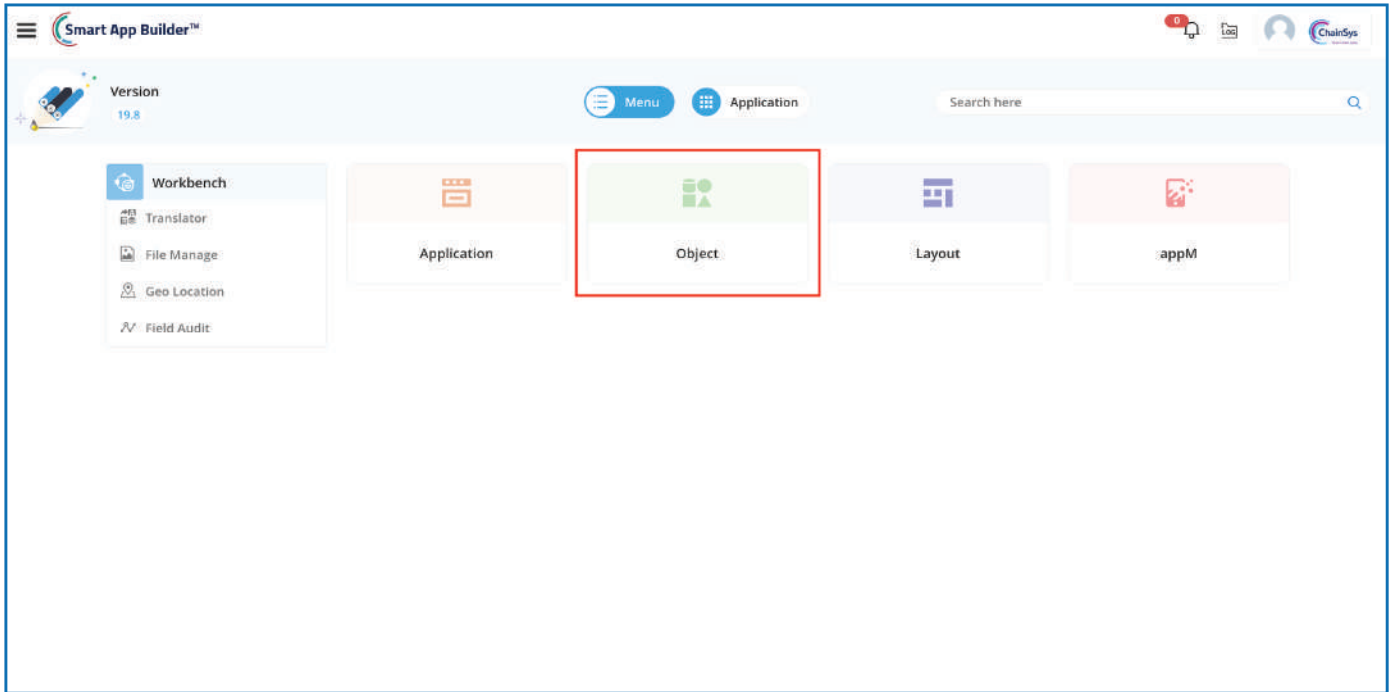
## Design



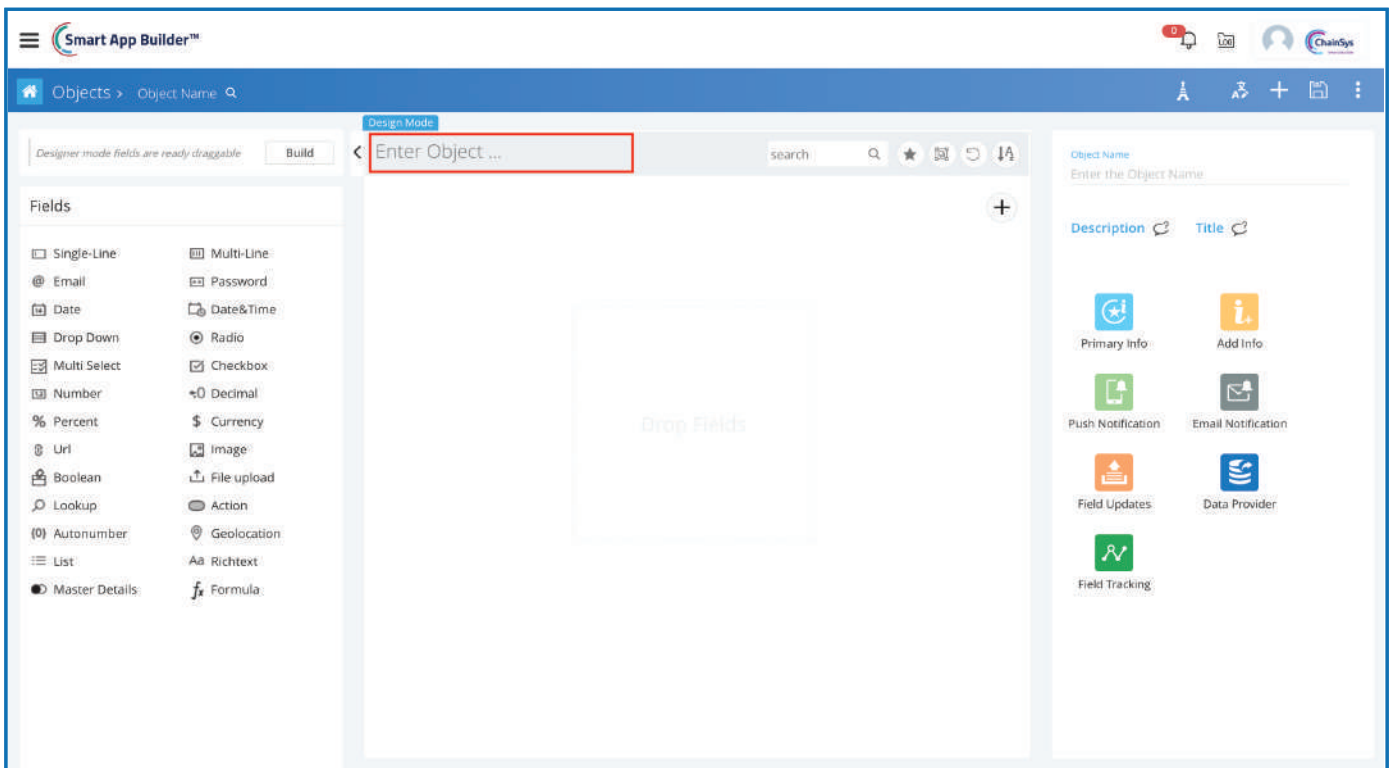
## Objects Configuration

An Object is a collection of attributes and the function created to accomplish a specific task.

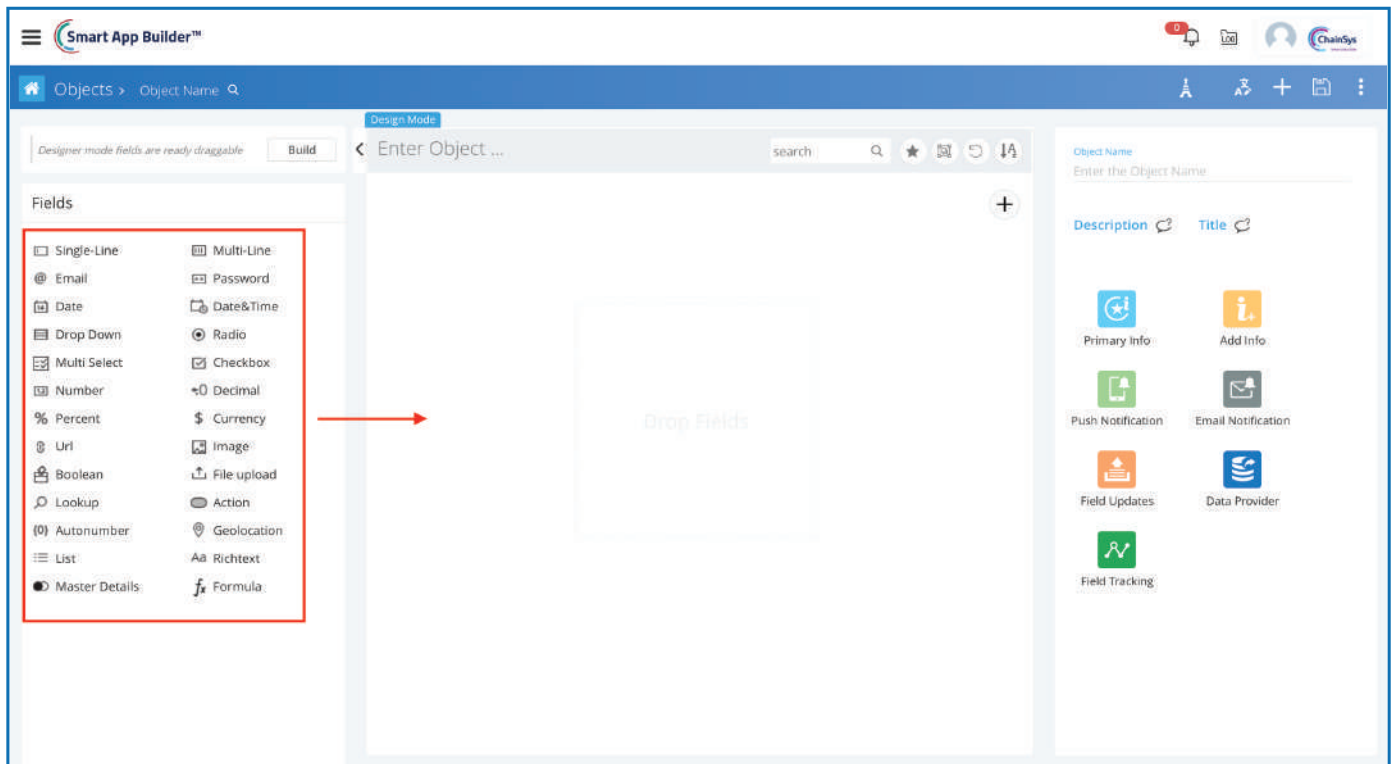
## Object Creation



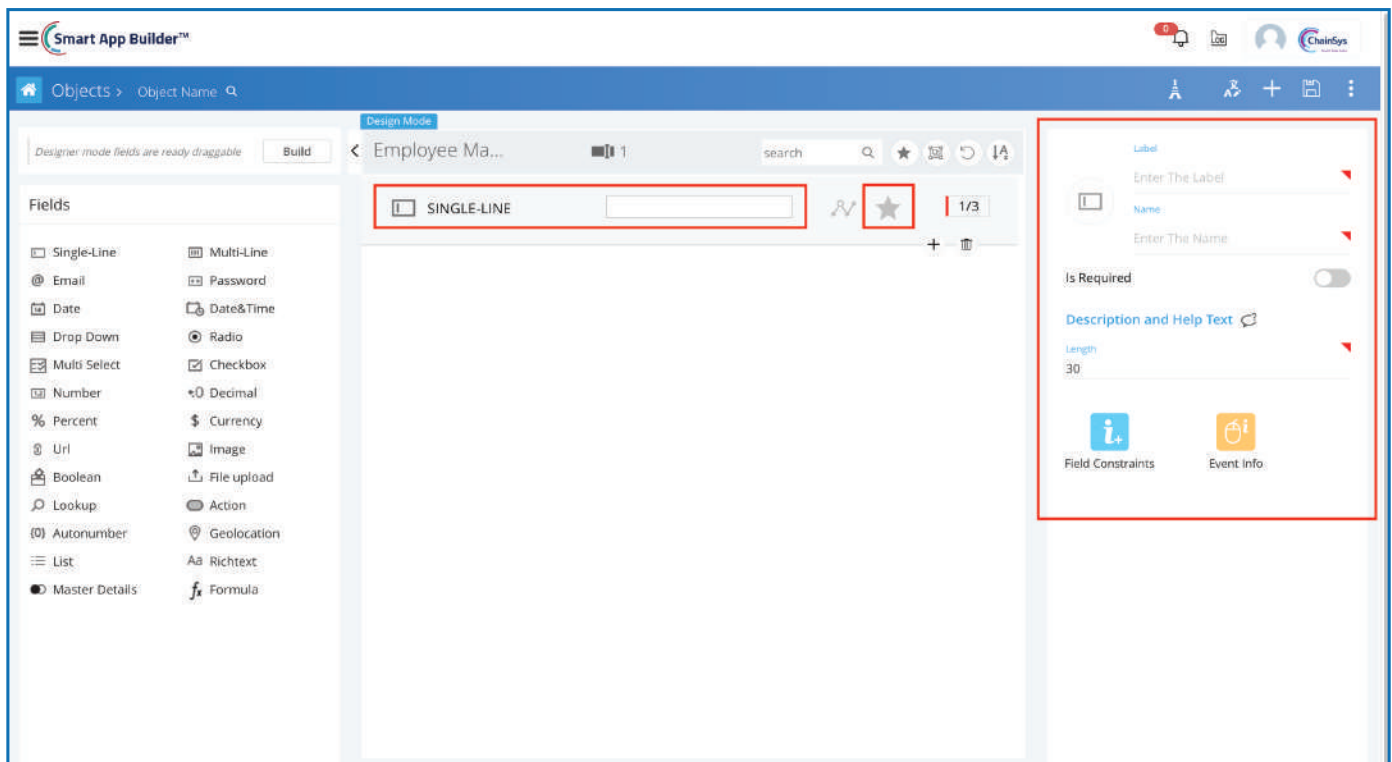
- Click on **Object** from the left pane of the home page, so that the Objects Definition form will be displayed as shown below.



- Double click on the **Enter Object Name** from the top and enter a new name for the object created. (Ex: Employee Master Info)
- The **Name** entered in the top will automatically reflect in the Object Properties form in the right.
- Description** - Enter a brief description of the object.



- Drag and drop the required **fields** towards the right as shown above.



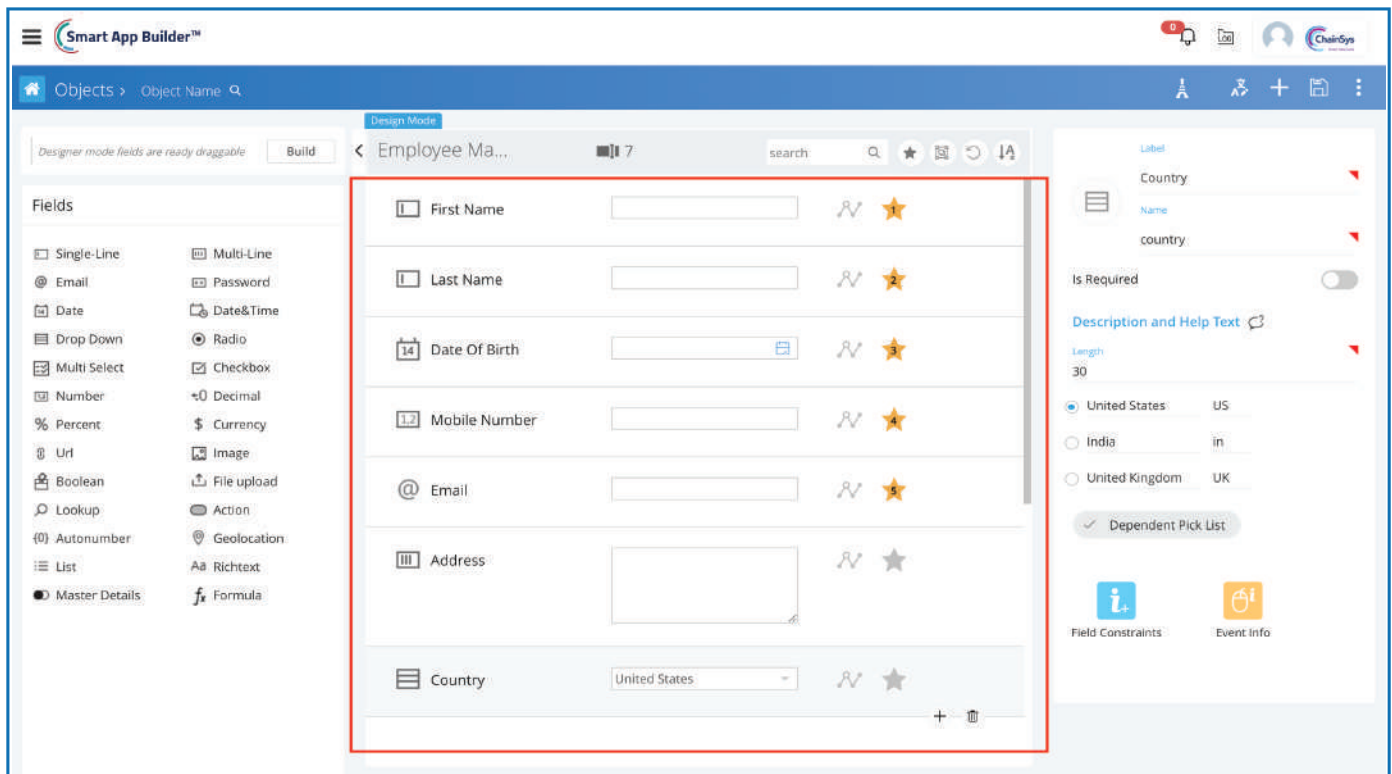
- Once a field is dragged and dropped, it should be renamed with a unique name only then the text fields will be allowed to be chosen.

- Once the fields are chosen, enter the required values in the field property form that appears in the right
  - Label** - The name entered over the field will be displayed automatically.
  - Name** - Enter a name, so that a column will be created against the respective label in the database.
  - Click on the **Prominent List** ★ icon to make the respective field a prominent one. The fields that are made prominent can be filtered and fetched separately during layout designing.
    - Note** - Only five fields can be marked under a prominent list.
  - Length** - Enter the length of the respective field created. However, the decimal 30 will be displayed by default.
  - Description** - Enter a brief description of the field.
  - Help Text** - Enter a tooltip for the respective field.
- Add the following fields in the 'Employee Master Info' object,

Field Name	Field Type
First Name	Single-Line
Last Name	Single-Line
Date Of Birth	Date
Mobile Number	Number
Email	Email
Address	Multi-Line
Country	Drop Down

- Once the information is entered, save the form, so that the fields created under the object will be displayed as shown below.





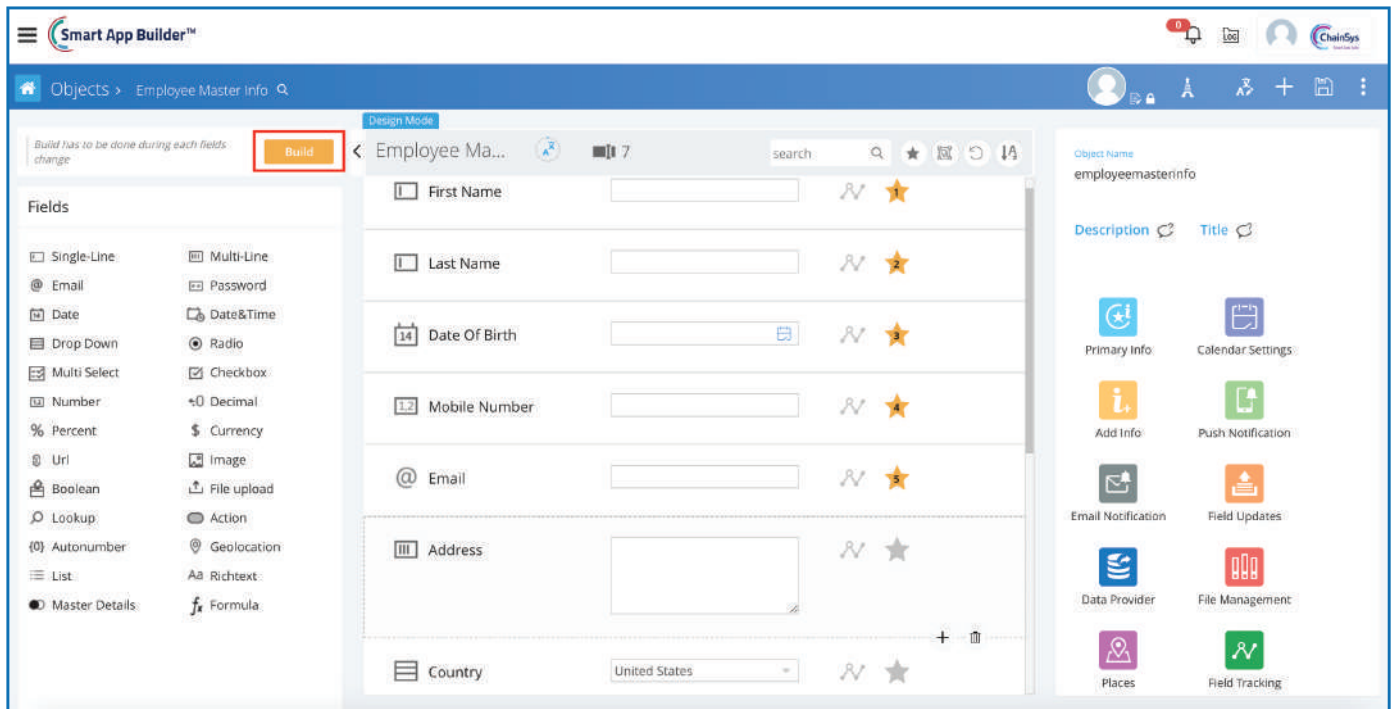
## Objects deployment

Once an object is created and all the required settings are made to it, it has to be marked with a Deploy status, so that it will be considered for execution.

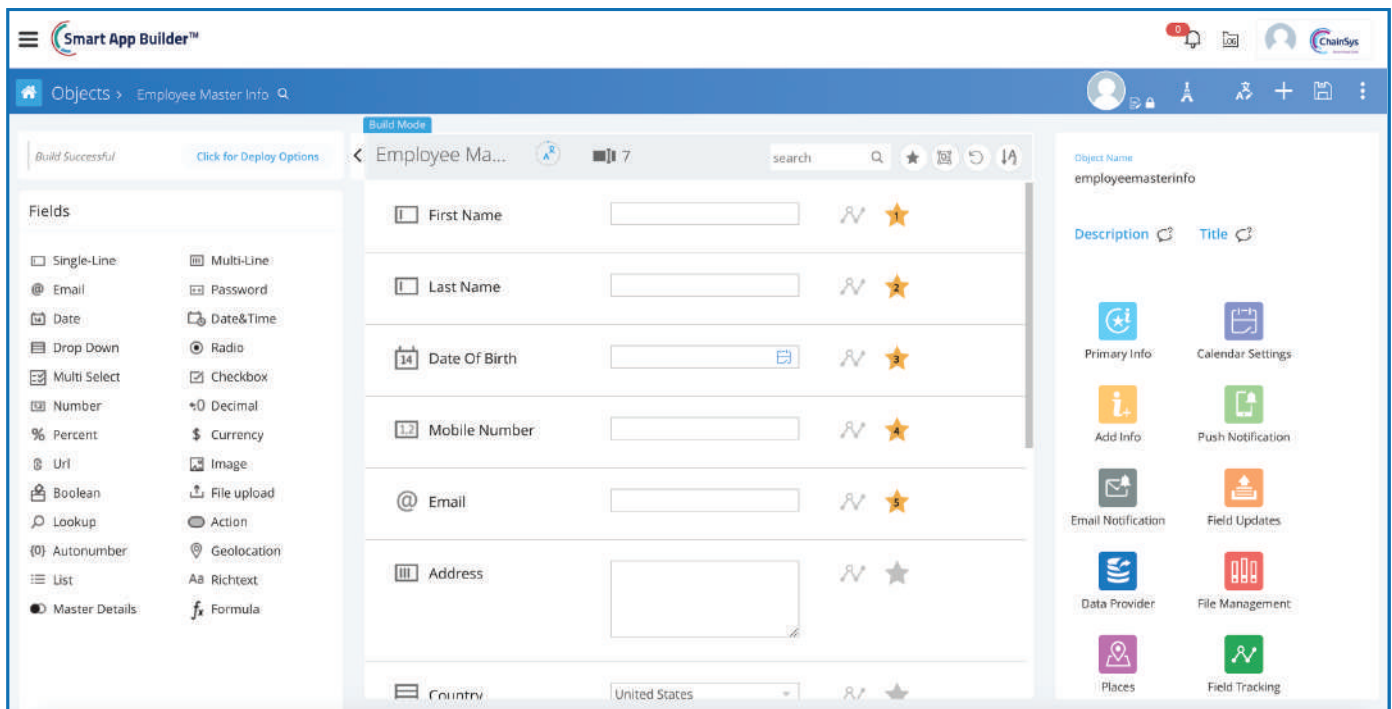
To deploy the object, we need to build the object. When an object is built, a table will be created at the backend and all the records will be moved to it, which makes it accessible by the application.

Follow the below steps to build and deploy the object.

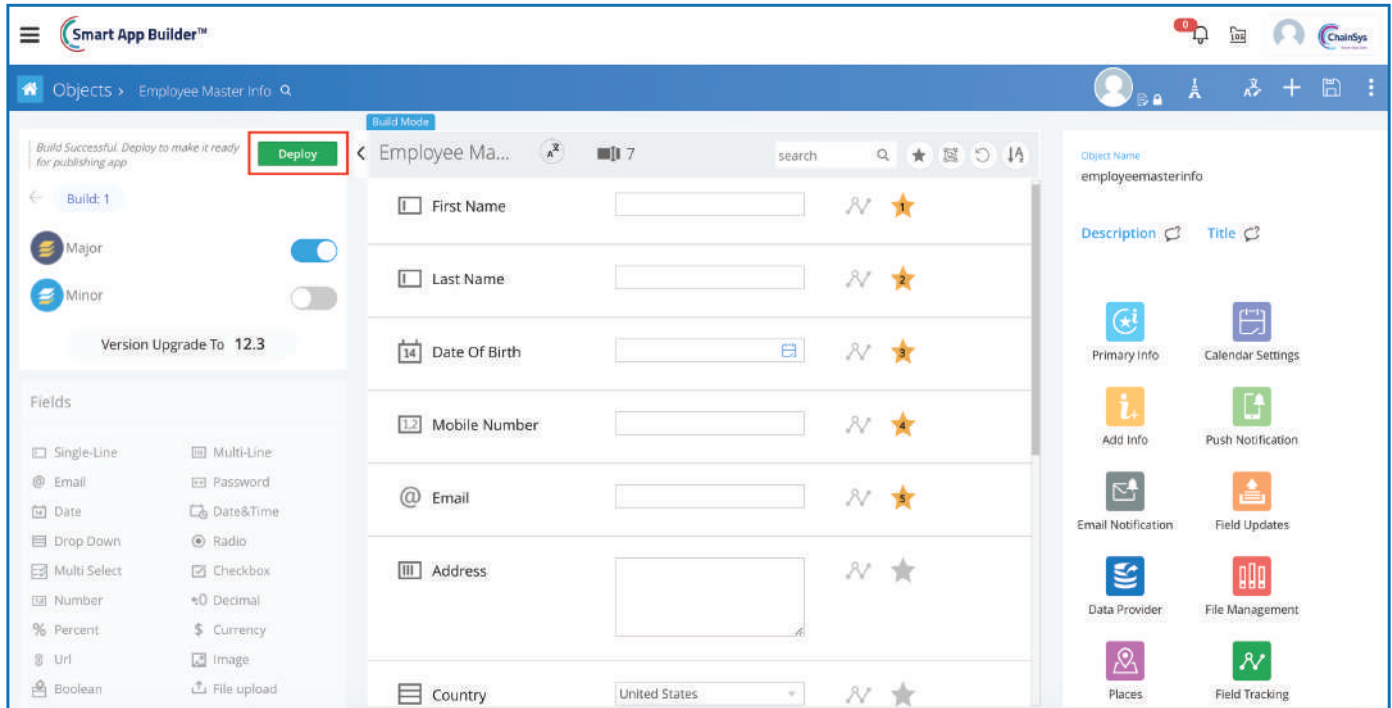
## Build Action



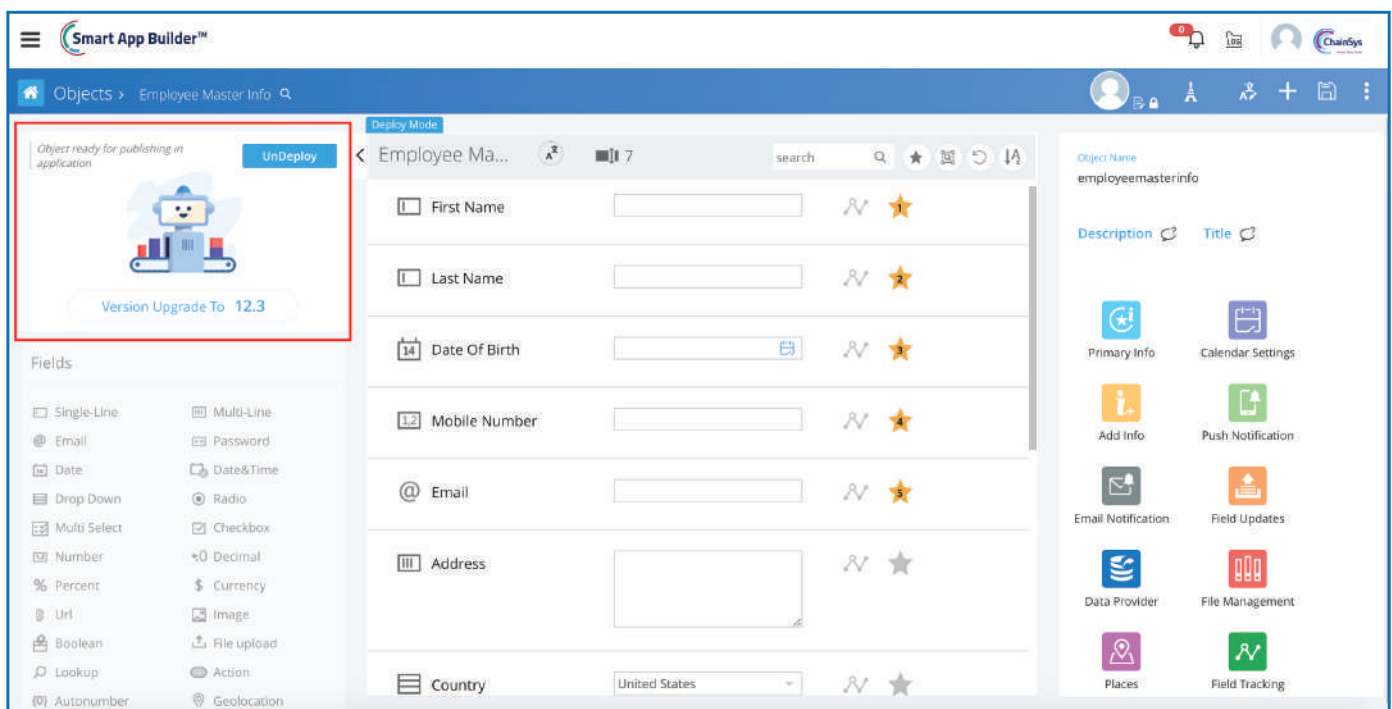
- Once an object is created and required settings are made to it. Click on the **Build** button from the top right, so that a table will be created at the back end in which all the records inserted from the published application will be stored.
- Once the **Build** button is clicked, the status of the respective object will be changed to 'Build Successful' **click for deploy options** as shown below.



## Deploy Action / Version Choosing



- Click on the **Deploy** button, so that the **Version Upgrade** page will be displayed as shown below.
- Slide the toggle key against the required version.
  - **Major** - On selecting this option, the application will be versioned in the whole number.
  - **Ex - 12.0 - 13.0**
  - **Major** - On selecting this option, the application will be versioned in decimals.
  - **Ex - 12.0 - 12.01**
- Once the version settings are done, click on the **Deploy** button under it, so that the status **Deployed** will be displayed with the version number.



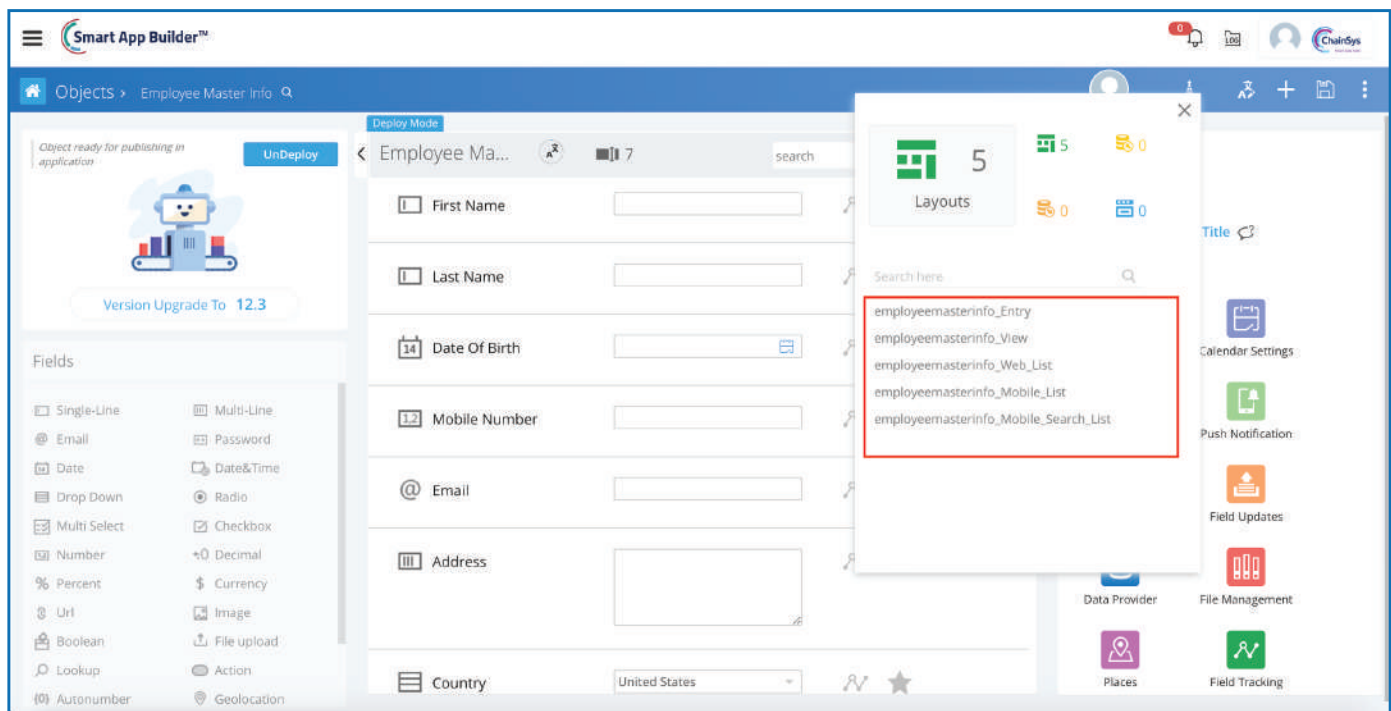
## Layouts Configuration

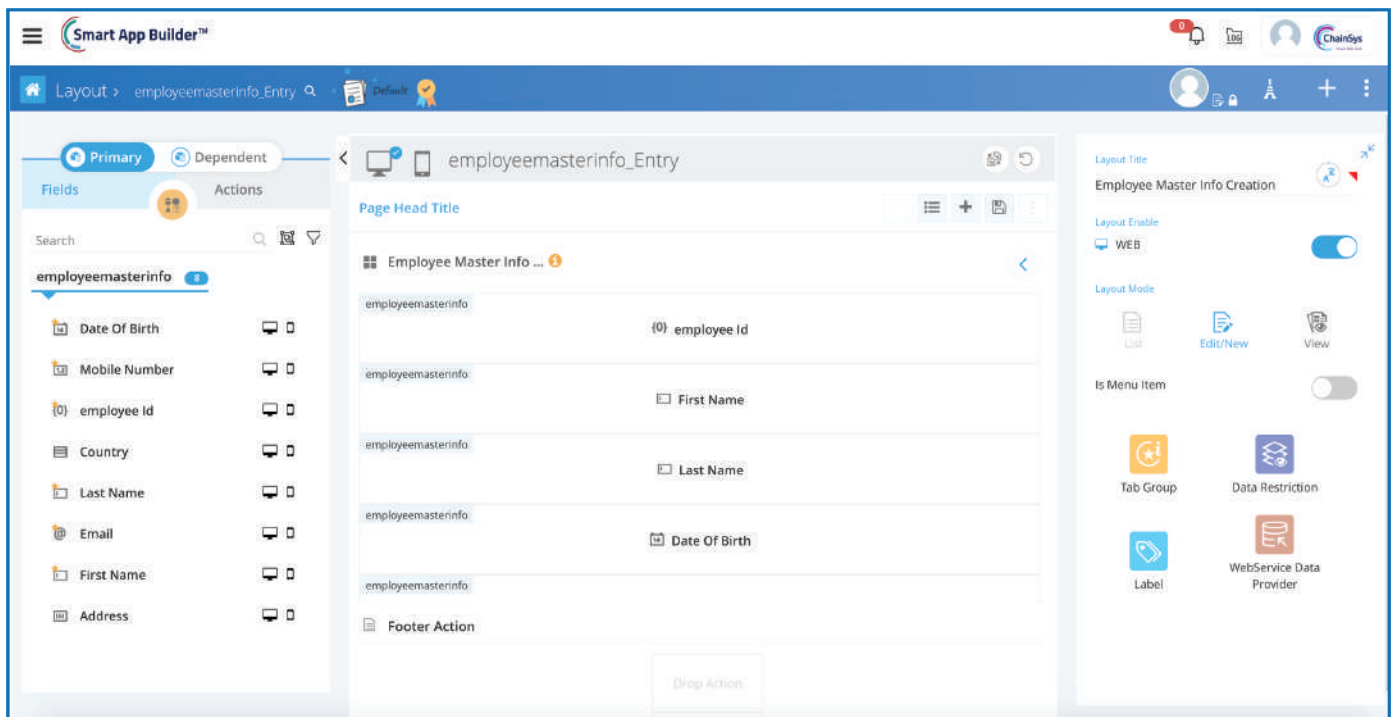
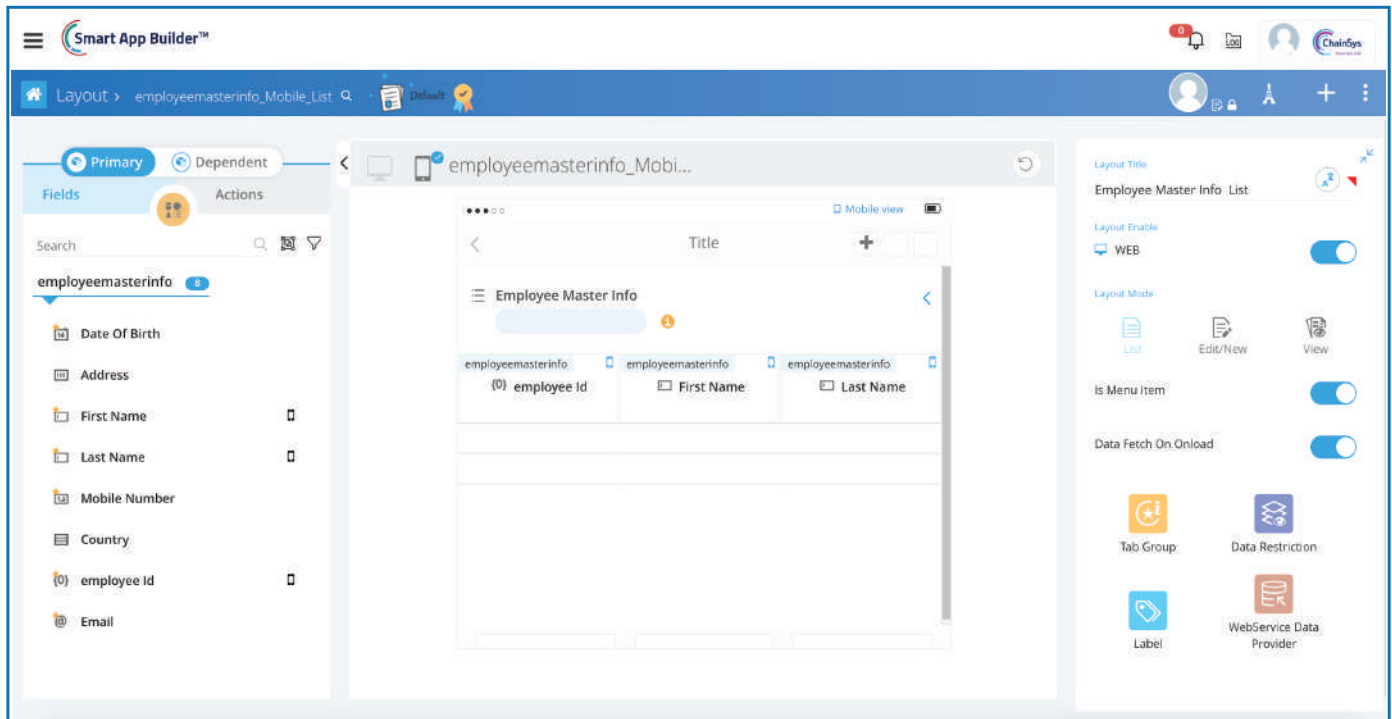
The Layout is an interface in which all the created objects and fields can be sorted and viewed. Here, the positions of the respective fields and actions can also be rearranged as per requirement.

We can create the layouts by drag and drop the required fields after selecting the object. In this workbook we are going to use the default layout which was generated automatically at the time of object build.

We already created the "Employee Master Info" object, for this object system already generated the following list of layouts at the time of object build.

- employeemasterinfo\_Entry
- employeemasterinfo\_View
- employeemasterinfo\_Web\_List
- employeemasterinfo\_Mobile\_List
- employeemasterinfo\_Mobile\_Search\_List





# Applications

The Application is the outermost layer or the external shell of the group of objects and layouts that are assorted to accomplish a specific functionality.

## Application Creation

The screenshot shows the 'Smart App Builder' interface for creating a new application. The top navigation bar includes the 'Smart App Builder' logo, a search bar, and user profile information. The main form is divided into several sections:

- Application Name:** A text field containing 'Employees Master Information'.
- Display Name:** A text field containing 'Employees Information'.
- Description:** A text area with the placeholder 'Enter Description'.
- Access in:** Radio buttons for 'Web' (selected) and 'Device'. Below 'Web' are options for 'Deployed Node' and 'Instant Render'. Below 'Device' is a checkbox for 'Enable Mobile View in Browser'.
- Publish Status:** A section with a 'Device' icon and a 'Make Ready For Publish' button.
- Settings Grid:** A grid of 12 settings cards, each with an icon and a value:
  - Licenses Details:** LICKDADFGHE12345678, Never Expires
  - Layouts Assignment:** 0
  - Users Assignment:** 0
  - Active Users:** 0
  - Menu Structure:** 0
  - Push Notification Certificate:** 0
  - Offline Settings:** 0
  - Calendar:** 0
  - Geo-location:** 0
  - Internationalization:** 0
  - ER Diagram:** 0
  - Object Assignment:** 0

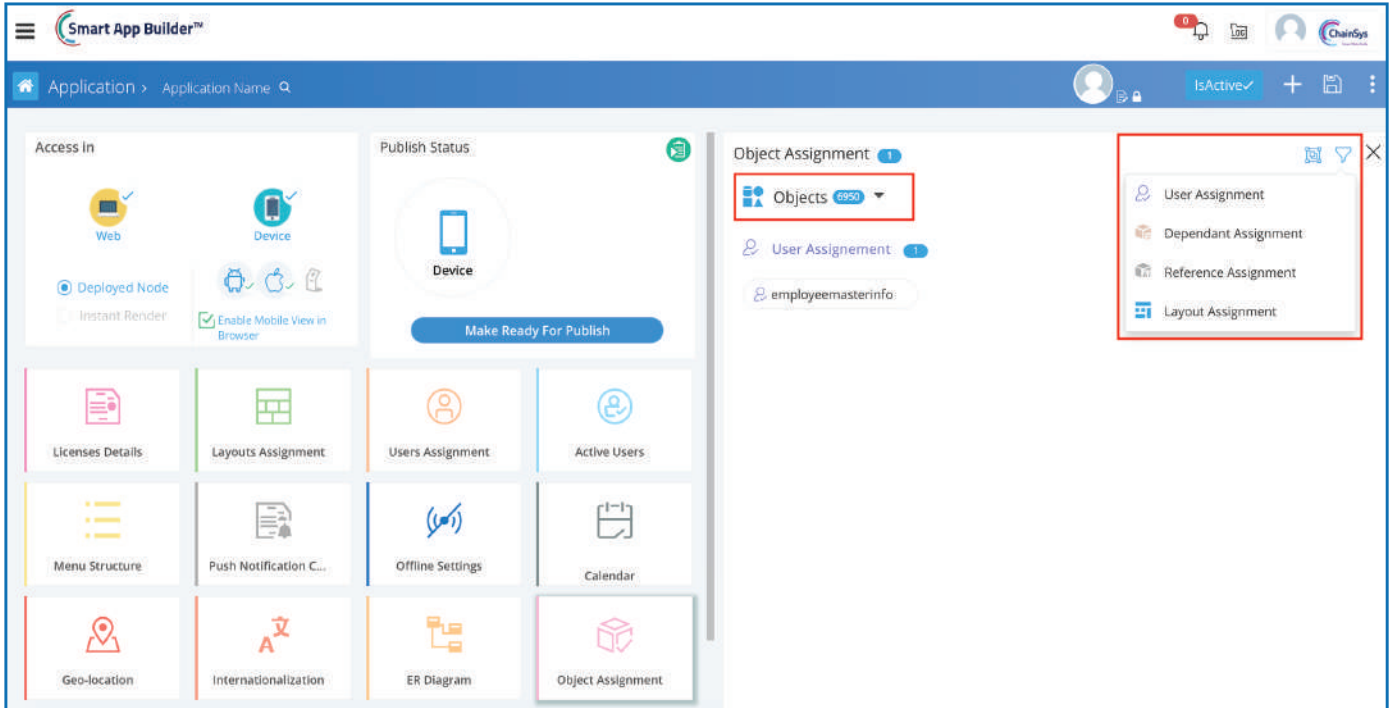
- **Application Name** - Enter a unique name for the application.
- **Display Name** - Enter a display name for the application. The name entered here will be displayed on the front end.
- **Upload Logo** - Upload an image with a unique logo for the application.
- **Description** - Enter a brief description of the application.
- **Access In** - Select an option using the radio button.
  - **Web** - On selecting this option, the application can be accessed via the web. Here, two different web applications can be created. Namely:-
    - **Instant Render** - On selecting this option, a dynamic web application will be created, which can be accessed within the organization's platform.
    - **Deployed Node** - The web application will be deployed in a server so that it can be universally accessed.
  - **Device** - On selecting this option, the application can be accessed using the following mobiles and devices.
- Once the information is entered in the above fields, save the form, so that a new application will be created and the following settings can be done.



# Object Assignments

The Objects can be assigned to an existing application or to a new application by following the steps below.

**Navigation: appDESIGNER -> Application Creation -> Object Assignment**

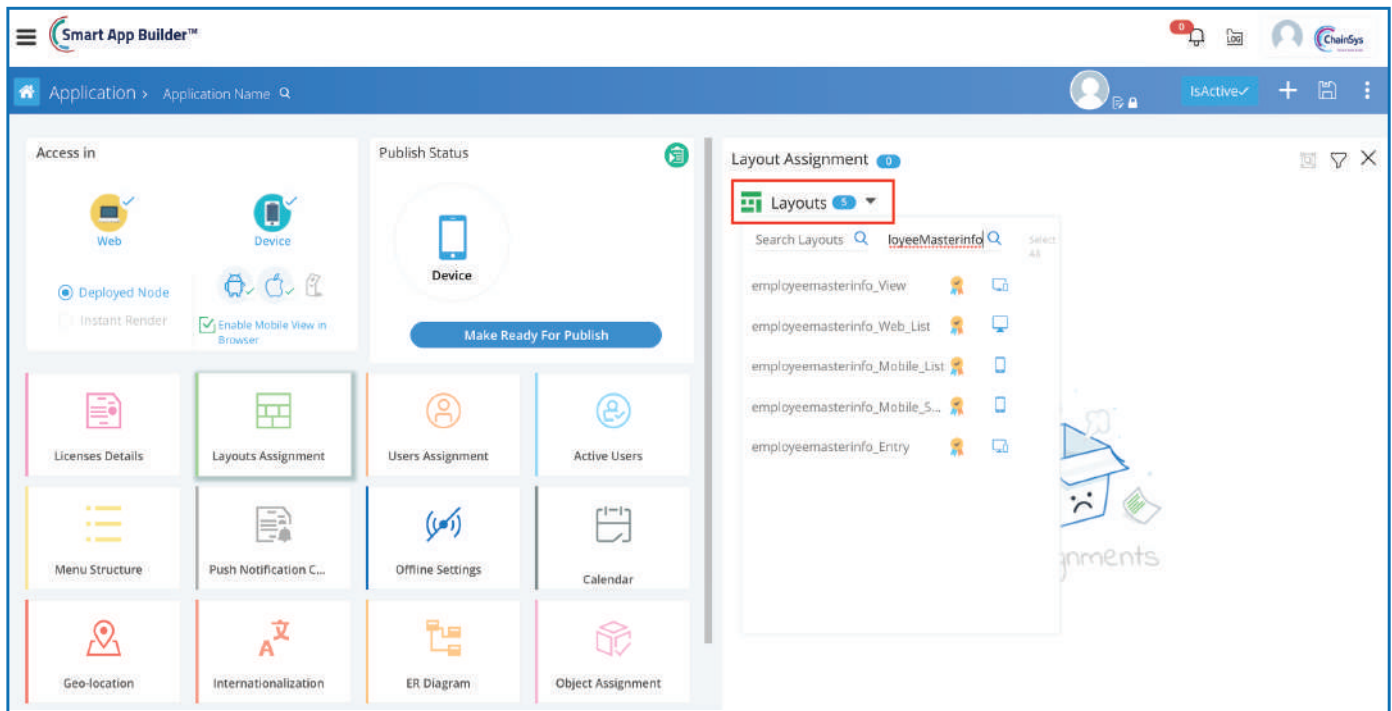


- Click on **Objects** drop-down menu and select an object from the list of options.
- Once the object is chosen, save the form, so that it will be assigned against the selected application.
- Clicking on the Filter icon to expand other object assignment options as shown below
- **User Assignment** - The object can be directly assigned to the users in object form.
- **Dependent Assignment** - When a parent object is added, the respective application will be assigned to the child objects by default.
- **Reference Assignment** - The application to which the object is assigned will also be assigned to the object that is used as a reference in it.
- **Layout Assignment** - If only the layouts are assigned to the application, the object against which the layout is created will also be assigned by default.

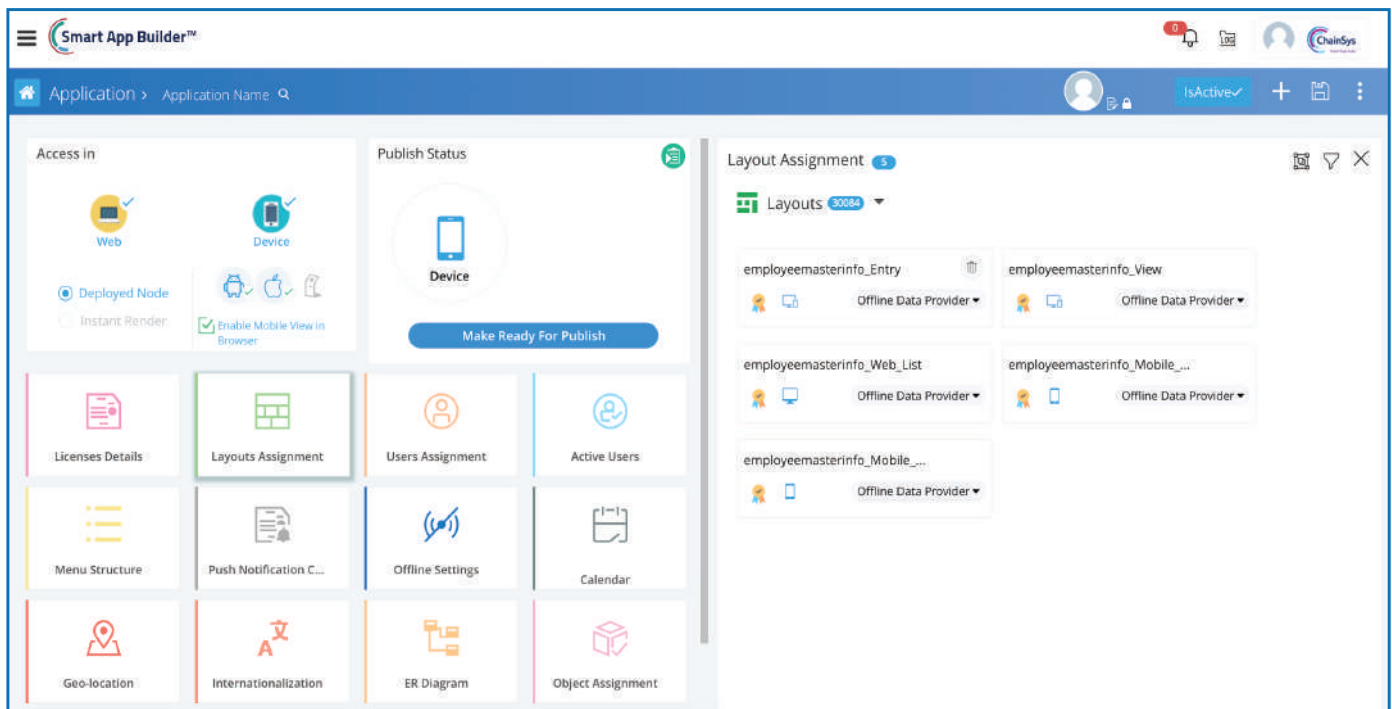
# Layout Assignments

The layouts can be assigned to an existing application or to a new application by following the steps below.

**Navigation: appDESIGNER -> Application Creation -> Layout Assignment**



- Click on the Layouts drop-down menu and select a layout from the list of options.
- Once the layout is chosen, save the form, so that it will be assigned against the selected application.



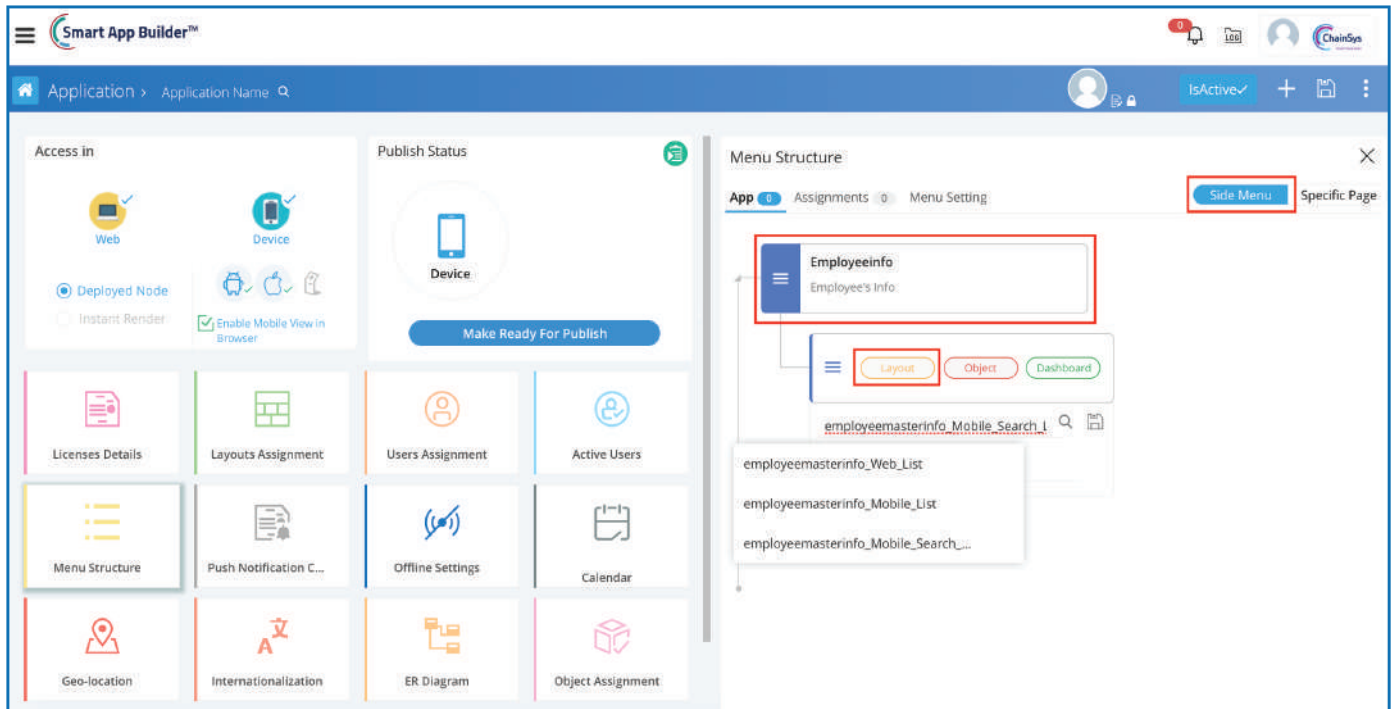


## Menu Structure

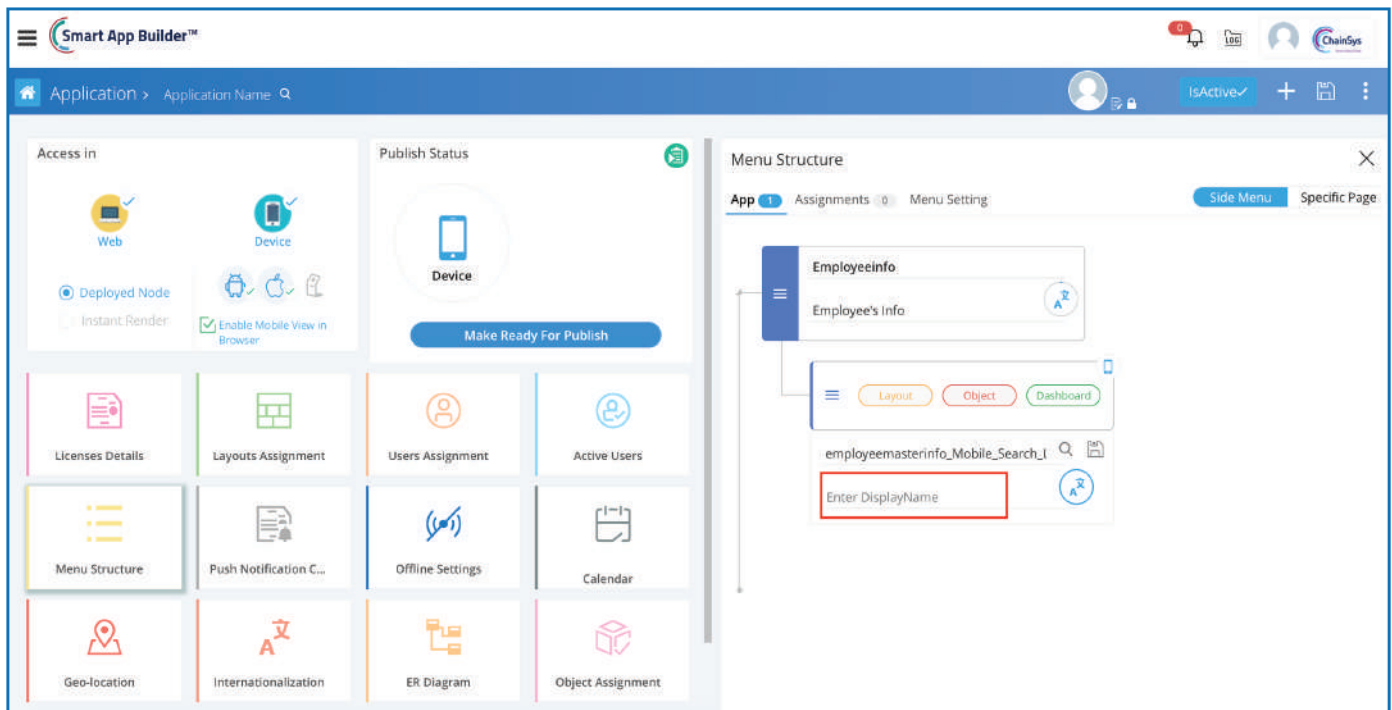
The menu structure is created using various layouts and objects so that the end-user can access the application through it. In this form, the created menu groups can also be assigned to various roles and users.

**Navigation:** appDESIGNER -> Application Creation -> Menu Group

### Side Menu



- Click on **Side Menu** from the top right to create a menu option on the side menu.
- **Menu Group Name** - Enter a name for the menu group.
- **Display Name** - Enter a display name for the menu group.
- Click on the **Layouts** button, so that the layouts that are chosen under the object will be displayed as shown below.
- Enter a **Display Name** for the menu group and save the form.

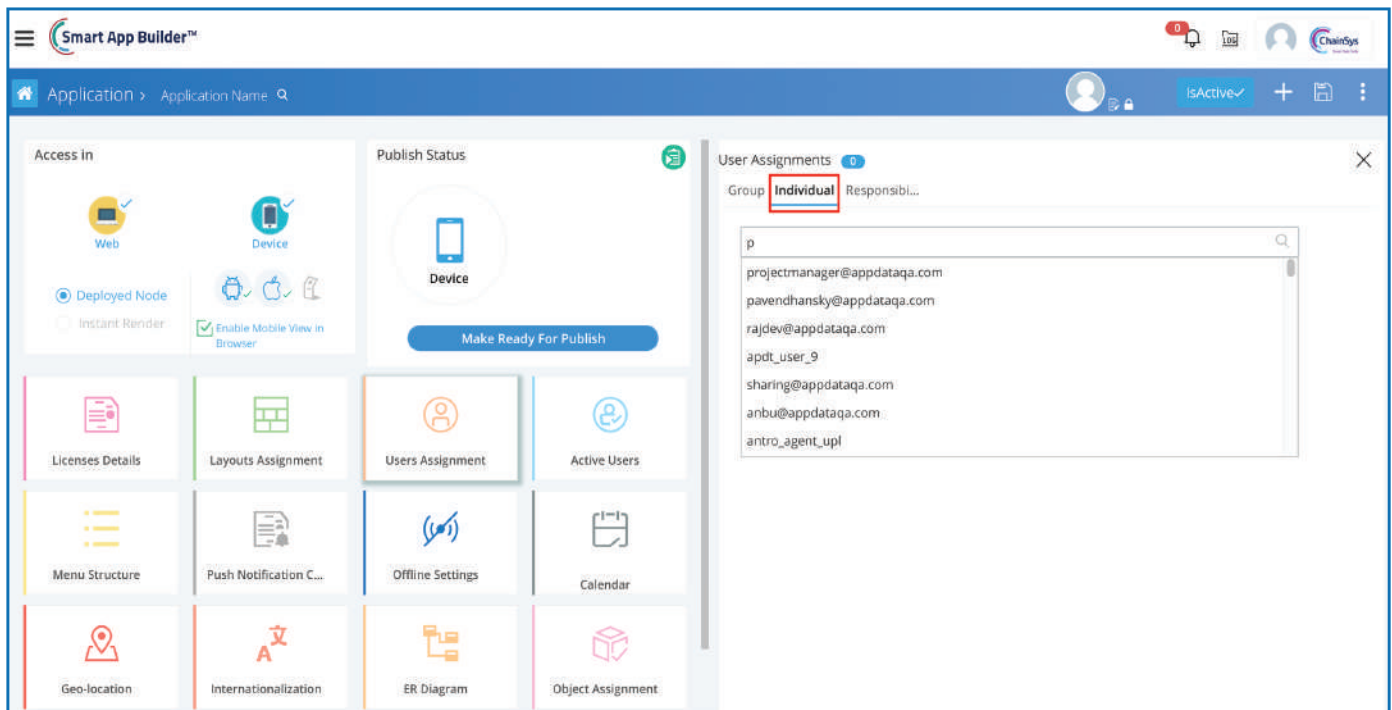


## User Assignments

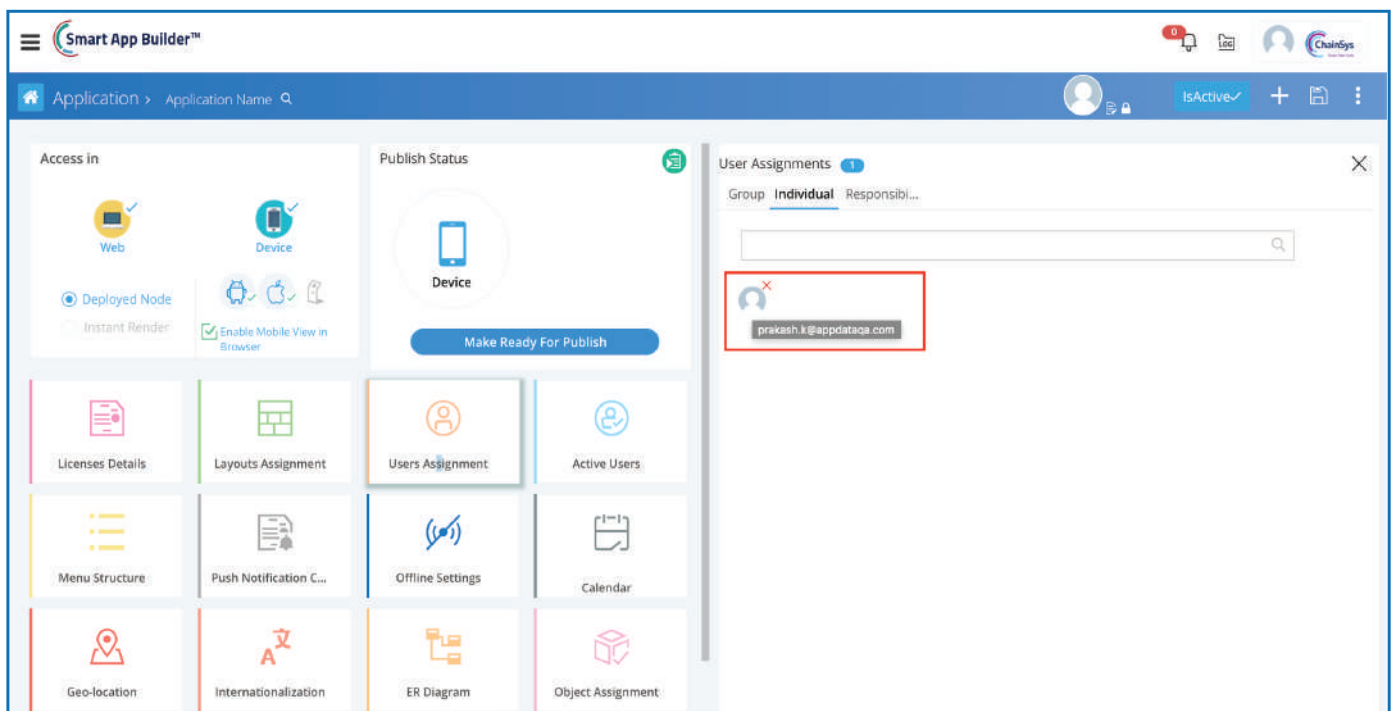
Using this functionality, the application can be assigned to users, so that the application can be accessed by them. The assignments can be performed in three different methods. Namely:-

- **Individual** - An application can be assigned to a single user so that the respective user can access the application.
- **Group** - Multiple users can be assembled in a single group and the application can be assigned to it so that all the users within the group will be able to access the application.
- **Responsibilities** - An application can be assigned to a responsibility, therefore anybody who is assigned to the respective responsibility will be able to access the application.

Navigation: appDESIGNER -> Application Creation -> User Assignments



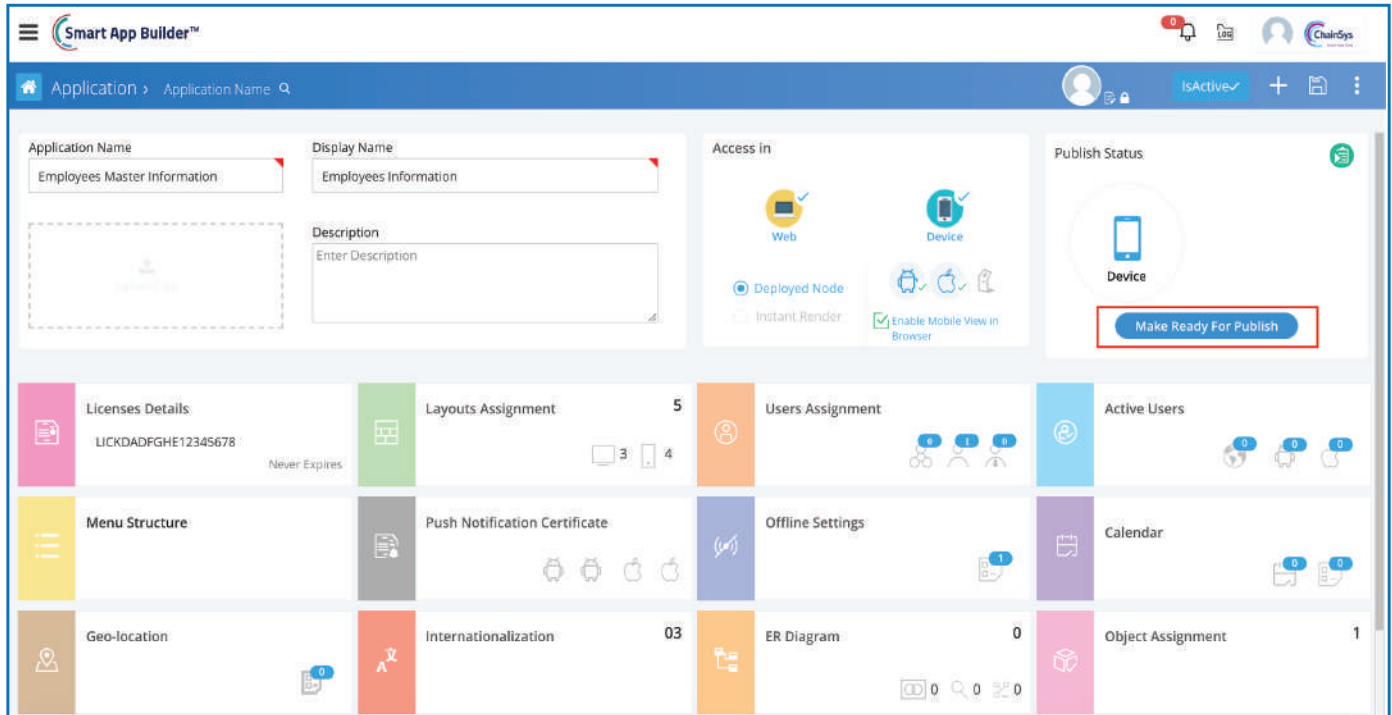
- Click and choose the required tab from the User Assignment form.
  - **Group**
  - **Individual**
  - **Responsibility**
- Click on the lookup field and select a name from the list so that the application will be assigned to it.
- Once the application is assigned, save the form, so that the assigned name will be displayed as shown below.



# Application Deployment

## Publish Action / Version Choosing

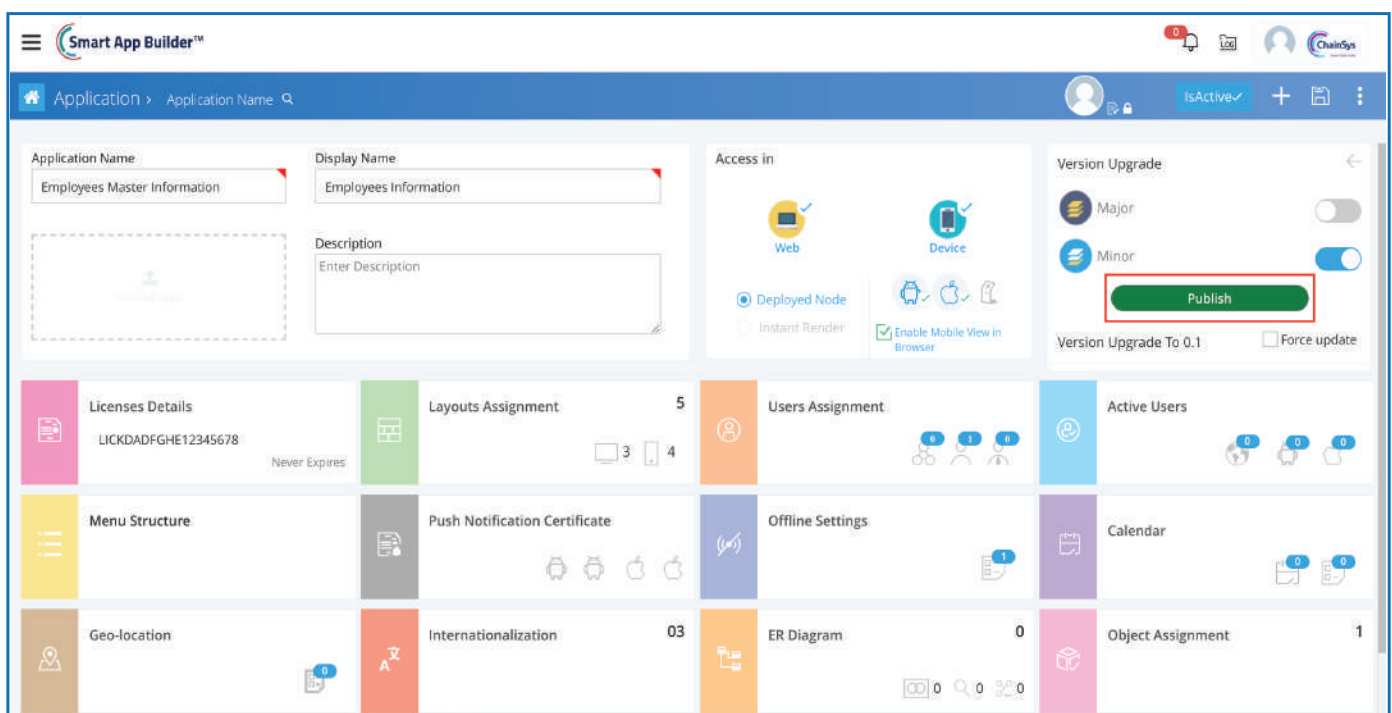
Post the application creation and user assignment, this application can be published so that it will be deployed on a server from where the user can access it.



The screenshot shows the 'Smart App Builder' interface for configuring an application. The top navigation bar includes the 'Smart App Builder' logo, a search bar, and user profile information. The main content area is divided into several sections:

- Application Details:** Fields for 'Application Name' (Employees Master Information), 'Display Name' (Employees Information), and 'Description' (Enter Description).
- Access in:** Options for 'Web' and 'Device' access, with 'Deployed Node' and 'Instant Render' checkboxes.
- Publish Status:** A 'Device' icon and a 'Make Ready For Publish' button (highlighted with a red box).
- Configuration Grid:** A grid of 12 tiles for various settings: Licenses Details, Layouts Assignment (5), Users Assignment, Active Users, Menu Structure, Push Notification Certificate, Offline Settings, Calendar, Geo-location, Internationalization (03), ER Diagram (0), and Object Assignment (1).

- Once the application is created, click on the **Make Ready For Publish** button from the top right of the above screen, so that the **Version Upgrade** form will be displayed as shown below.



The screenshot shows the 'Smart App Builder' interface with the 'Version Upgrade' form displayed on the right side. The form includes:

- Version Upgrade:** A section with 'Major' and 'Minor' version selection options, a 'Publish' button (highlighted with a red box), and a 'Version Upgrade To 0.1' label.
- Force update:** A checkbox labeled 'Force update'.

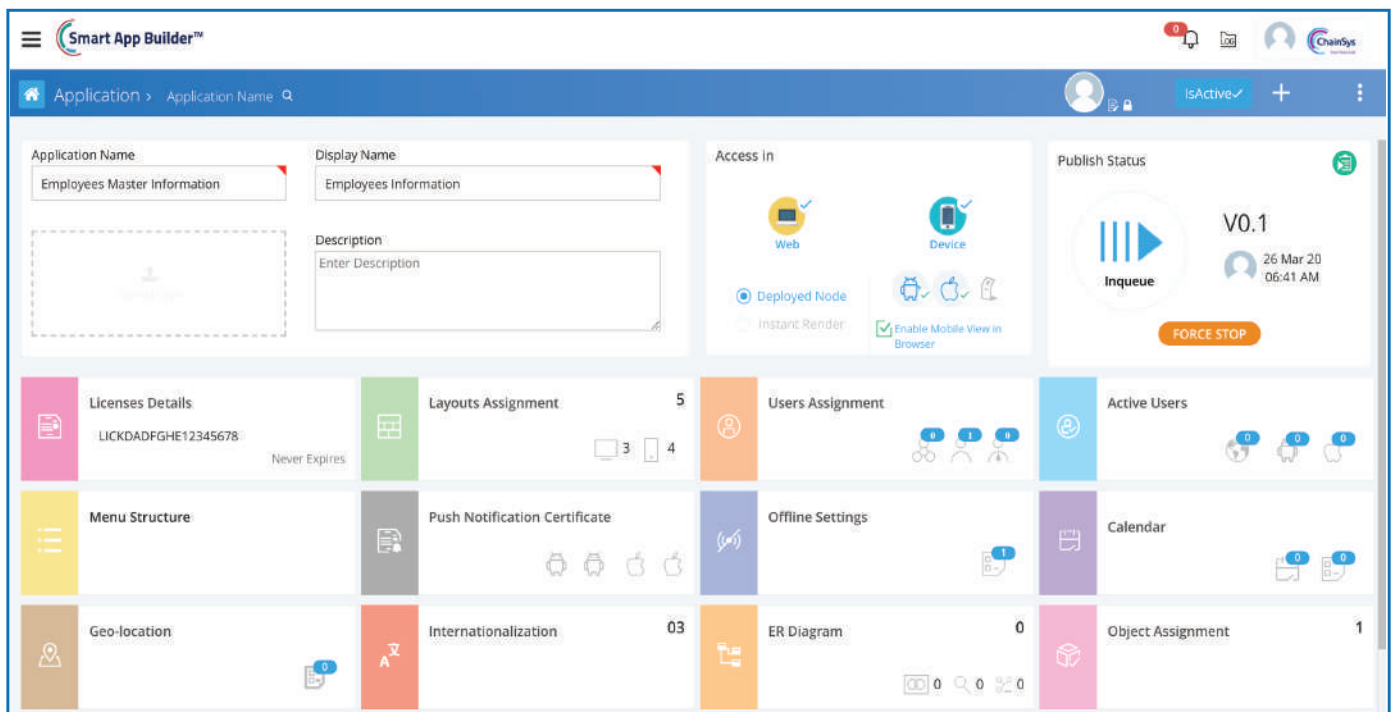
The rest of the interface, including the top navigation bar and the configuration grid, remains the same as in the previous screenshot.

- Choose the required version by sliding the toggle key.
  - **Major** - On selecting this option, the application will be versioned in the whole number.
  - **Ex - 12.0 - 13.0**
  - **Minor** - On selecting this option, the application will be versioned in decimals.
  - **Ex - 12.0 - 12.01.**
- Once the version settings are done, click on the **Publish** button under it, so that the status Published will be displayed with the version number.

## Publish Status

During the publishing process, the application will go through various stages as shown below.

### Inqueue



- When the above status is shown, the process can be aborted by clicking the **Force Stop** button.

## Build In Progress

The screenshot shows the Smart App Builder interface with the application 'Employees Master Information' in the 'Build In Progress' state. The top navigation bar includes the application name and a search icon. The main content area is divided into several sections:


- Application Details:** Application Name (Employees Master Information), Display Name (Employees Information), and a Description field.
- Access in:** Web and Device access options, with a 'Deployed Node' and 'Instant Render' checkbox.
- Publish Status:** V0.1, 26 Mar 20 06:41 AM, and a 'Build Inprogress' indicator.
- Configuration Grid:** A grid of 12 tiles for various settings: Licenses Details (LICKDADFGHE12345678), Layouts Assignment (5), Users Assignment, Active Users, Menu Structure, Push Notification Certificate, Offline Settings, Calendar, Geo-location, Internationalization (03), ER Diagram (0), and Object Assignment (1).

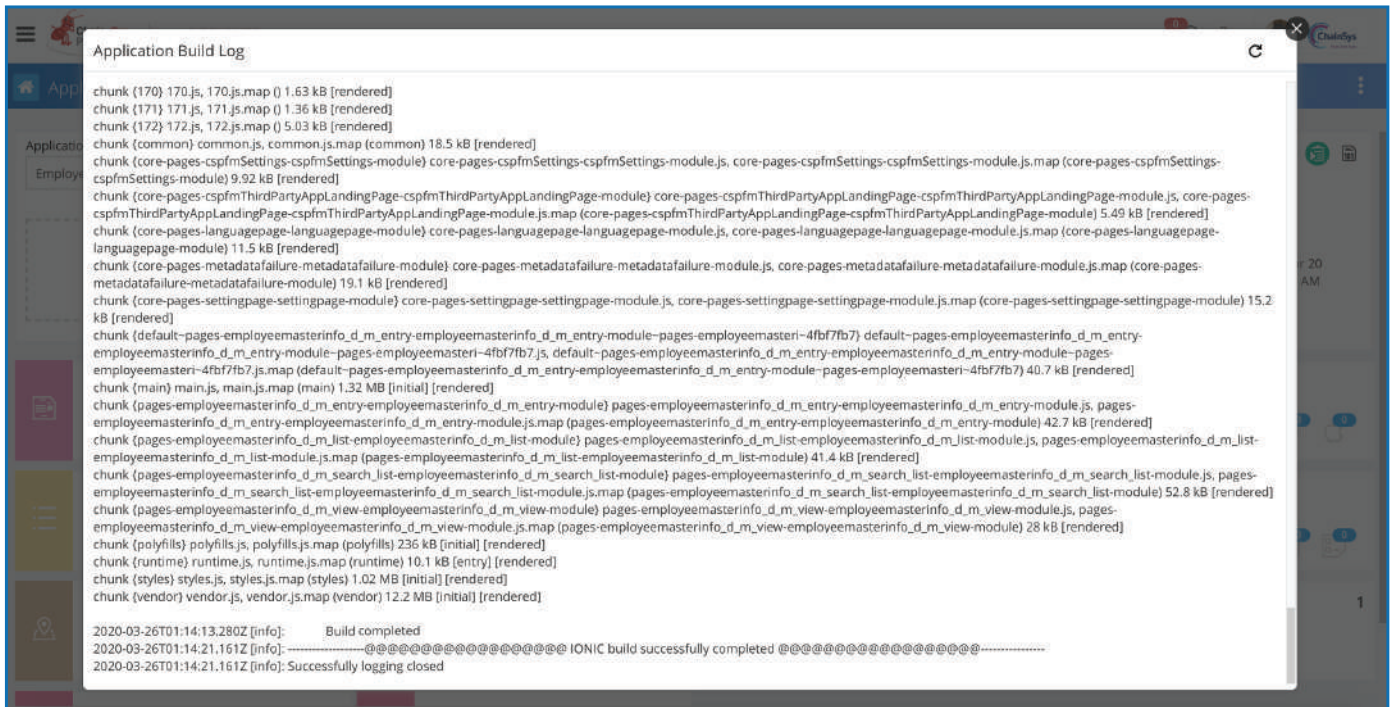
- Once the process is complete, the status will be displayed as Published as shown below.


The screenshot shows the Smart App Builder interface with the application 'Employees Master Information' in the 'Published' state. The top navigation bar includes the application name and a search icon. The main content area is divided into several sections:

- Application Details:** Application Name (Employees Master Information), Display Name (Employees Information), and a Description field.
- Access in:** Web and Device access options, with a 'Deployed Node' and 'Instant Render' checkbox.
- Publish Status:** V0.1, 26 Mar 20 06:41 AM, and a 'Published' indicator. An 'UNPUBLISH' button is visible.
- Configuration Grid:** A grid of 12 tiles for various settings: Licenses Details (LICKDADFGHE12345678), Layouts Assignment (5), Users Assignment, Active Users, Menu Structure, Push Notification Certificate, Offline Settings, Calendar, Geo-location, Internationalization (03), ER Diagram (0), and Object Assignment (1).











- Click on the **Build Log**  icon to check the complete log of the build.



- Click on **Build History**  icon to check the complete history of the build.

## Publish History

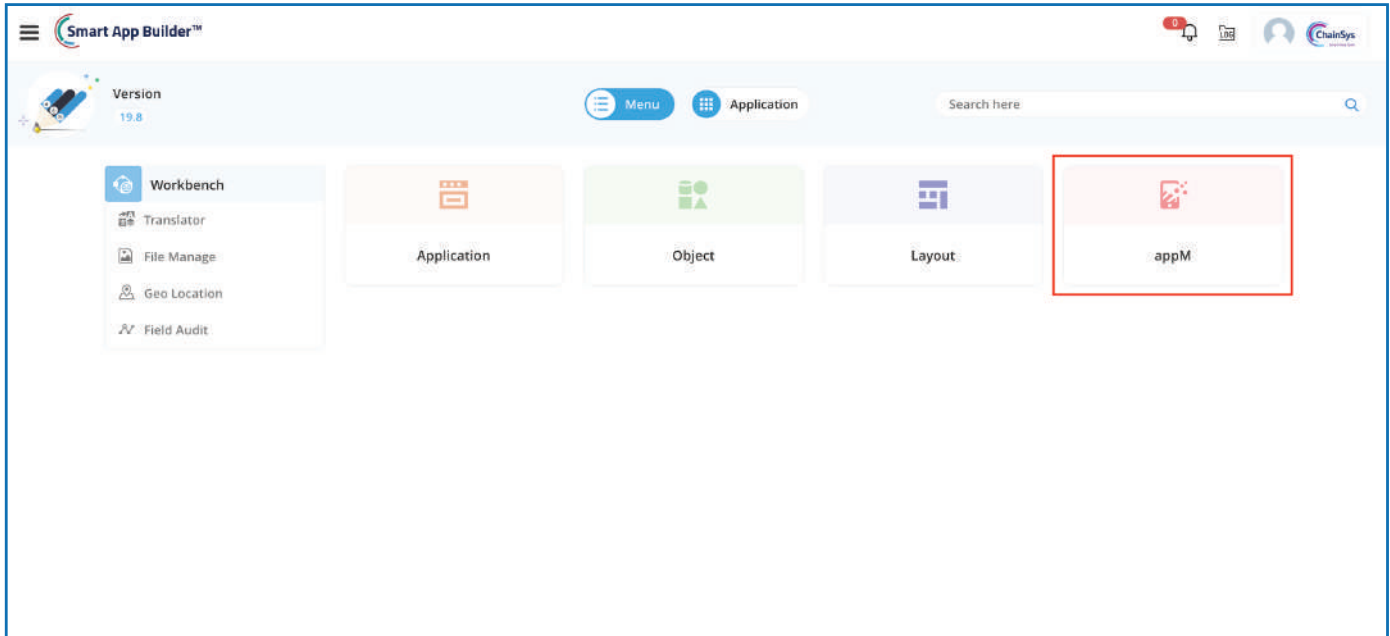
### Employees Master Information

26 Mar	 06:43 am - 06:44 am	V0.1	 
	 prakash.k@appdataqa.com		
26 Mar	 06:52 am - 06:53 am	V0.2	 
	 prakash.k@appdataqa.com		

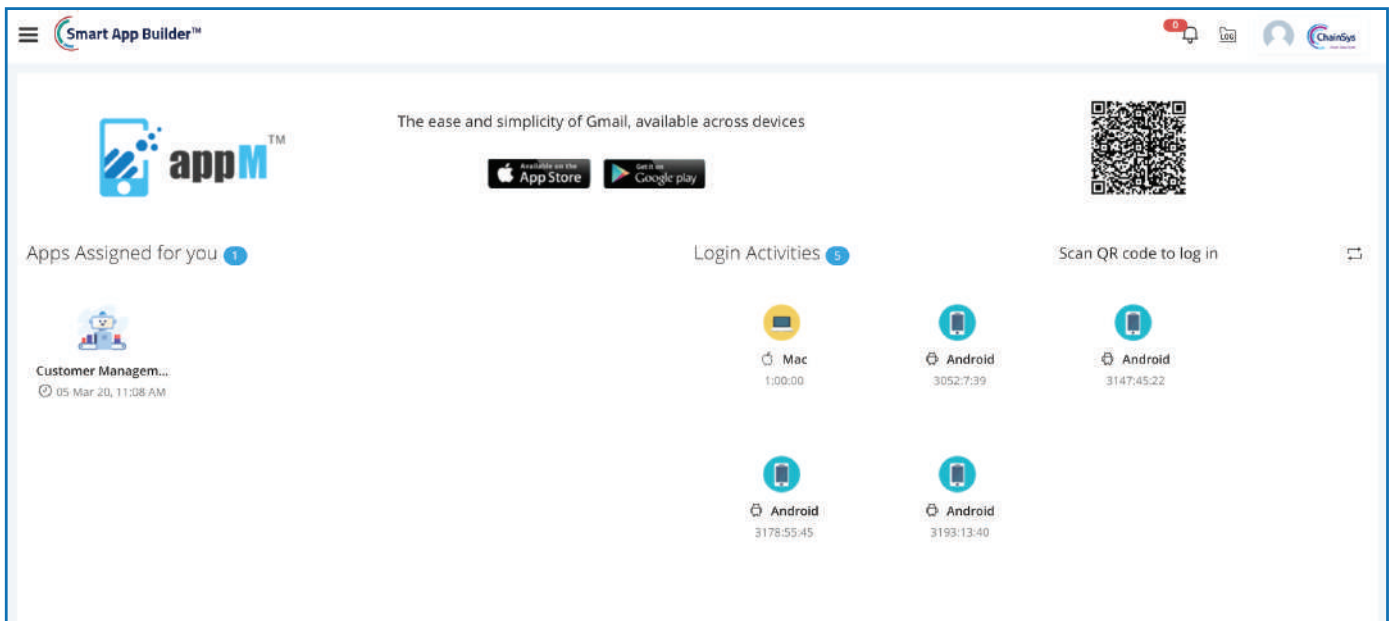
## Use App

To check the outcome of the above processes in a mobile device, perform the following steps.

### Mobile App Installation and Configuration



- Click on the **appM** from the menu group on the left pane so that the form will be displayed as below.

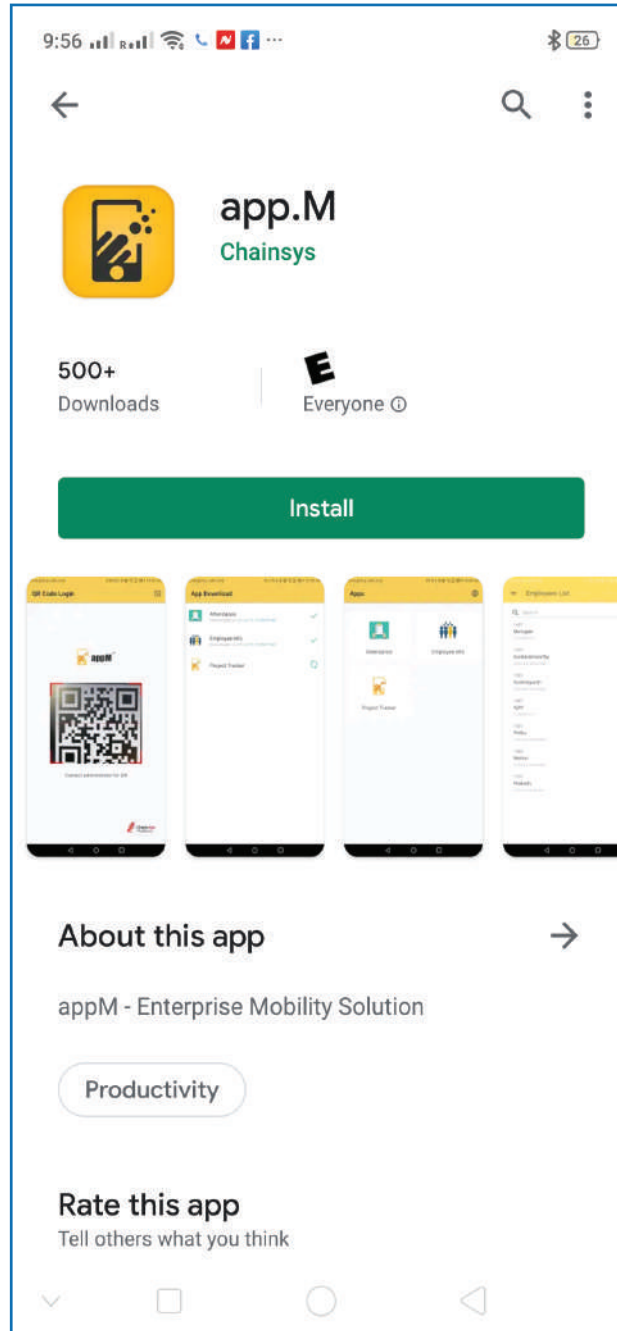


- Open the **App Store** or **Play Store** from your mobile device and install the appM application.
- After installing the appM application in the mobile device, scan the above QR code from the desktop computer to log in to the application.
- When the QR code is not accessible, the login process can also be performed by following the steps below.

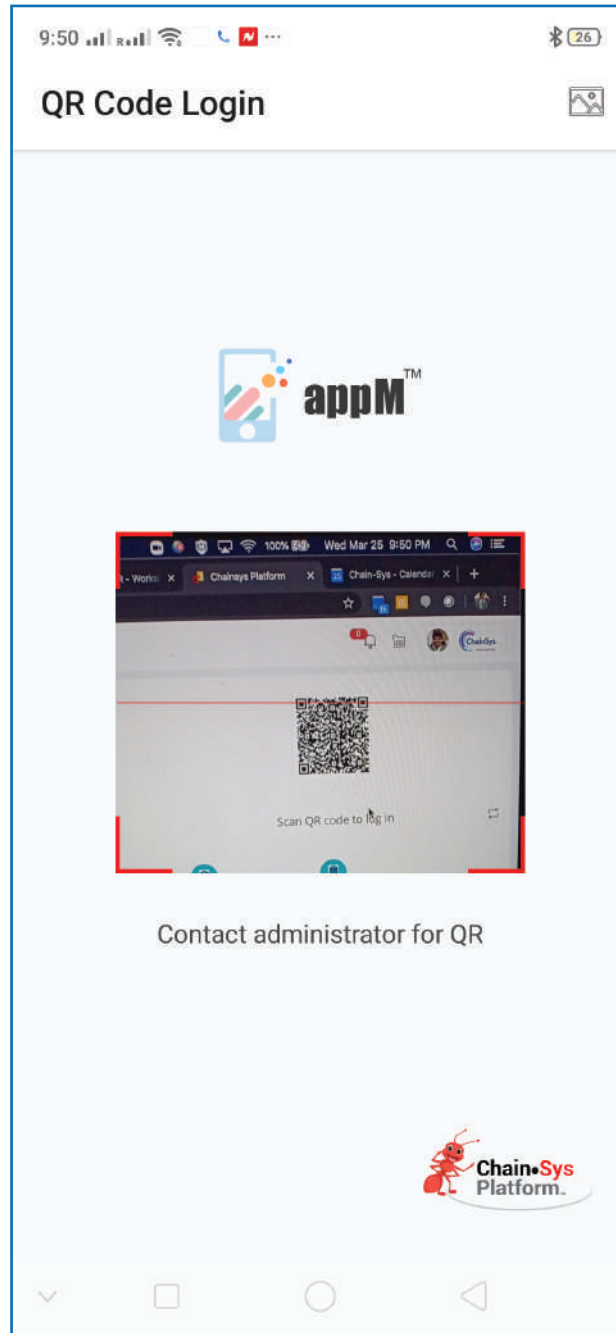


## appM Installation from App Store/ Play Store

- Open the App Store/Play Store application in your **IOS/Android** mobile and search for **appM**.
- Press the **Install** button so that the application will be downloaded and installed on your android phone.



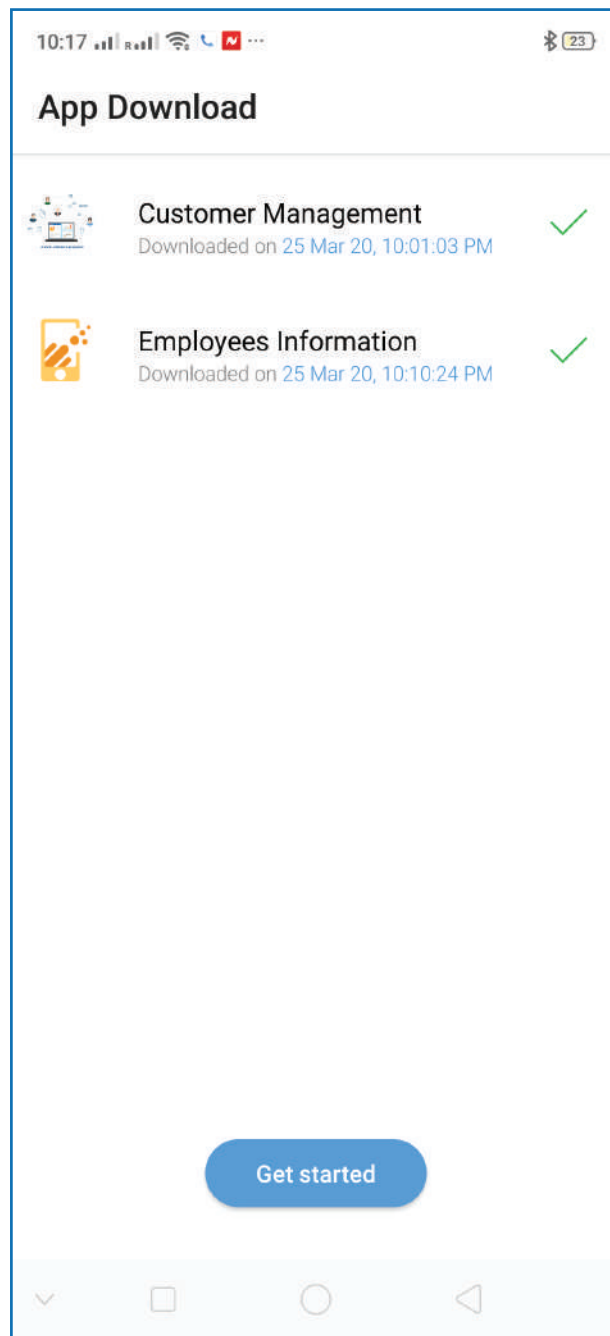
## Configuring appM to Connect Chainsys Platform



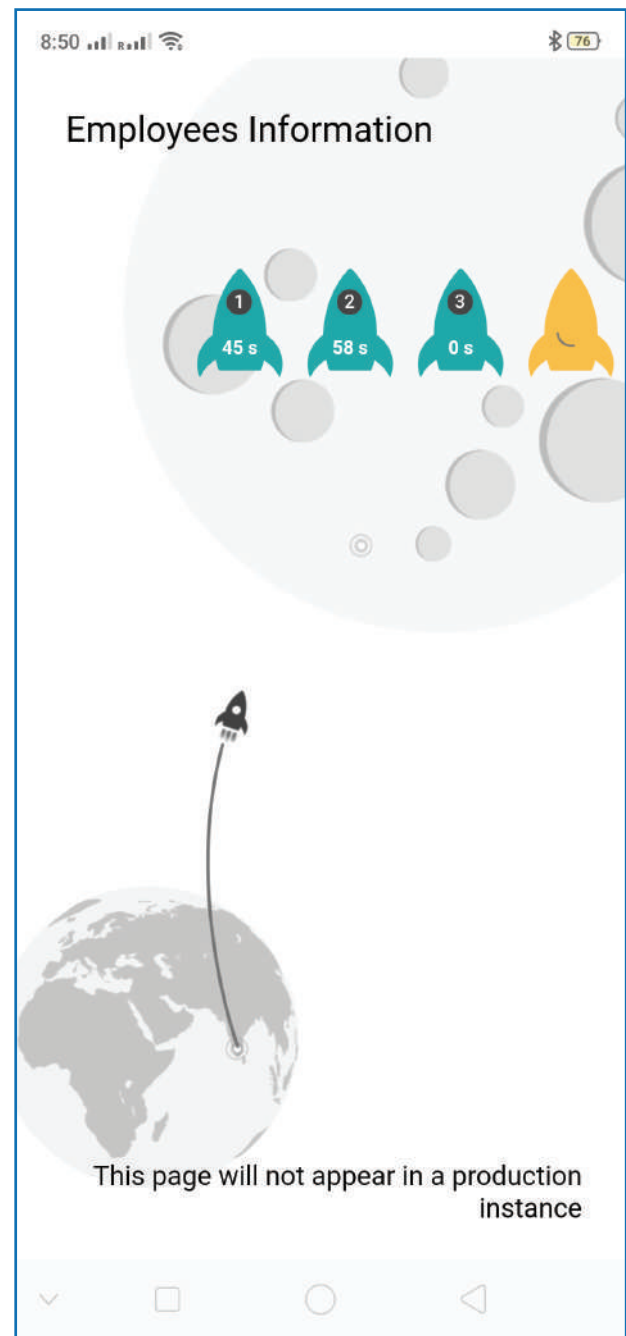
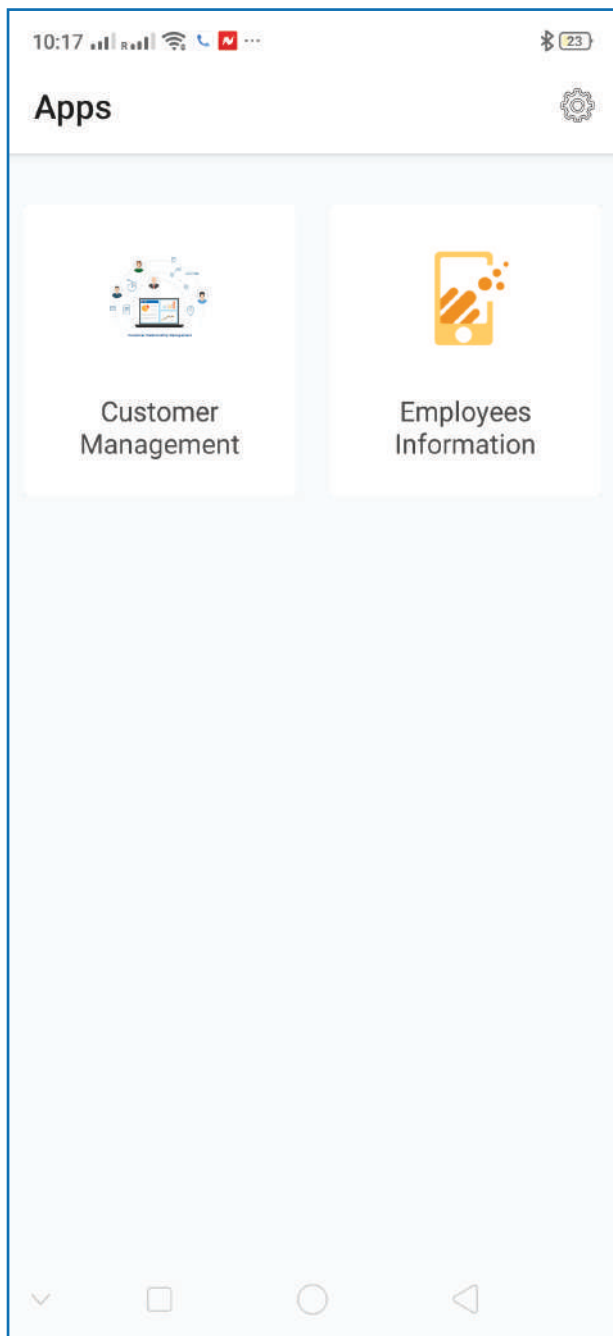
- Open the appM application, and scan the QR code which is explained in the 4.1 section.
- Once you scanned the QR code you will get the form as shown below. Here enter the credentials.
  - **User Name** - Enter your username.
  - **Password** - Enter your password.
- Press the **Connect** button, so that the entered credentials will be saved in the application and the connection will begin to establish.



- Once the connection is established and synced, the screen will be displayed as shown below.
- During the sync process, the apps assigned to the user using Smart App Builder will be downloaded to the mobile device.

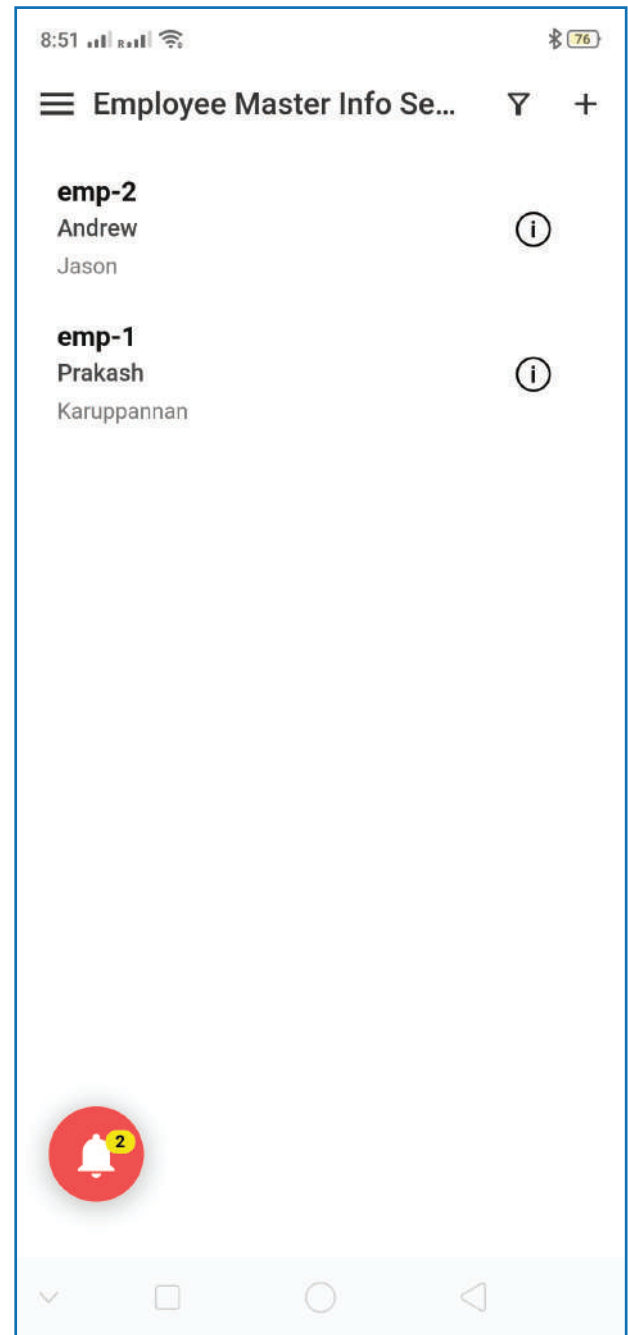
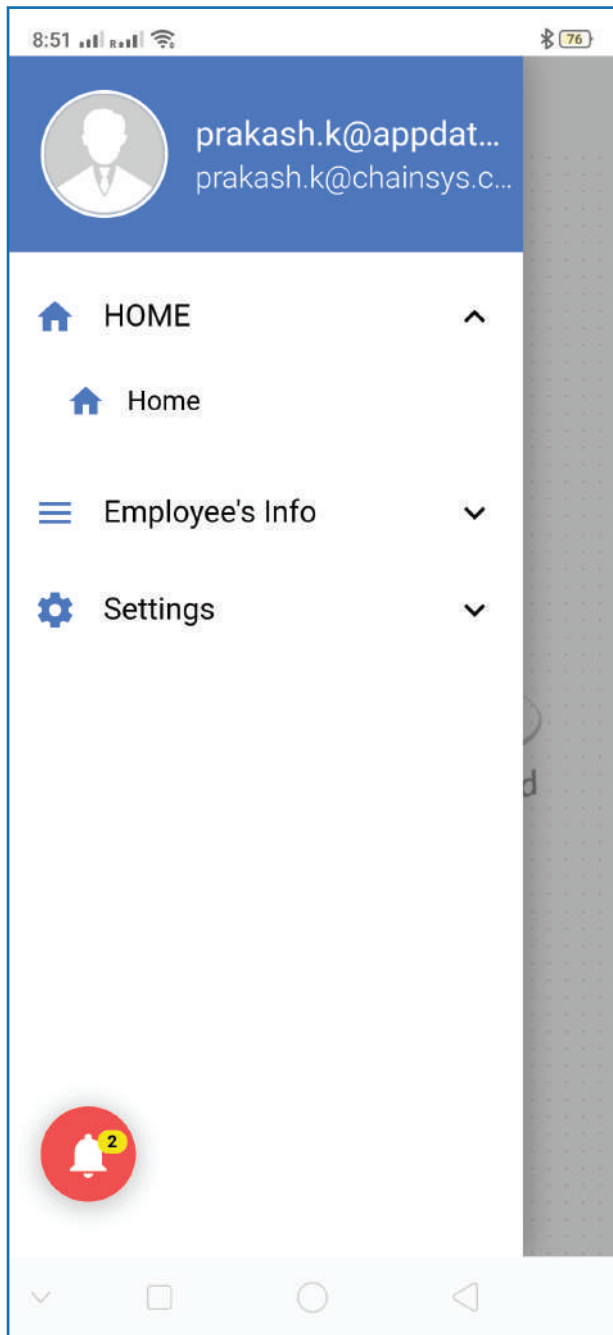


- Click on the **Get Started** button, so that all the applications will be displayed as shown below.

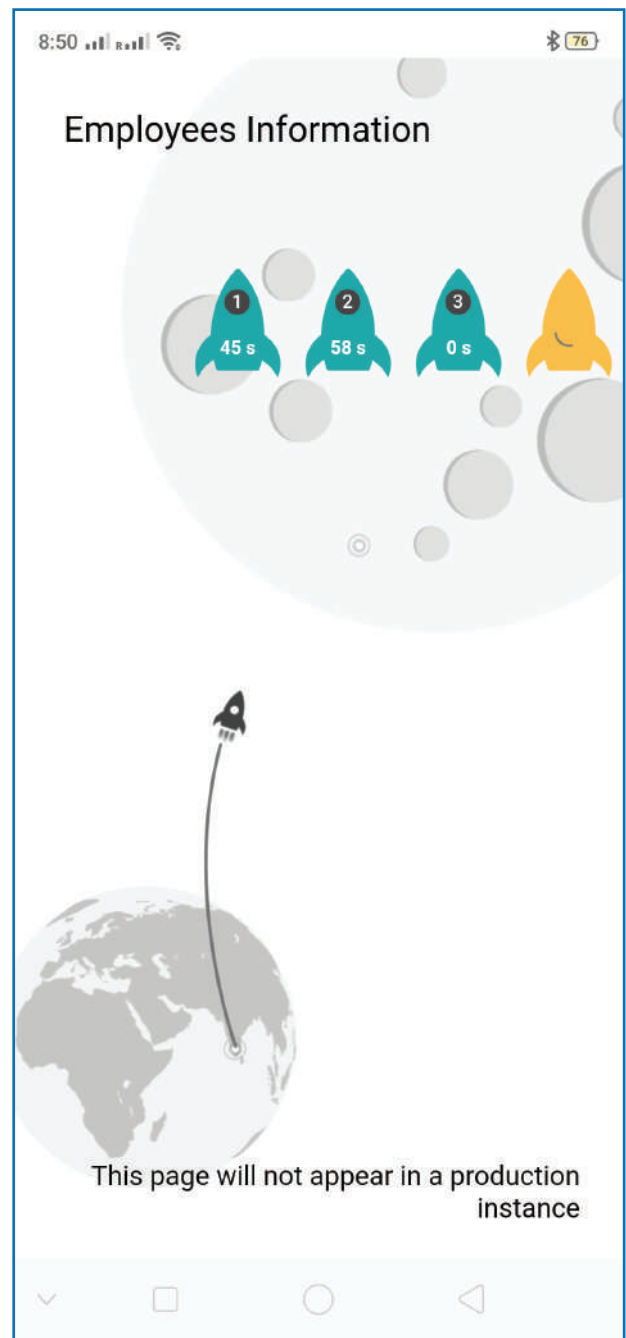
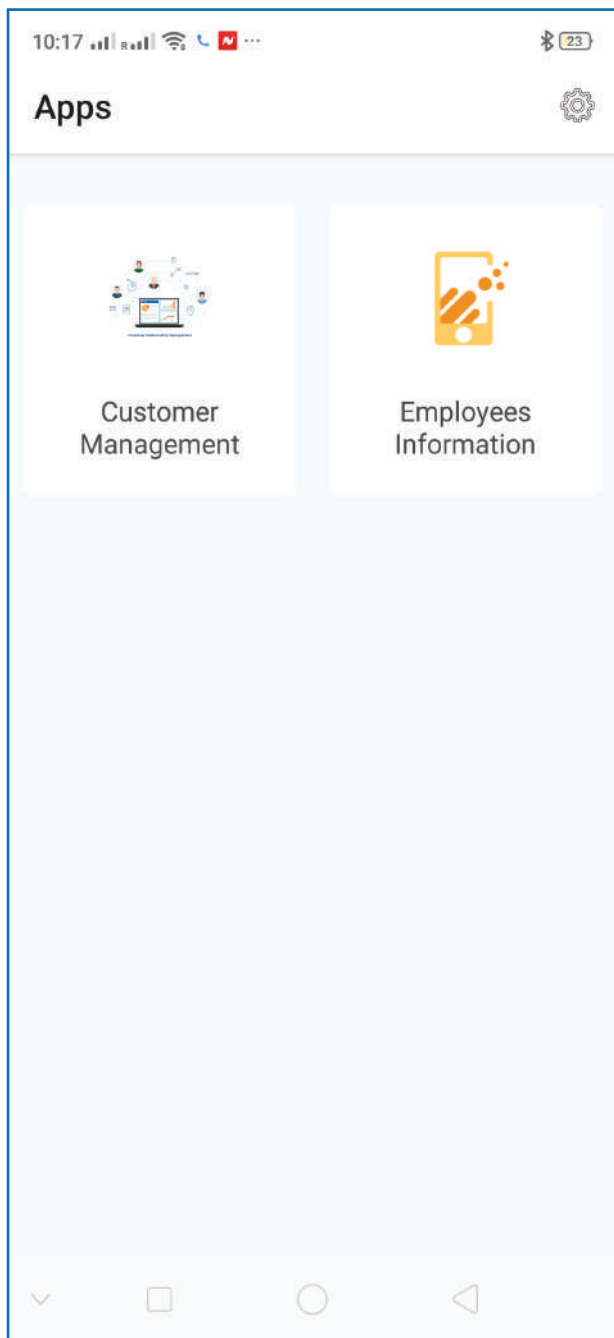


- Press the required application, so that the data associated with it will be synced and made available in the mobile device. So that it can also be used offline (when there is no connection to the server) and it will be displayed as shown below.

- You will get the side menus as configured, click the menu to view the associated layout.



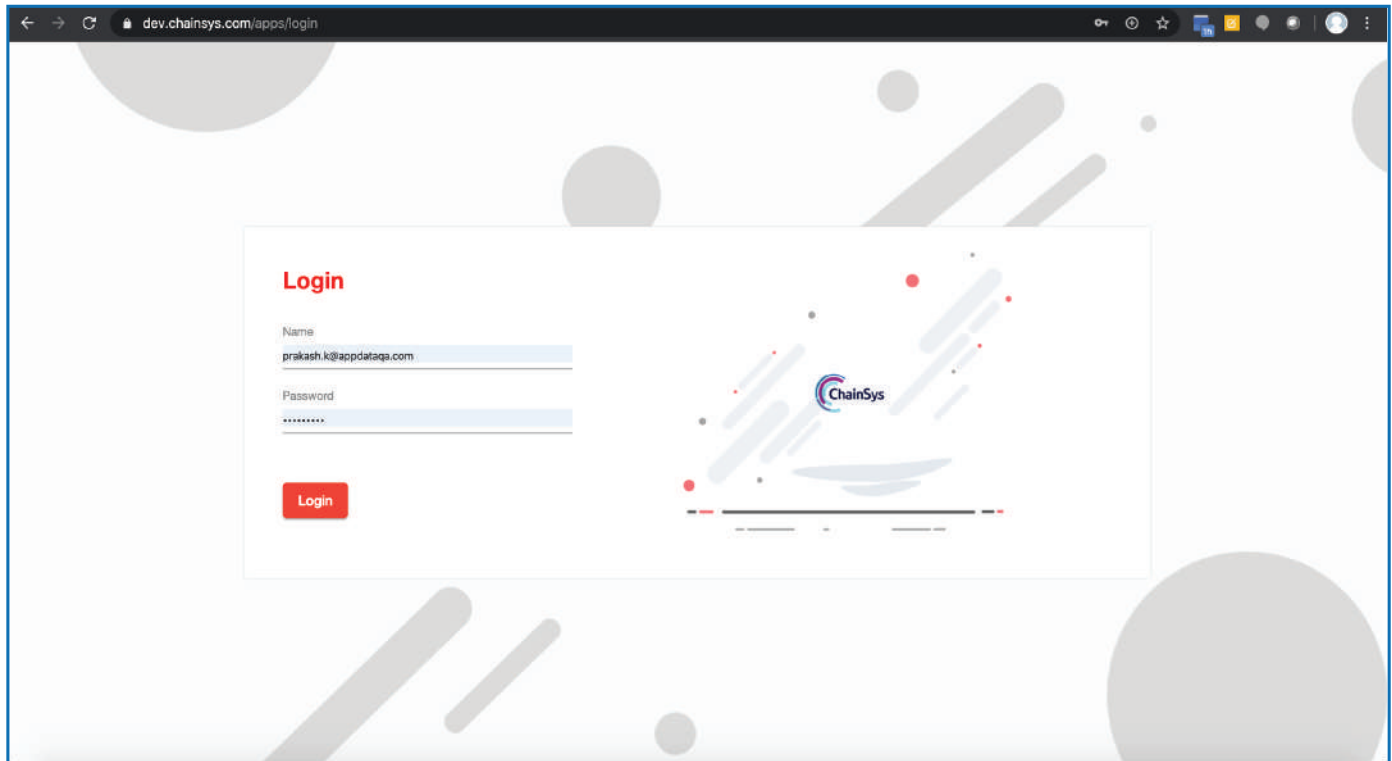
- Press the **Add New + icon** to include more details to the specific record.
- Press any specific record, so that all the information associated with it can be viewed and edited as shown below.



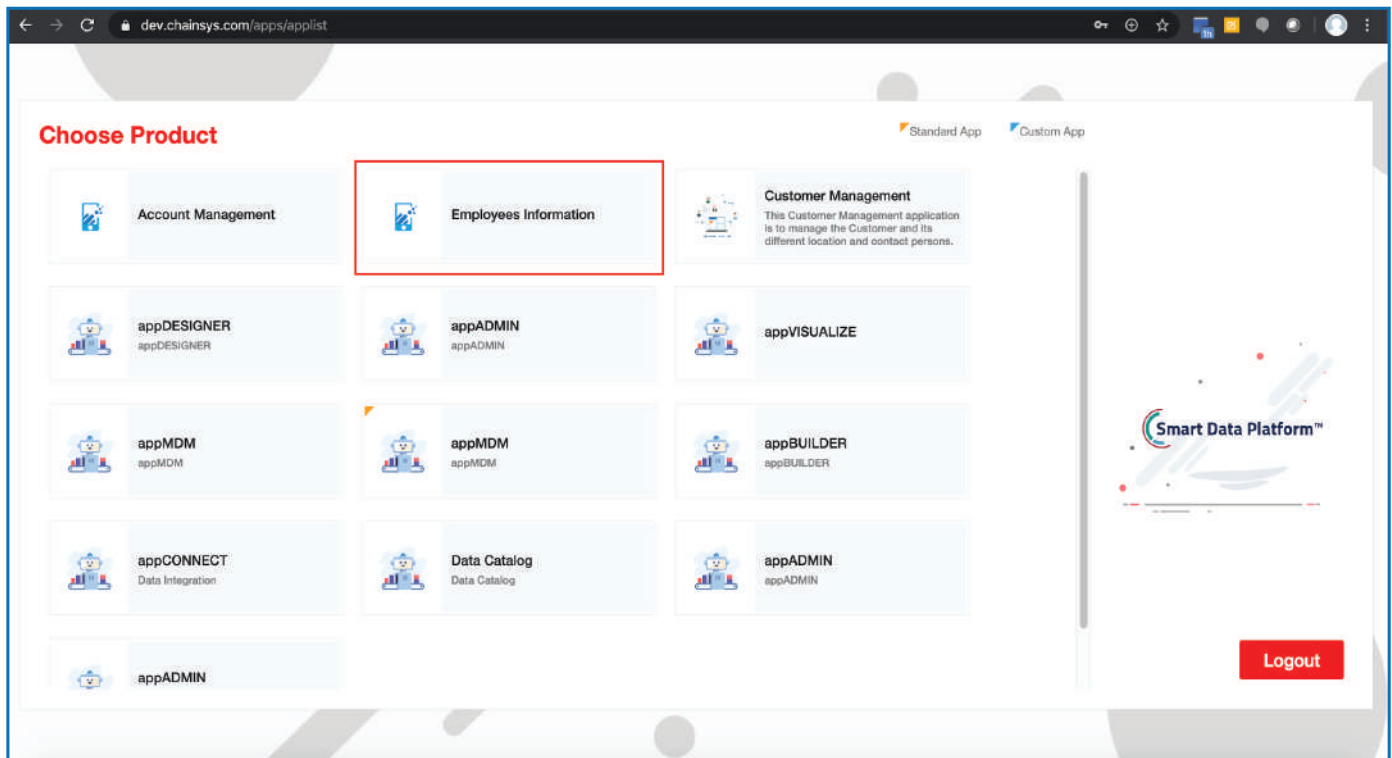
# Web Application

## Login

- Enter the following link in your browser and login using Username and Password.
  - <https://dev.chainsys.com/apps/>



## Application Switcher

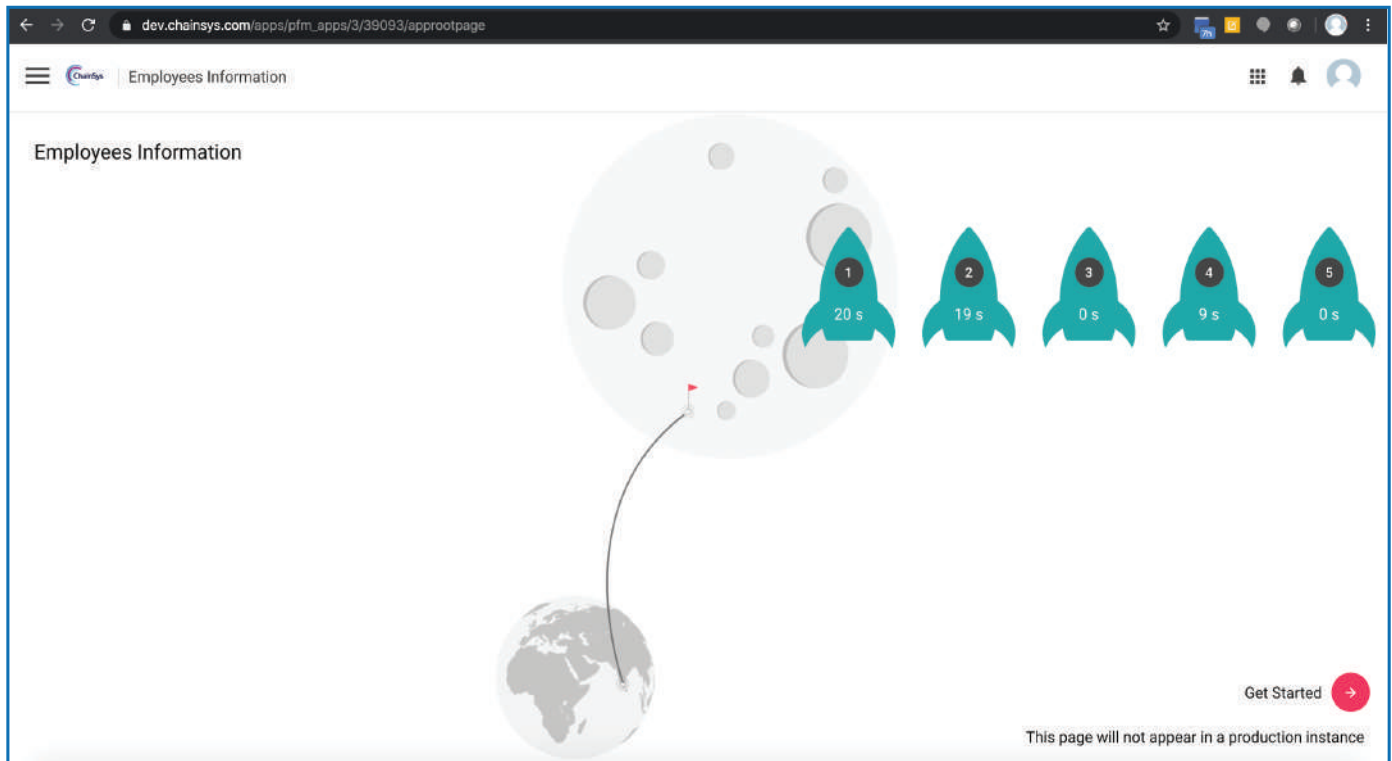




- Once logged in, the form will display all the assigned applications as shown above.
- Click on any to the required application to access it.

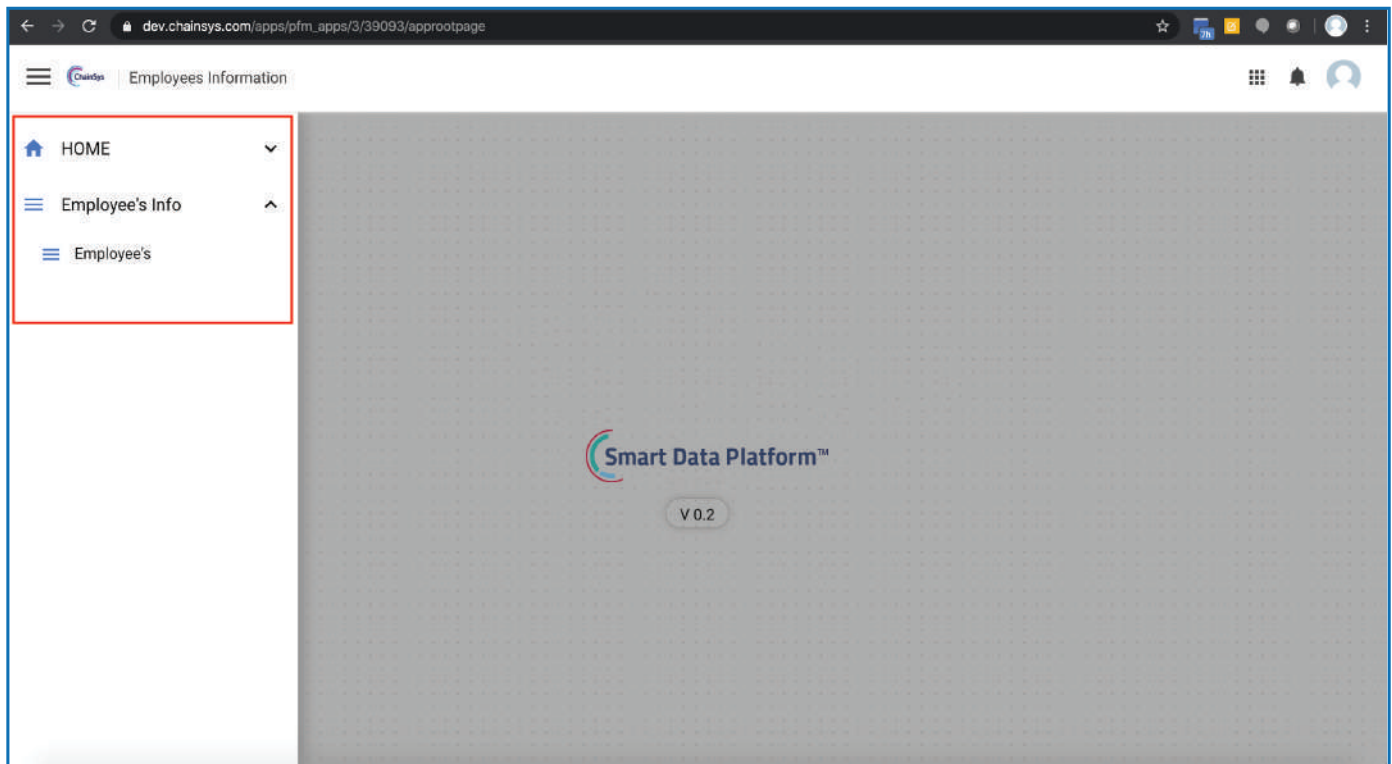
## Data Sync

- Once the application is clicked, it will go through a process and fetch the associated information from the backend. During which the form will be displayed as shown below.



## Menu Explanation


- Once the **Sync** process is complete, the homepage will be displayed as shown below.

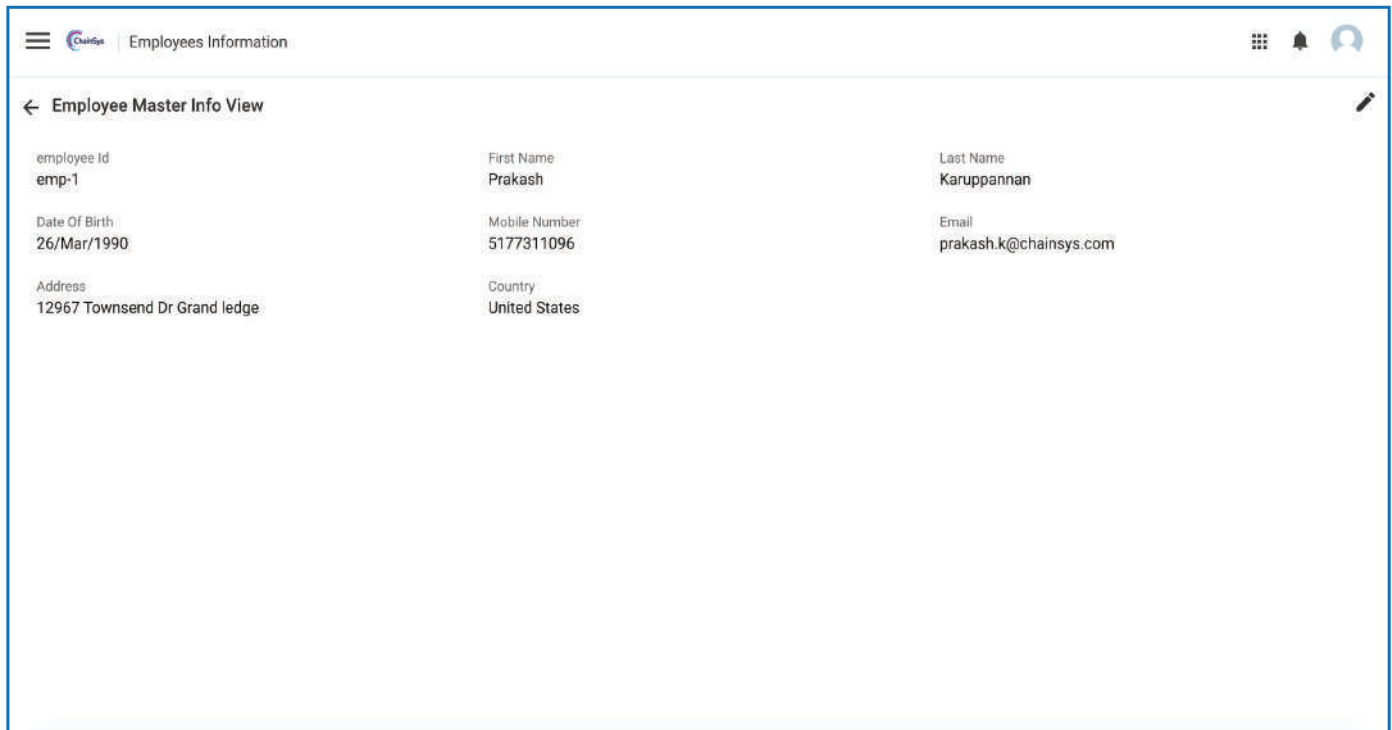


- The menu groups assigned in the application will be displayed in the left pane.
- Click on the **Employee's** menu from the left pane, so that it will navigate to the employees list page.

The screenshot shows the application interface after navigating to the 'Employee's' menu. The top navigation bar remains the same. The left sidebar menu is no longer visible. The main content area displays a table titled 'Employee Master Info Search' with a search icon on the right. The table has three columns: 'employee Id', 'First Name', and 'Last Name'. There are two rows of data.


employee Id	First Name	Last Name
emp-2	Andrew	Jason
emp-1	Prakash	Karuppannan

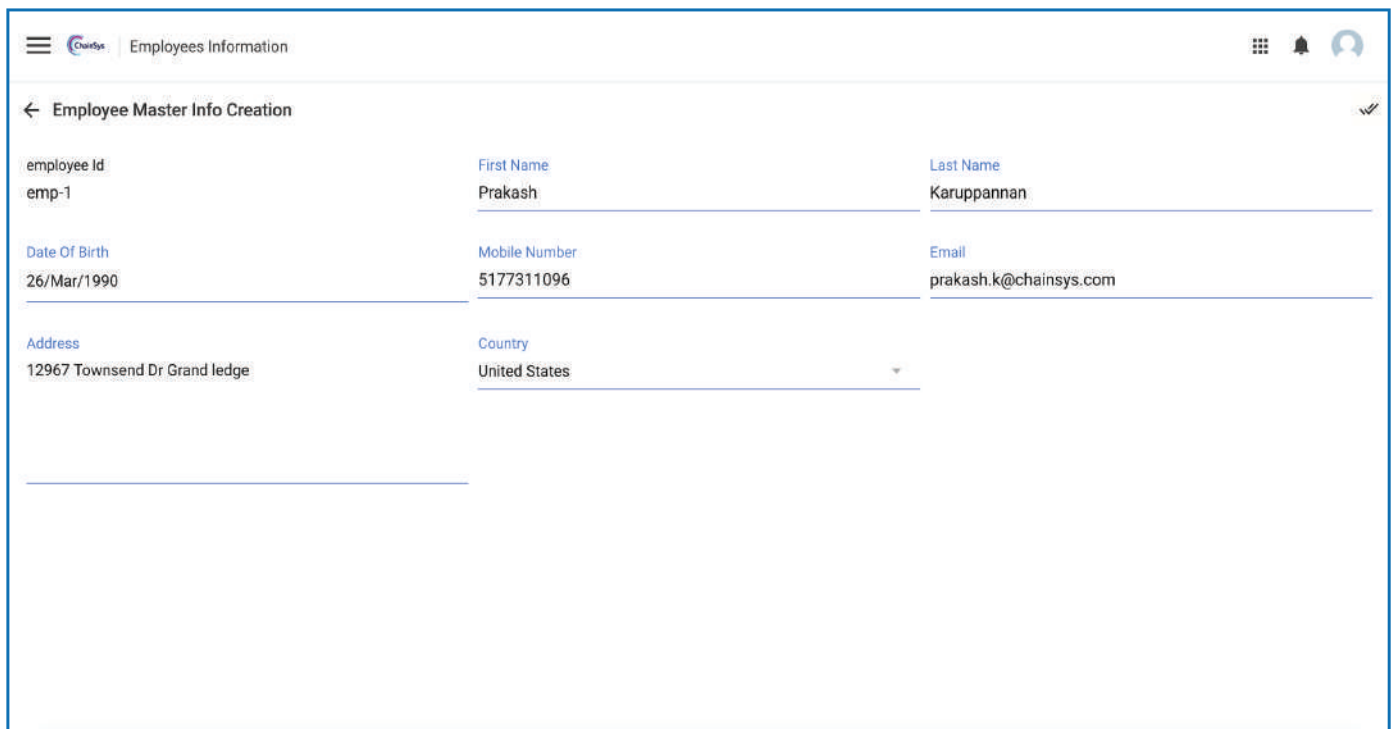
- Click on the Add New  icon to include a new record to the menu.
- Click on an existing record, so that the details associated with it will be displayed as shown below.



**Employee Master Info View**

employee Id emp-1	First Name Prakash	Last Name Karuppannan
Date Of Birth 26/Mar/1990	Mobile Number 5177311096	Email prakash.k@chainsys.com
Address 12967 Townsend Dr Grand ledge	Country United States	

- Click on Edit  icon from the top right, so that any information on the page can be modified.



**Employee Master Info Creation**

employee Id emp-1	First Name Prakash	Last Name Karuppannan
Date Of Birth 26/Mar/1990	Mobile Number 5177311096	Email prakash.k@chainsys.com
Address 12967 Townsend Dr Grand ledge	Country United States	

## Supported Endpoints ( Partial )

Oracle Sales Cloud, Oracle Marketing Cloud, Oracle Engagement Cloud, Oracle CRM On Demand, SAP C/4HANA, SAP S/4HANA, SAP BW, SAP Concur, SAP SuccessFactors, Salesforce, Microsoft Dynamics 365, Workday, Infor Cloud, Procore, Planview Enterprise One

Cloud Applications

Oracle E-Business Suite, Oracle ERP Cloud, Oracle JD Edwards, Oracle PeopleSoft, SAP S/4HANA, SAP ECC, IBM Maximo, Workday, Microsoft Dynamics, Microsoft Dynamics GP, Microsoft Dynamics Nav, Microsoft Dynamics Ax, Smart ERP, Infor, BaaN, Mapics, BPICS

Enterprise Applications

Windchill PTC, Oracle Agile PLM, Oracle PLM Cloud, Teamcenter, SAP PLM, SAP Hybris, SAP C/4HANA, Enovia, Proficy, Honeywell OptiVision, Salesforce Sales, Salesforce Marketing, Salesforce CPQ, Salesforce Service, Oracle Engagement Cloud, Oracle Sales Cloud, Oracle CPQ Cloud, Oracle Service Cloud, Oracle Marketing Cloud, Microsoft Dynamics CRM

PLM, MES & CRM

Oracle HCM Cloud, SAP SuccessFactors, Workday, ICON, SAP APO and IBP, Oracle Taleo, Oracle Demantra, Oracle ASCP, Steelwedge

HCM & Supply Chain Planning

Oracle Primavera, Oracle Unifier, SAP PM, Procore, Ecosys, Oracle EAM Cloud, Oracle Maintenance Cloud, JD Edwards EAM, IBM Maximo

Project Management & EAM

OneDrive, Box, SharePoint, File Transfer Protocol (FTP), Oracle Webcenter, Amazon S3

Enterprise Storage Systems

HIVE, Apache Impala, Apache Hbase, Snowflake, mongoDB, Elasticsearch, SAP HANA, Hadoop, Teradata, Oracle Database, Redshift, BigQuery

Big Data

mangoDB, Solr, CouchDB, Elasticsearch

No SQL Databases

PostgreSQL, Oracle Database, SAP HANA, SYBASE, DB2, SQL Server, MySQL, memsql

Databases

IBM MQ, Active MQ

Message Broker

Java, .Net, Oracle PaaS, Force.com, IBM, ChainSys Platform

Development Platform

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