



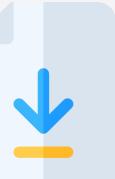
Recording will
be shared

Welcome to the **Pictorial Stacked Chart Workshop!**

**Download
Code & Slide**

[**bit.ly/KDP_PICT**](https://bit.ly/KDP_PICT)

Click the top right
Download ZIP
button



**Sign up for
2x things**

KDP Account
bit.ly/KDP_signup

Developer License
bit.ly/K_DevLic

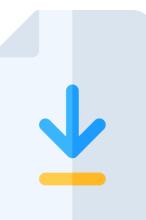
**Asking Questions
& Raising Hands**

Post questions in
the chat anytime!

Include your code
& error messages.



**2x \$100 Gift Card
Raffles!**



ahansel / 00_Pictorial_Stacked_Chart_Workshop.md

Last active 4 minutes ago

 Edit Delete Star

0

 Code Revisions

5



Download ZIP

 00_Pictorial_Stacked_Chart_Workshop.mdClick here to download
EVERYTHING

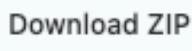
Raw

↵ No Server Data Visualization: Build a Pictorial Stacked Chart Project!

Thank you for attending our Kintone x Pictorial Stacked Chart workshop!

Use the following CSV file, CDN URLs, JavaScript file, and PDF files for the hands-on section!

Download Links

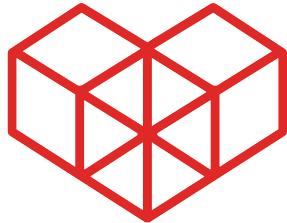
Click [here](#) or the  button on the upper right corner for all the code, data, & slide you need for our workshop!

Scroll down to
view the other files

2x Accounts to Sign-Up for



Sign Up for a KDP Account



kintone
developer program

bit.ly/KDP_signup

⚠ Do NOT use Safari ⚠

⚡ Accept Cookies First ⚡

✓ Chrome & Firefox works ✓

The screenshot shows a web browser window with the Kintone developer program sign-up page. The page has a yellow header bar with the Kintone logo and a search bar. Below the header, there's a welcome message featuring a giraffe and a yellow call-to-action button. The main form area is titled "Sign up to Kintone Developer Program" and contains fields for "Your full name *", "Your email *", and a reCAPTCHA checkbox labeled "I'm not a robot". A large blue "Sign up" button is at the bottom. The right side of the screen shows a blurred view of the Kintone interface with tabs like "Program", "Customizations", and "Community".

Sign up to Kintone Developer Program

Please fill out this form, and we'll send you a welcome email so you can verify your email address and sign in.

Your full name *

Your email *

I'm not a robot

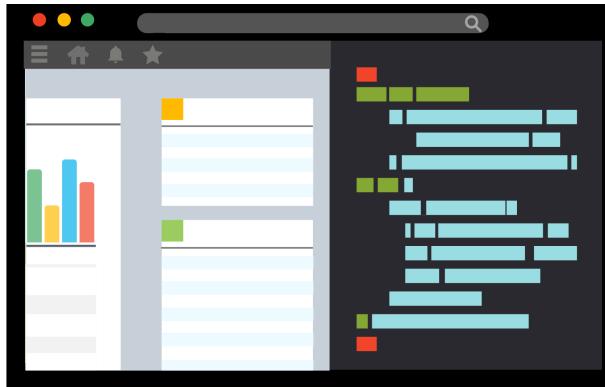
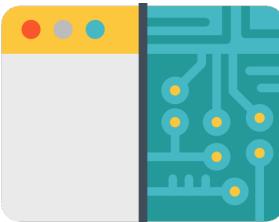
reCAPTCHA
Privacy - Terms

Sign up

Cancel



Sign Up for a Developer License



Get a free Kintone environment
by signing up here:

bit.ly/K_DevLic

Terms of Service for the Developer License

The account holder of this developer program who applies for the license (hereinafter referred to as "User") must comply with all of the provisions and the following conditions set out by Kintone Corporation (hereinafter referred to as "Kintone"), who will provide a Kintone developer license to the User.

[Kintone Developer License Terms of Service](#)

Developer License Application Form

First Name*

Last Name*

Email*

Company Name*

Create your Kintone Developer License subdomain (lowercase, numbers and hyphens only)*
For example: mydomain, coffee-lovers

I agree with the [Kintone Developer License Terms of Service*](#)

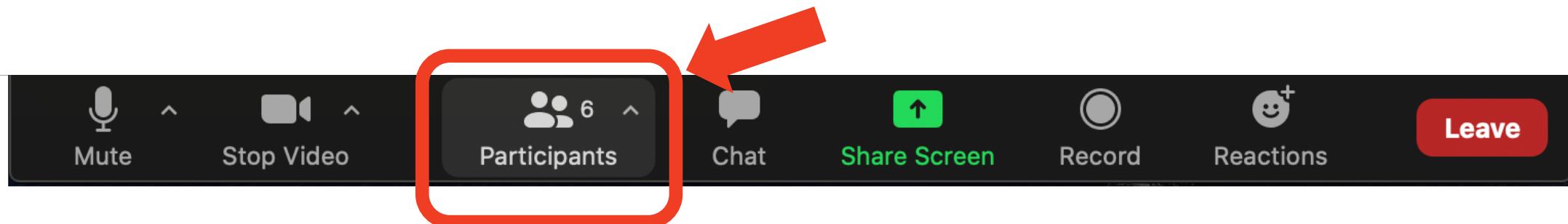
protected by reCAPTCHA Privacy - Terms

Sign Up



Let's Practice Raising Your Hand in Zoom

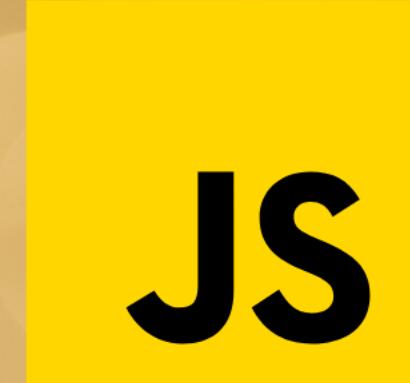
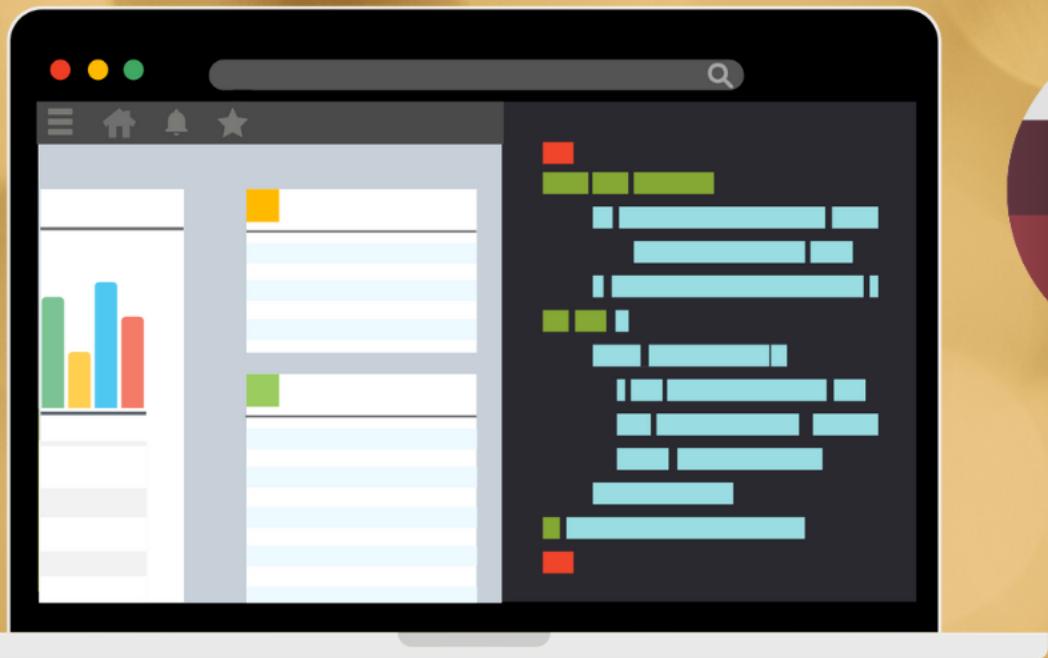
This helps us out who to look out for throughout this workshop.



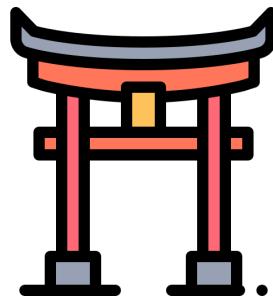


No Server Data Visualization

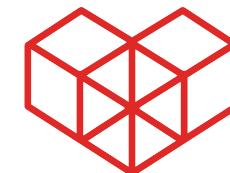
Build a Pictorial Stacked Charts!



Kintone Developer Program Team



Will & Genji run the Kintone
Developer Program from
Tokyo, Japan!



kintone
developer program

The screenshot shows the homepage of the Kintone Developer Program. At the top, there's a navigation bar with links for Home, Community, API Docs, Tutorials, Plug-ins, and SDKs & Tools. To the right of the navigation is a search bar and buttons for "Join the program" and "Sign in". The main header features the text "Welcome to the Kintone Developer Program" over a background image of a lion and a giraffe. Below the header, a yellow section contains a key icon and the text "What is the Kintone Developer Program? Learn how to unlock all of the perks that come with joining the Kintone Developer Program!" with a "Learn more →" button. At the bottom, there are three cards: "Quick start" (with a person icon), "Community" (with a people icon), and "API Docs" (with a document icon).

Hey! I'm Nim.

**My path to becoming a
Technical Evangelist:**

Hack Reactor SF



Kintone Sales Engineer



Lead Sales Engineer



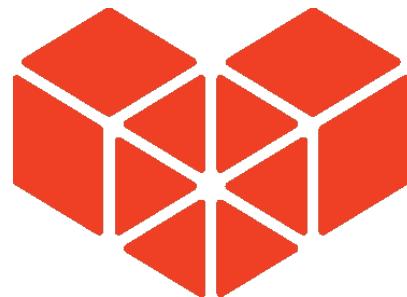
Sales Engineering Manager



Technical Evangelist



Overview of Today's Workshop



kintone

- ❑ We will build a visualization project together using Kintone
- ❑ Everyone will walk away with a project they can work on

This Workshop is For

Front-end developers who want to **spend less time**
setting up their back-end infrastructure



I want to **concentrate** on
the **UI/UX** of my project!

Today's Agenda

- 1 Get the Big Picture**
- 2 Create a Kintone App**
- 3 Display amCharts on Kintone**
- 4 Call REST APIs from Kintone**

Today's Agenda

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Scope of Traditional Data Analytics

Nearly all conversations about Data Analytics revolve around three goals:

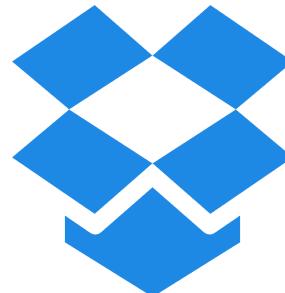
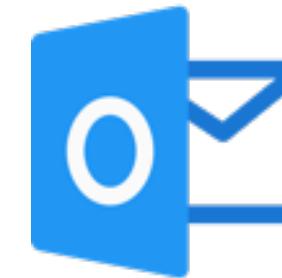
- Make data look pretty
- Understand the data easily
- Generate actionable insight

But are we **sharing** the insights effectively?



Where did
that file go?

Missing - Unified Communication



Missing - Unified Communication

Data Silos

Information is not being shared effectively

Scattered Communication
Unclear where the conversation is happening

Where Kintone is Special!



What is Kintone?

The screenshot displays the Kintone interface with several panels:

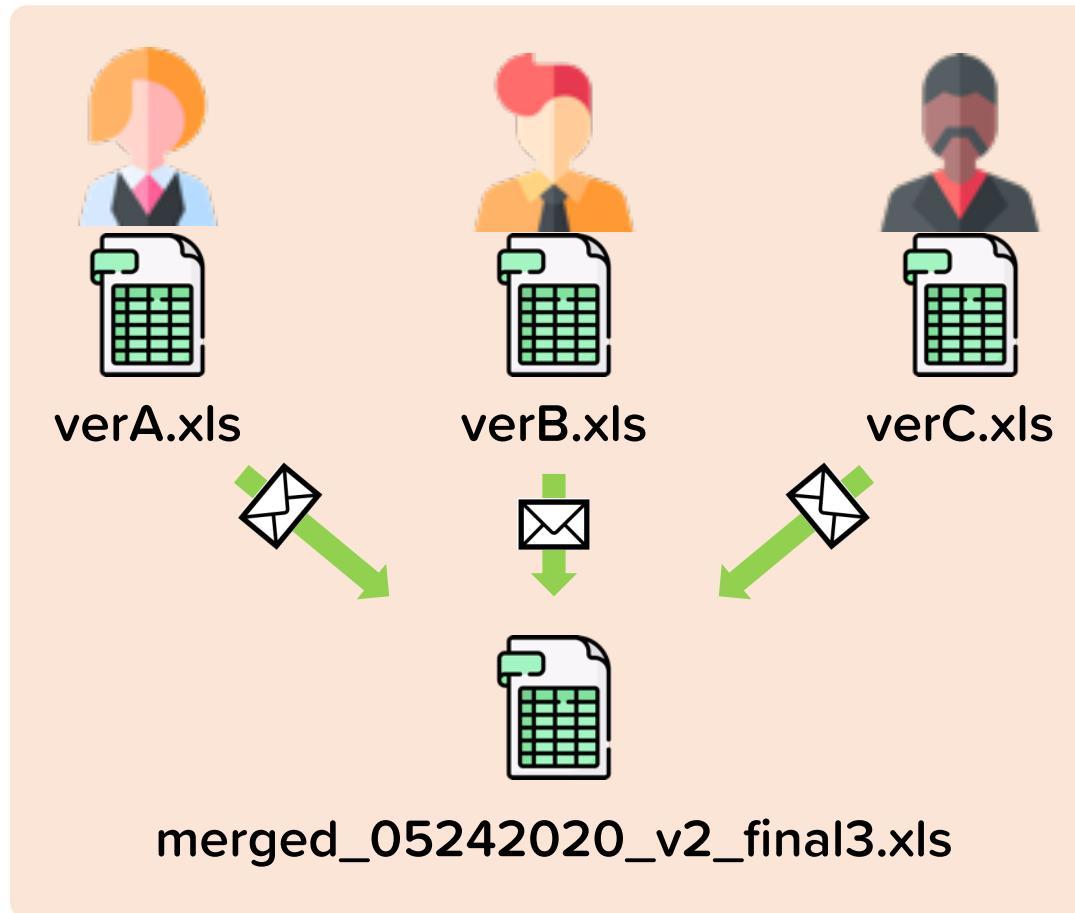
- Customer Database:** Shows a grid with three items: Admin:Green, Admin:Green, and Admin:Green.
- Sales Leads:** Shows a grid with three items: Admin:Green, Admin:Green, and Admin:Green.
- Contact Log:** Shows a grid with three items: Admin:Green, Admin:Green, and Admin:Green.
- Threads:** A list of threads: Deal Flow (Apr 3 11:24 AM), Sales Division (Apr 1 11:49 PM), and Monthly Reports (Apr 1 11:45 PM).
- Apps:** A list of applications: Vendor Database, Item Database, [Of] Product List, [Of] Invoices, [Of] Seminar Survey, [Of] Attendee Lists, [Of] Event Calendar, [Of] Activity Log, [Of] Sales Leads, and [Of] Customer Database.
- Dashboard:** Contains two charts:
 - A bar chart titled "Sales Leads: Monthly Expected Sales (per priority)" showing sales for Middle, High, and Low priorities over time.
 - A pie chart titled "Total(Amount)" showing the distribution of total amount among different categories: Int Creator (\$4202, 30.1%), T/C (\$1950, 14.0%), Viewer (\$1440, 10.3%), Form Creator (\$630, 4.5%), and kintone (\$5718, 41.0%).
- People:** A list of members: Hiroko ..., Mary Si..., John S..., Rudy Red, Polly Pink, Bill Blue, Glen Gr..., Paul Gray, Mark Pe..., Dannie ...

At the bottom left, it says "Apr 1 10:43 PM Mary Simpson".

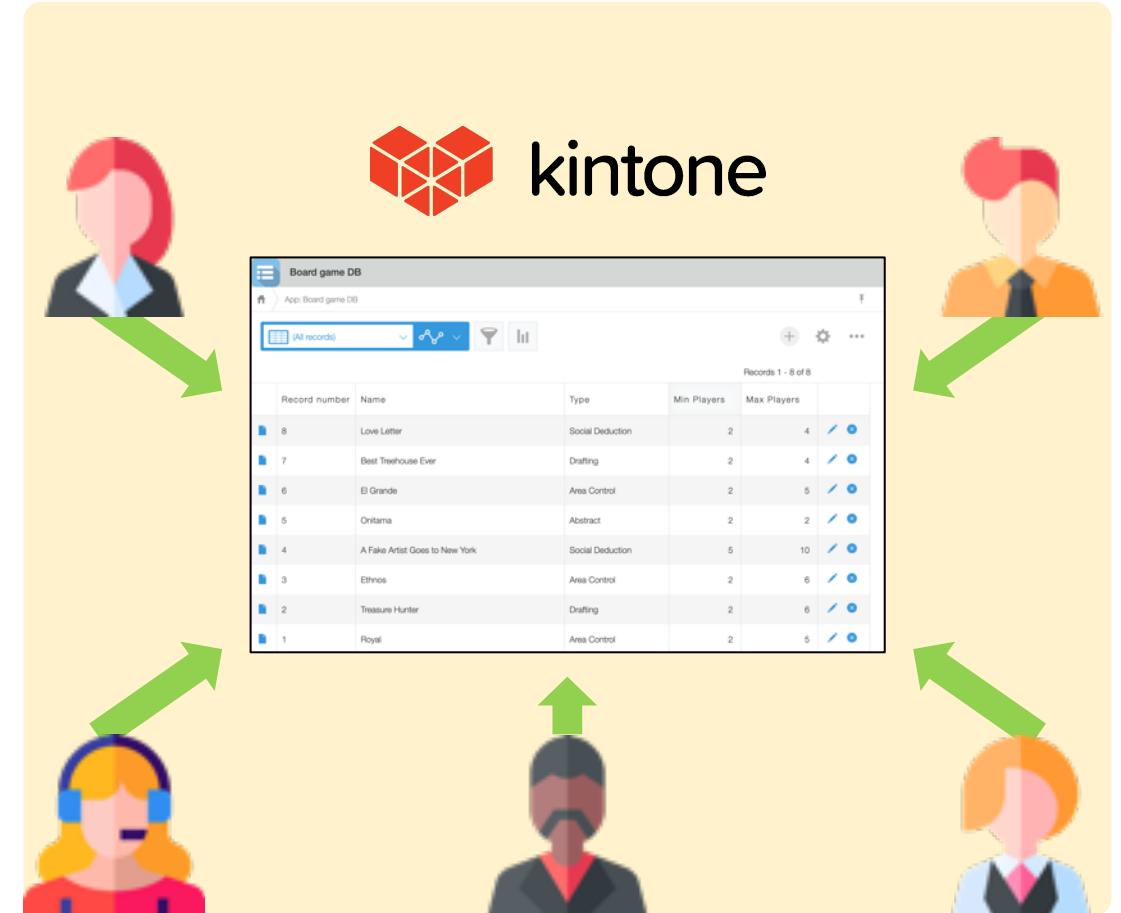
Kintone is a **no-code / low-code** cloud platform for teams to easily share and **collaborate** on their **data** efficiently.

Sharing Data With Teams Is Easier

When sharing data is hard

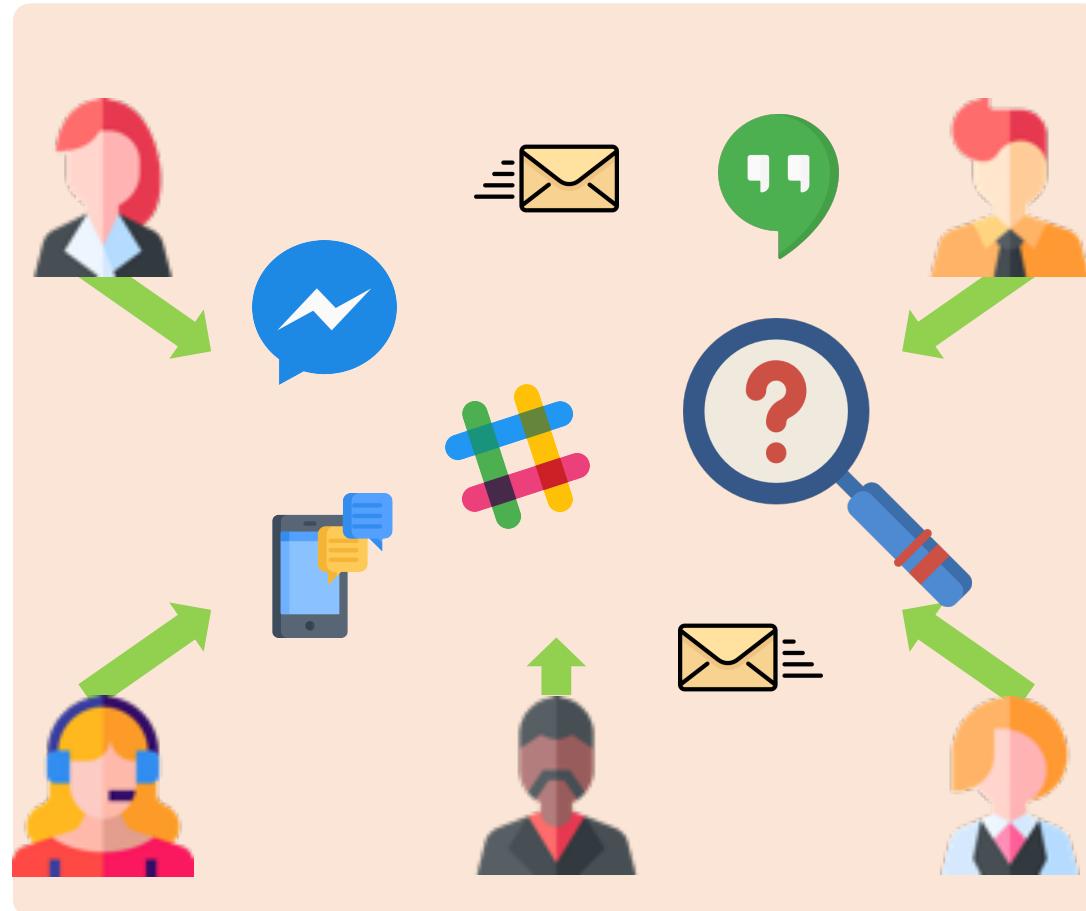


When sharing data is easy



Keep Your Conversations Accessible

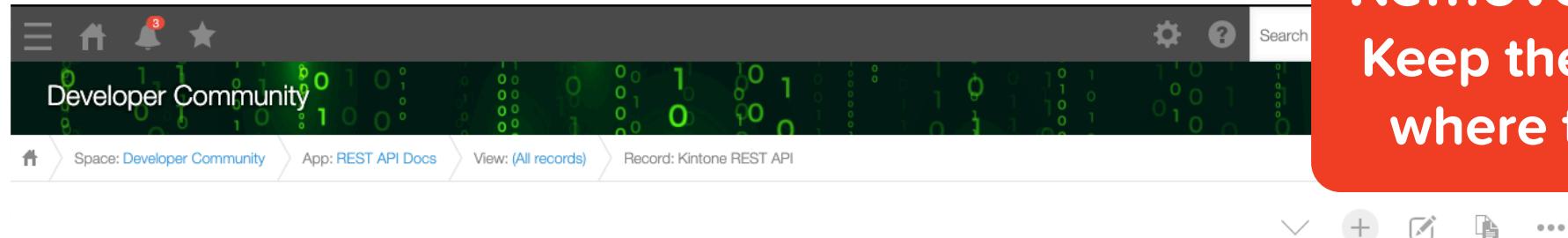
When communicating is hard



When sharing data is easy



What is Possible?



Remove the Friction
Keep the conversation
where the data lives

Where
Data
Lives

A screenshot of the REST API Docs app. It shows fields for EN Section (API Info), EN API Group (Kintone REST API), and EN Method (GET). Below these are fields for EN API Name (Get API Schema), EN URL (Endpoint) (/k/v1/apis/*.json), and EN Article Link (<https://developer.kintone.io/hc/en-us/articles/115006107628>). A 'Fix History' section contains a table comparing 'Before' and 'After' states of a document page, with a note about fixing the GET API List API link and adding apis.{key}.link.

A screenshot of a communication feed. It shows a comment from '3: Clare - Support' (@Sharon - Developer @Genji) stating 'Done!' with a 'Like' and 'Reply' button. Below it is a reply from '2: Sharon - Developer' (@Genji) saying 'Oh, shoot, thanks for catching my mistake!'. Another message from '@Clare - Support' asks to fix the GET API List API link. Finally, '1: Genji' (@Clare - Support) asks to take a look at a document. The entire feed is framed by a red border.

Where
Communication
Lives

What is Possible?

Workflow
Loop the right
people at the
right time

The screenshot shows a software interface for managing a project ticket. At the top, there's a navigation bar with icons for home, notifications (5), star, gear, question mark, and search ('Search in App'). Below the navigation, the space is 'Developer Community' and the app is 'KDP Event'. The view is 'Summary' and the record is 'No Server Data Visualization: Build a Word Cloud Data Project'. A modal window is open in the foreground, titled 'Assign Reporter' and 'Change Assignee'. It shows the current status as 'Writing Report' and a list of assignees: Genji, Sharon - Developer, John - Manager, and Clare - Support. Clare - Support is selected and highlighted with a blue border. Below the list are 'Cancel' and 'Confirm' buttons. The main area of the interface shows sections for 'Community', 'Data Project', 'Support', and 'Event Image'. The 'Support' section lists the same four assignees. On the right side, there's a comment feed. The first comment is from 'John - Manager' (@Genji) on Aug 27, 2020, assigning the report writing to 'Clare - Support'. It has 1 unlike and a reply. The second comment is from 'Genji' (@Sharon - Developer) on Aug 27, 2020, thanking them for putting together a great workshop content! It also has a like and a reply.

Space: Developer Community App: KDP Event View: Summary Record: No Server Data Visualization: Build a Word Cloud Data Project

Assign Reporter Change Assignee

Next Status:
Writing Report

Select Assignee:

- Genji
- Sharon - Developer
- John - Manager
- Clare - Support

Cancel Confirm

Community

Data Project

Support

- Genji
- Sharon - Developer
- John - Manager
- Clare - Support

Event Image

No Server Data Visualization JS Build a Word Cloud!

Write your comment here.

2: John - Manager Aug 27, 2020 @Genji Assign this event's report writing to @Clare - Support

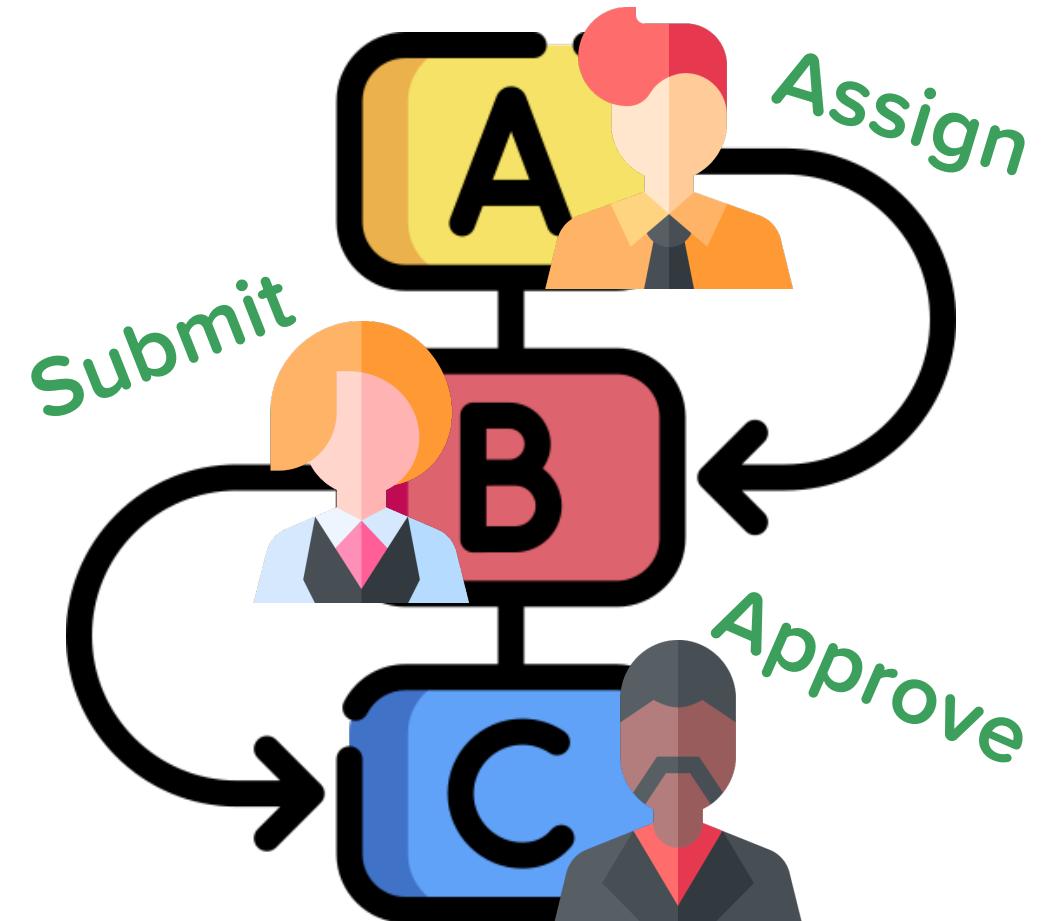
1: Genji Aug 27, 2020 @Sharon - Developer Thanking for putting together such a great workshop content!

Collaboration Done Right

With Process Management, establish a workflow so that the right people sees the right information at the right time.

Common uses:

- Expense report
- Legal document review
- Hiring process



Control the Data - Permissions

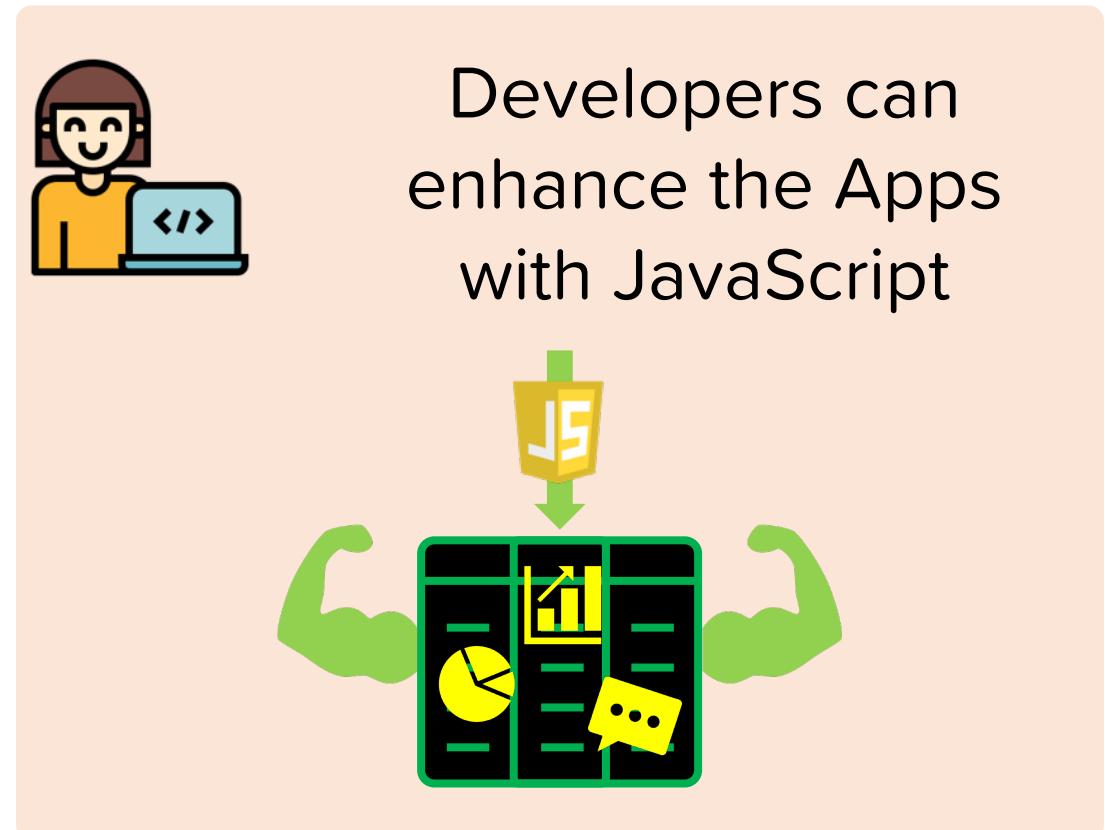
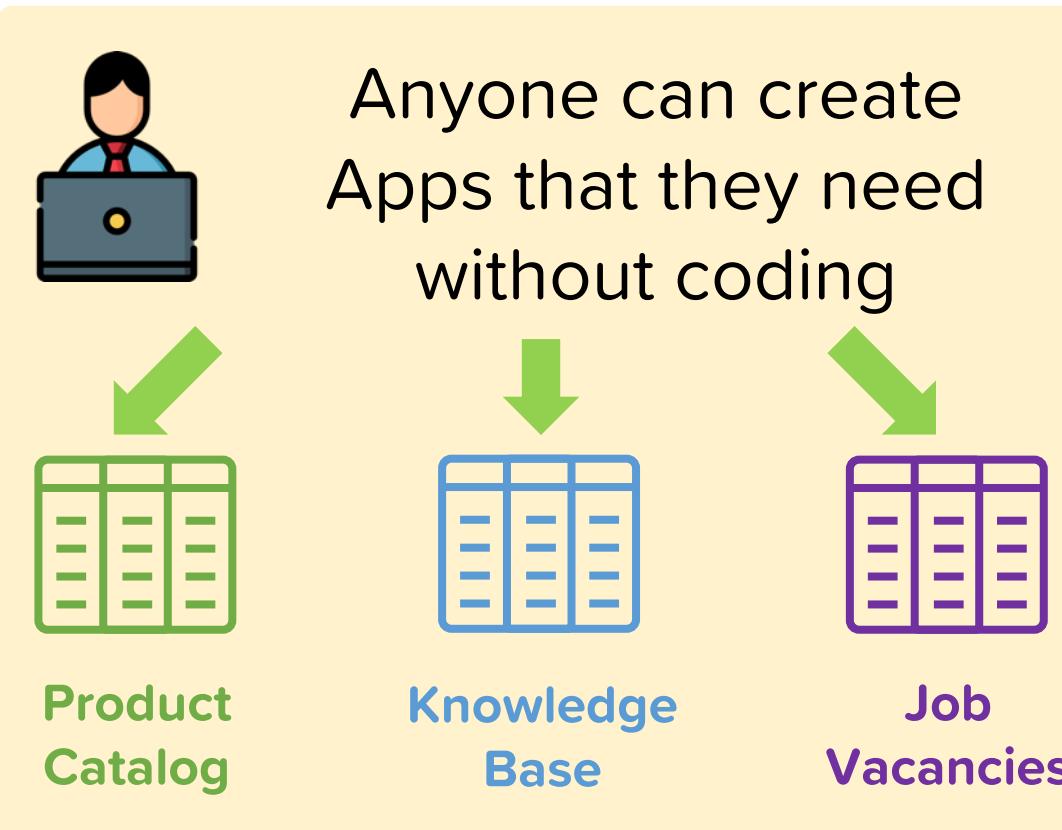
Control exactly who to share the data with. The granular permission controls can be configured to the Apps, the Records, or even at Field-by-field basis.

These permissions can be applied to individual Users, Groups, and or Departments.



Everyone Contributes!

As a **no-code & low-code platform**, Kintone supports non-coders with visual programming UI while enabling sophisticated customization



Kintone Apps

The screenshot shows the Kintone Shared To Do app interface. At the top, there's a navigation bar with icons for home, notifications (15), and search. Below it is a header bar with a gear icon, a refresh icon, a close button, and a search bar labeled "Search in App". The main title is "Shared To Do" and the subtitle is "App: Shared To Do". A descriptive text block states: "To Do App with Process Management feature. All tasks assigned to you can be viewed under 'Assigned to me' section on the portal page. Always be organized and on time by setting up reminders and visualizing team's progress through snazzy graphs." Below this is a toolbar with buttons for "My To Do" (selected), a graph icon, a funnel icon, and a list icon. On the right side of the toolbar are buttons for "+", settings, and three dots. The main area displays a table titled "Records 1 - 5 of 5". The columns are: To Do, Priority, Due date, Status, Details, and Attachment. The data rows are:

To Do	Priority	Due date	Status	Details	Attachment
Define requirements	Medium	Apr 05, 2019	In progress	Please start defining the requirements for our ne...	/x
Research vendors	Medium	Apr 08, 2019	Complete	Find at least 3 vendors and summarize their pro...	/x
Send invoice to customer	High	Apr 11, 2019	Assigned		/x
Define scope	Low	Apr 12, 2019	Assigned	XYZ Project would be a long project divided into...	/x
Map out schedule	Low	Apr 19, 2019	Assigned		/x

At the bottom of the table area, it says "Records 1 - 5 of 5".

The main building block in Kintone is an **App**.

Imagine an **App** as a powerful, online table where data is stored in records.

Kintone Apps

Sales & Leads > Settings

Last Updated: Mary Simpson 12:10 AM

Sales & Leads

Form Views Graphs App Settings

Save Form

Leads & Sales

Lead Title Sales Representative

Contact Info

Company Name Website

Contact Name Job Title

Email Telephone Number

Product Name Product ID Unit Price Quantity

The screenshot shows the Kintone app builder interface for a 'Sales & Leads' application. The top navigation bar includes 'Sales & Leads > Settings' and a timestamp 'Last Updated: Mary Simpson 12:10 AM'. Below the title, there are tabs for 'Form', 'Views', 'Graphs', and 'App Settings', with 'App Settings' currently selected. A green button labeled 'Save Form' is visible. The main area displays a form titled 'Leads & Sales' with fields for 'Lead Title' and 'Sales Representative'. Under the 'Contact Info' section, there are fields for 'Company Name' and 'Website', each with a 'Lookup' and 'Clear' button. Below that, there are fields for 'Contact Name' and 'Job Title'. At the bottom of the form, there are fields for 'Email' and 'Telephone Number'. A footer row contains columns for 'Product Name', 'Product ID', 'Unit Price', and 'Quantity'.

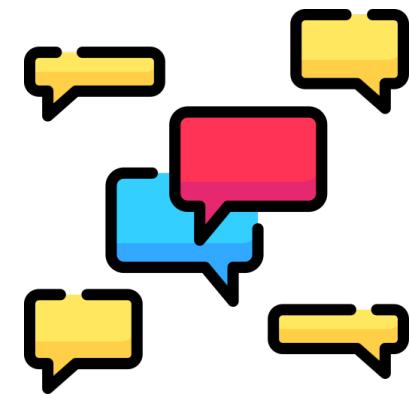
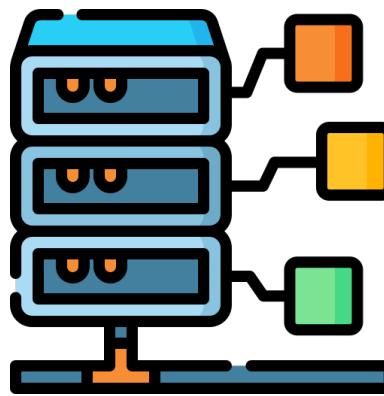
Apps are easy to **create** using a **drag-and-drop** interface with no coding needed.

Apps are extensively **customizable** with client-side **JavaScript**.

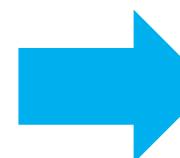
Fulfill the Promise of Data Analytics

Gain meaningful insights about the data that become operationalized quickly.

Data + Communication



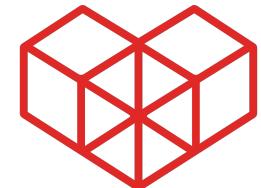
Insight



Action



How Developers Contribute

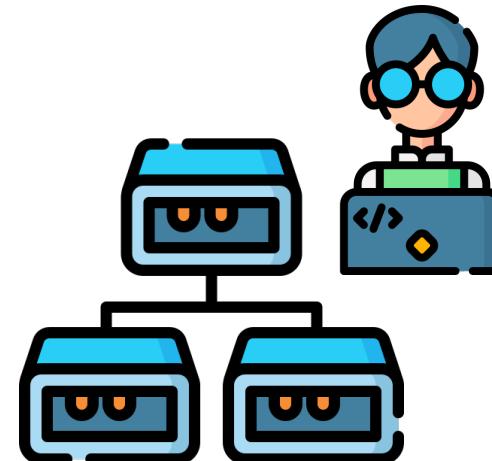


kintone
developer program

How Developers Contribute

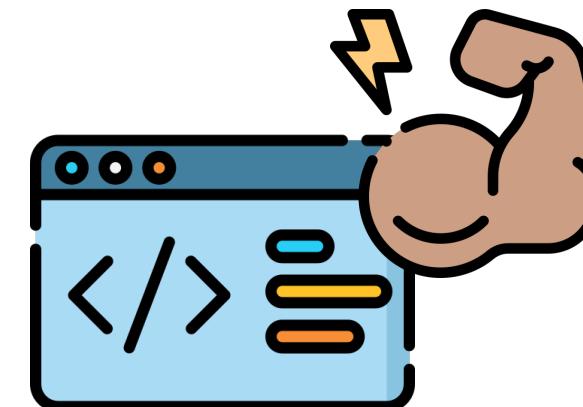
Command Center

- Create a custom look & feel
- Integrate with 3rd party web applications to exchange data



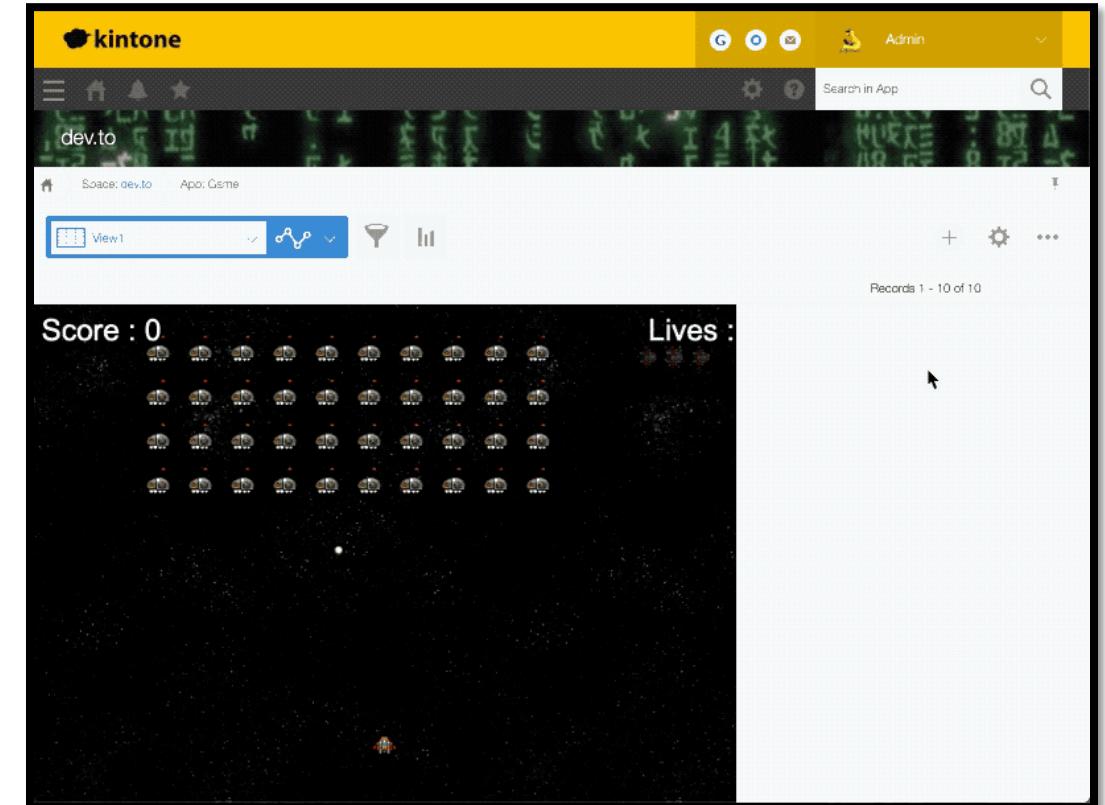
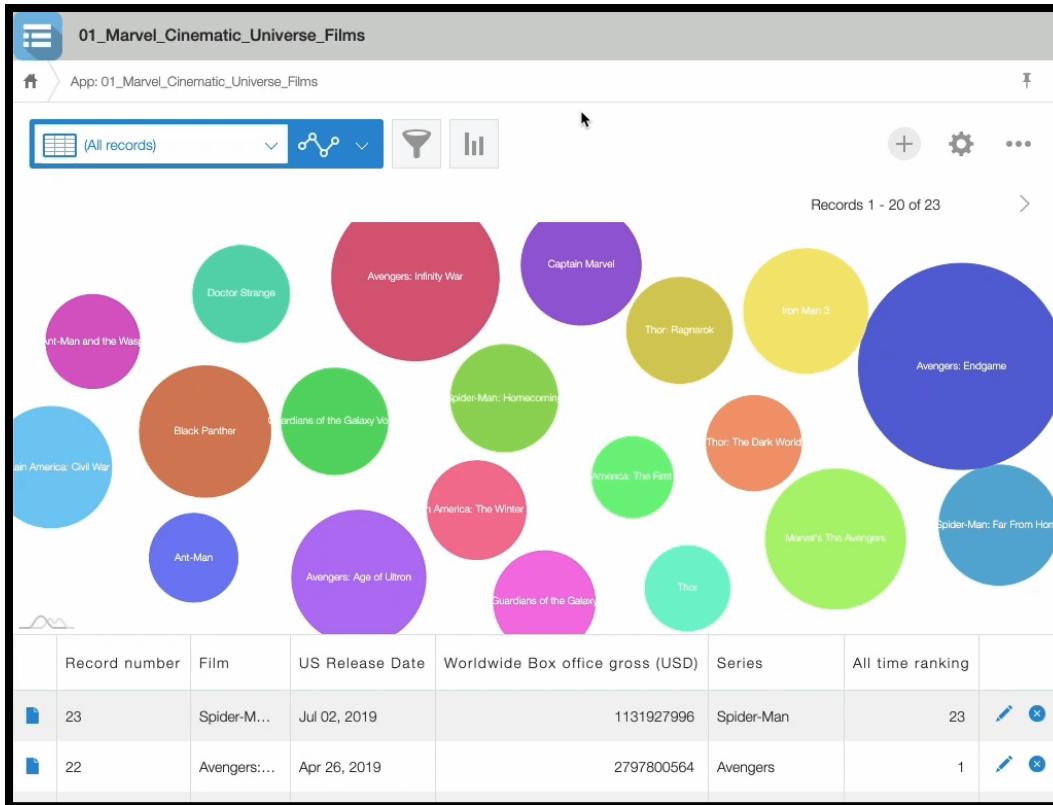
Enhancements

- Develop JavaScript customizations
- Build & share extensions



Create a Custom Look and Feel

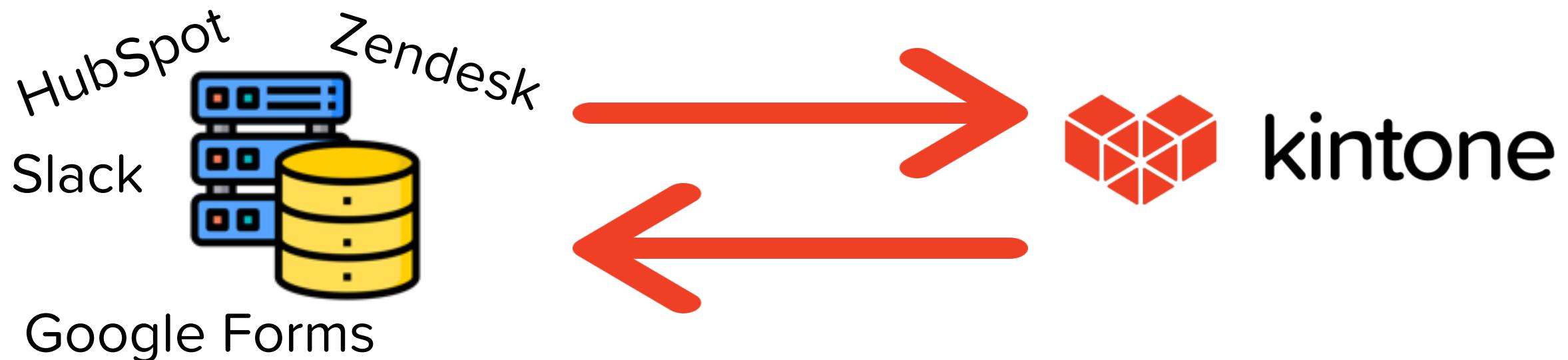
Display data the way you want with HTML, JS, and CSS



Integrate with 3rd Party Web Applications

Have all your business platforms **talk with Kintone!**

Call Kintone's REST APIs to create, read, and update data within Kintone Apps.



Integrate with 3rd Party Web Applications

Kintone can **talk with other apps** and servers!

Send data to an external server through **outbound webhooks** whenever records are created, updated, deleted, moved along in a workflow, or commented on.



```
"id": "01234567-012389ab",
"type": "ADD_RECORD",
"app": {
  "id": "1",
  "name": "Project management"
}
```

Record Data



Integrate with 3rd Party Web Applications

Integrate with 3rd parties **securely!**

API Tokens can be generated to grant access to each Kintone App with limited permissions.



Board game DB

App: Board game DB

(All records) Filter Chart

Records 1 - 8 of 8

Record number	Name	Type	Min Players	Max Players	Actions
8	Love Letter	Social Deduction	2	4	
7	Best Treehouse Ever	Drafting	2	4	
6	El Grande	Area Control	2	5	
5	Onitama	Abstract	2	2	
4	A Fake Artist Goes to New York	Social Deduction	5	10	

Share Your Enhancements With Non-coders

Plug-ins are custom JavaScript and CSS packages that business users can install and configure themselves.

Category:
Plug-in

Date input button Plug-in



Details
Version: 1

Date Field *
Select a date field where the date will be inserted into.

Submission date

Button Space Field *
Select a Blank space field where the button will be displayed.
Blank space fields must have their Element IDs set in the Form settings.

space_for_button

Title

Submission date

Product Feature Apps Spaces People

Assignee

Kintone For Self Learning



Keep learning new
JavaScript tricks!

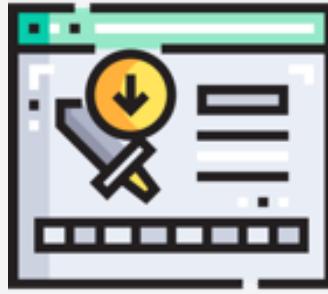


Contribute your
learnings to tech
blogs



Share your
projects with your
community!

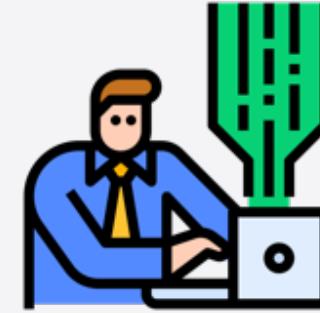
Kintone For Creating Revenue



Create & sell
Kintone
extensions



Consult with firms
on achieving
business goals



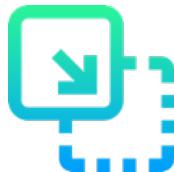
Develop Kintone
customizations for
customers

How Is This Related to Building Projects With No Servers?

Kintone will:



become your server running your database



let you create your databases with GUI



allow you to concentrate on the front-end work

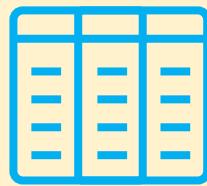
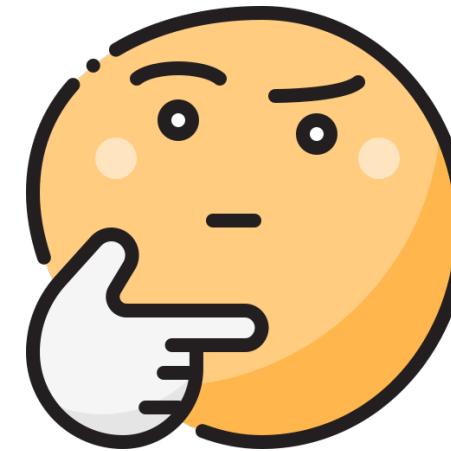
Today's Agenda

- 1 Get the Big Picture**
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- 3 Display amCharts on Kintone**
- 4 Call REST APIs from Kintone**

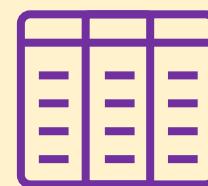
Zoom Poll enters you
into the first
**\$100 Amazon Gift
Card Raffle!**

Let's Create a Kintone App! (A Database)

What sort of database shall we make?



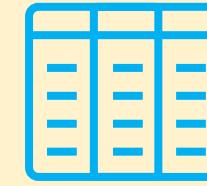
Employee List



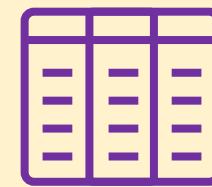
CRM



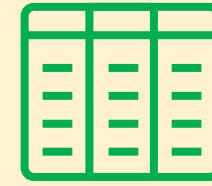
Expense Report



Company FAQ



Board Game DB



Lunch DB

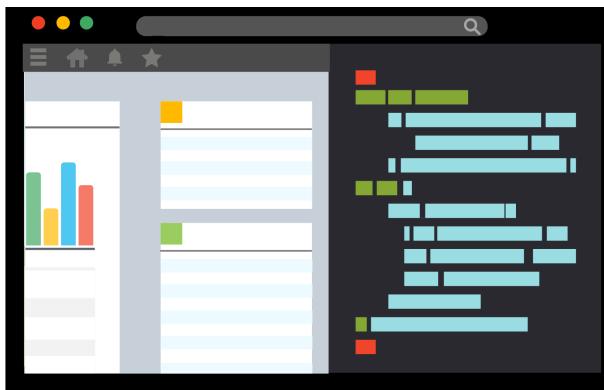


Hands-On Walk-Through

- 1** First, let's go over the steps to build the app
- 2** Then, build the app as an exercise



Sign Up for a Developer License



Get a free Kintone environment
by signing up here:

bit.ly/K_DevLic

Terms of Service for the Developer License

The account holder of this developer program who applies for the license (hereinafter referred to as "User") must comply with all of the provisions and the following conditions set out by Kintone Corporation (hereinafter referred to as "Kintone"), who will provide a Kintone developer license to the User.

[Kintone Developer License Terms of Service](#)

Developer License Application Form

First Name*

Last Name*

Email*

Company Name*

Create your Kintone Developer License subdomain (lowercase, numbers and hyphens only)*

For example: mydomain, coffee-lovers

I agree with the [Kintone Developer License Terms of Service](#)*

protected by reCAPTCHA

[Privacy](#) - [Terms](#)



[Sign Up](#)

Check Your Email



Welcome to Kintone! One More Step To...

The screenshot shows a Gmail inbox with one email. The subject is "Welcome to Kintone! One More Step to Developer License". The sender is "Will Sayama akihiro-sayama@cybozu.com via bf06x.hubspotemail.net to me". The email body contains an orange banner with the kintone logo and the text "ONE MORE STEP FOR YOUR DEVELOPER LICENSE!". Below the banner, there is a message: "Howdy! Please click the button below to activate your developer license and complete the sign-up process." followed by a red "Activate Now" button. At the bottom, it says "Only valid for 24 hours. Please click [here](#) if an error is displayed after the expiration. Your subdomain name is devevents2."

https://{{your_subdomain}}.kintone.com/

The screenshot shows a web browser window with the URL "https://{{your_subdomain}}.kintone.com/" in the address bar. The page title is "Set Initial Password". It has two input fields: "New Password" and "Confirm New Password". Below the "New Password" field is a note: "Enter minimum 8 characters, including both letters and numbers." At the bottom is a blue "Set Password" button.



Let's Log into Kintone

Click on Kintone button
on the Left side

[https://\[subdomain\].kintone.com/](https://[subdomain].kintone.com/)

Note: Details of your domain and log in
details should be in your email!

https://[subdomain].kintone.com/...

The screenshot shows the Kintone login interface. At the top, there is a navigation bar with the Kintone logo, a search bar, and user authentication fields for 'Username' and 'Password'. Below the navigation bar, there is a 'Notices' section with a message: 'Click to add users. User administration and login security settings are available.' In the center of the page, there are two main buttons: 'Administration' and 'kintone'. The 'kintone' button is highlighted with a red border and a red arrow points towards it from the left side of the screen. The 'Administration' button has a grey border.



Create a Kintone App (Web Database)

On the Left side of the
Portal

- > Find the **Apps** section
- > Click on the [+] button on the left side

The screenshot shows the Kintone Portal interface. On the left, there is a sidebar with sections for 'Announcement', 'Spaces', and 'Apps'. A red arrow points from the text 'On the Left side of the Portal' to the 'Announcement' section. A red box highlights the '+ Add New App' button in the 'Apps' section. The main content area displays the 'Welcome to Kintone!' dashboard, which includes sections for 'How to use Kintone', 'How to use the Announcements dashboard', and a timestamp of 'Aug 8, 2017 11:00 AM Administrator'. Below the main content are 'Notifications' and 'Unread' status indicators.



Create a Kintone App (Web Database)

Under the Create New App section, select the **Create App from Scratch** button

The screenshot shows the Kintone Marketplace interface. At the top, there's a navigation bar with the Kintone logo, user profile, and search bar. Below it, the main title is "Kintone Marketplace". On the left, there's a sidebar titled "By Department" with categories like Sales, Customer Service, Human Resources, IT & Administration, Research & Development, Marketing, Legal & Finance, and Company-wide. In the center, there's a section titled "How to Find Apps?" with instructions: "Click the left category names to look for apps in the Kintone Marketplace, or enter a keyword in the search box." Below this, there's a "Create New App" section with two buttons: "Create App from Scratch" (which is highlighted with a red arrow and a red box) and "Create from Excel".



Title Your Kintone App

This is the App Builder!

Let's start by naming
the new App!

Title it by clicking on
"New App" and type
Board Game DB

The screenshot shows the Kintone App Builder interface. At the top, there is a navigation bar with the Kintone logo, a user icon labeled 'Username', and a search bar. Below the navigation bar, the breadcrumb path reads 'Kintone Marketplace > Board Game DB > Settings'. A red arrow points to the app title 'Board Game DB' which is highlighted in a blue box. To the right of the title are two buttons: 'Discard' and 'Activate App'. Below the title, there is a navigation bar with tabs: 'Form', 'Views', 'Graphs', and 'App Settings'. The 'Form' tab is selected. On the left side, there is a green button labeled 'Save Form'. Below it is a grid of field types: Label, Rich text, Number, Radio button, Multi-choice, Date, Date and time, Text, Text area, Calculated, Check box, Drop-down, Time, and Attachment. To the right of the field grid, there is a large grey arrow pointing downwards with the text 'Drag and drop fields here.'.

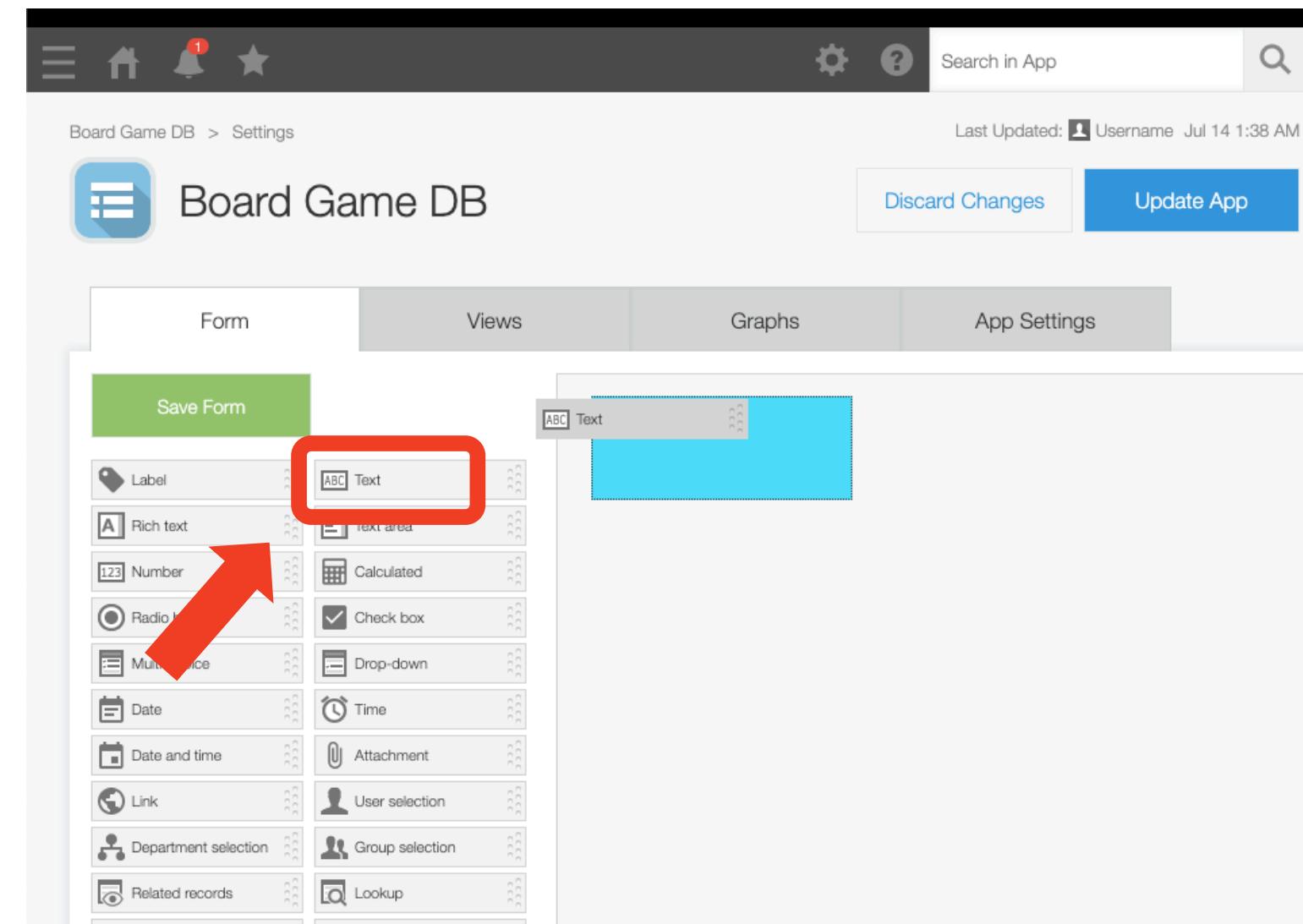


Drag and Drop the Text Field

Now let's add a **Text** field to the **Board Game DB** App!

On the Left side

- > Find the **[ABC] Text** field
- > Drag it to the middle



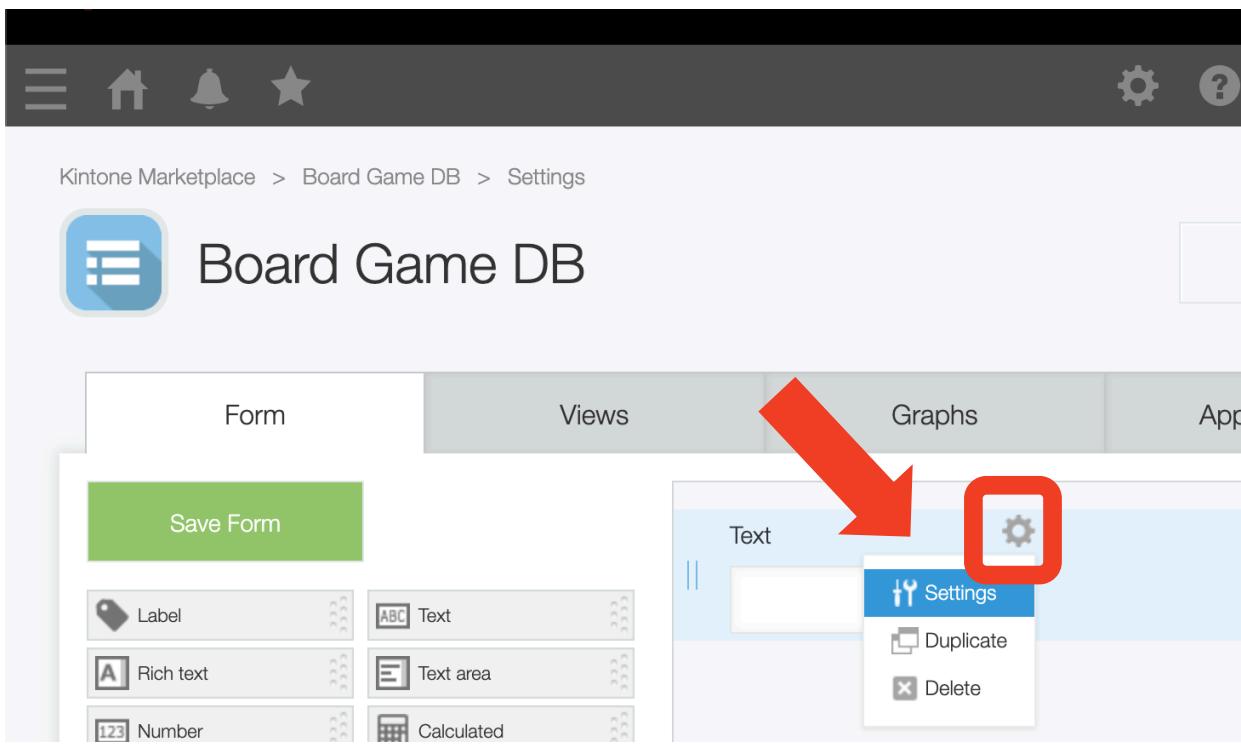


Configure the Text Field

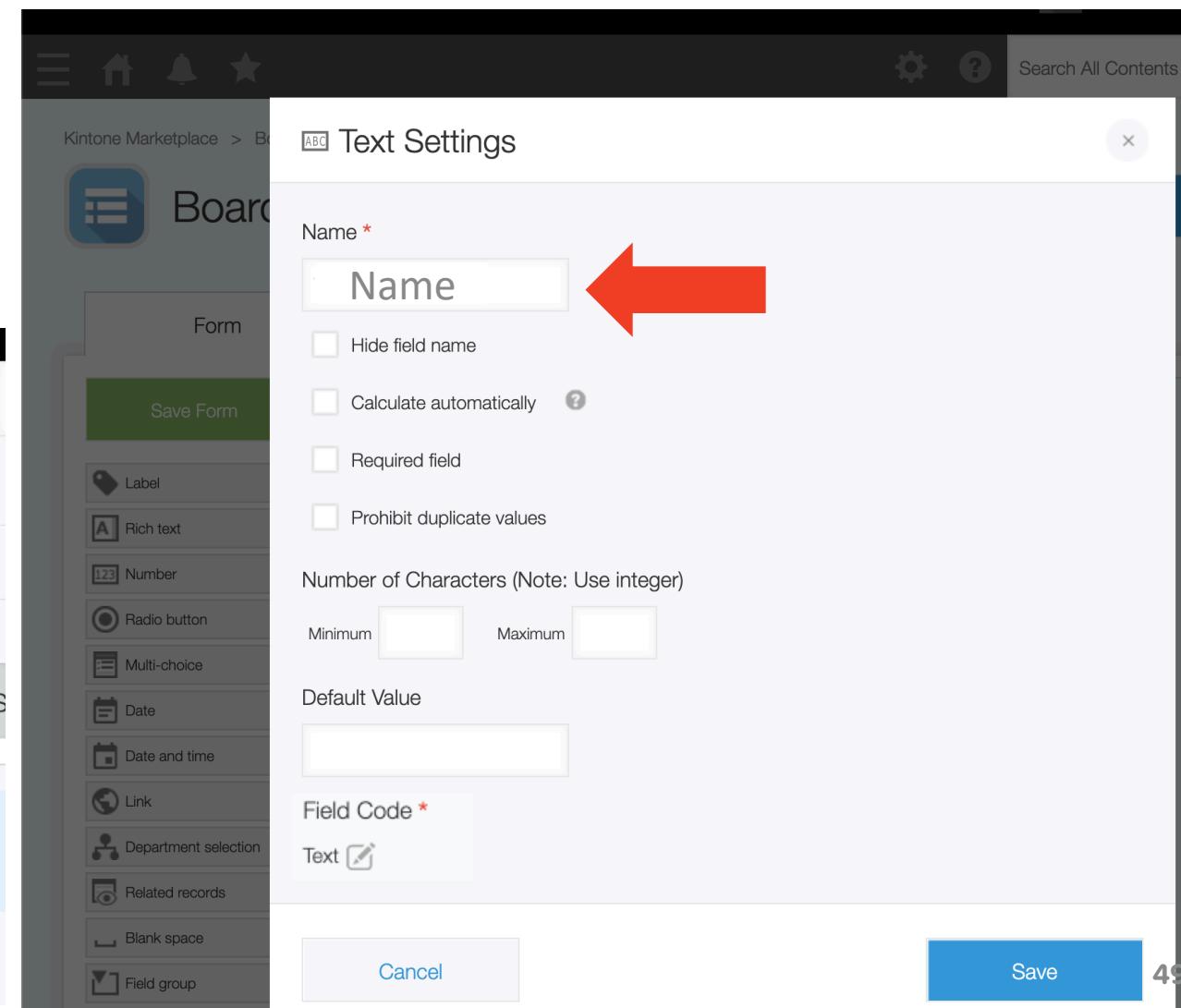
Hover over the [ABC] Text field

> Click on the Gear icon 

> Replace Text with Name



This screenshot shows the Kintone app settings interface. At the top, there's a navigation bar with icons for Home, Bell, and Star, followed by a gear icon and a question mark icon. Below the navigation bar, the path is shown as Kintone Marketplace > Board Game DB > Settings. The main title is "Board Game DB". There are tabs for Form, Views, Graphs, and App S. The "Form" tab is selected and has a green "Save Form" button. In the center, there's a list of field types: Label, Rich text, Number, Radio button, Multi-choice, Date, Date and time, Link, Department selection, Related records, Blank space, and Field group. A "Text" field is highlighted with a red arrow pointing to its gear icon. A context menu for the "Text" field is open, showing options: Settings (highlighted with a red box), Duplicate, and Delete.



This screenshot shows the "Text Settings" dialog box. At the top right, there's a close button (X) and a search bar labeled "Search All Contents". On the left, there's a sidebar with icons for Label, Rich text, Number, Radio button, Multi-choice, Date, Date and time, Link, Department selection, Related records, Blank space, and Field group. The main area is titled "ABC Text Settings". It has a "Name" input field with the value "Name" (highlighted with a red arrow), a checkbox for "Hide field name", and a checkbox for "Calculate automatically". Below these are checkboxes for "Required field" and "Prohibit duplicate values". There's also a section for "Number of Characters (Note: Use integer)" with "Minimum" and "Maximum" input fields. Under "Default Value", there's a text input field. At the bottom, there are "Field Code" and "Text" input fields, and buttons for "Cancel" and "Save".



Drag and Drop the Drop-down Field

let's add a **Drop-down** field
to the **Board Game DB**
App!

On the Left side

- > Find the **Drop-down** field
- > Drag it to the middle

The screenshot shows the 'Board Game DB' application interface. At the top, there is a navigation bar with icons for home, notifications (1), and search, followed by 'Search in App'. Below the notifications icon is a gear icon for settings and a question mark icon for help. To the right of the search bar, it says 'Last Updated: [User] Jul 14 1:38'. On the far right are 'Discard Changes' and 'Update App' buttons.

The main area is titled 'Board Game DB > Settings' and contains a sidebar with 'Form', 'Views', 'Graphs', and 'App Settings' tabs. The 'Form' tab is active. A green 'Save Form' button is visible. On the left, there is a list of field types: Label, Text, Rich text, Text area, Number, Calculated, Drop-down, Radio button, Check box, Multi-choice, Drop-down, Date, Time, Date and time, Attachment, Link, User selection, Department selection, Group selection, and Person selection. The 'Drop-down' field type is highlighted with a blue selection box. On the right, there is a 'Name' input field with a blue selection box around its placeholder text.



Configure the Drop-down field

Hover over the **Drop-down** field

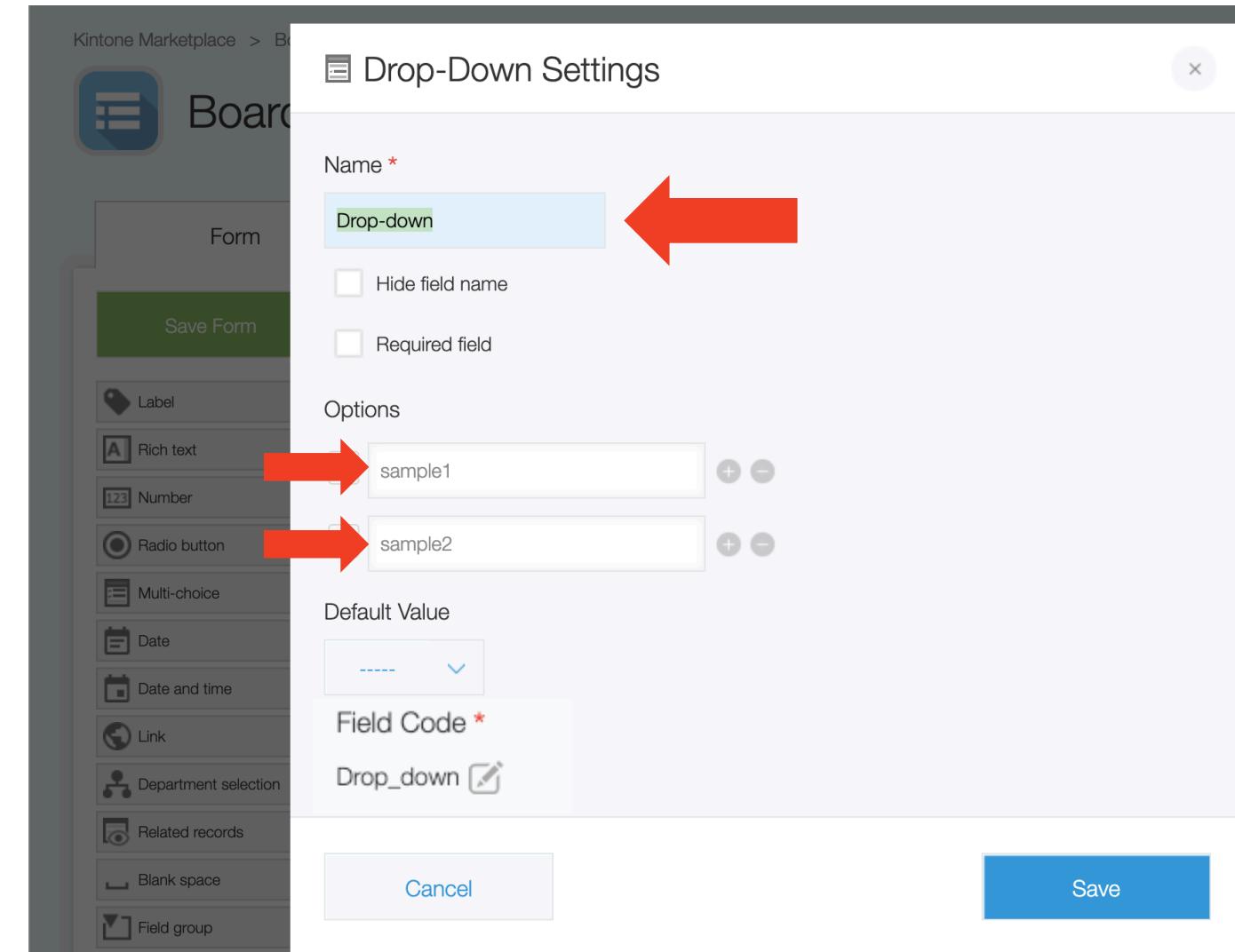
> Click on the Gear icon 

Replace the following text:

> "Drop-down" with **Type**

> "sample1" with **Abstract**

> "sample2" with **Area Control**





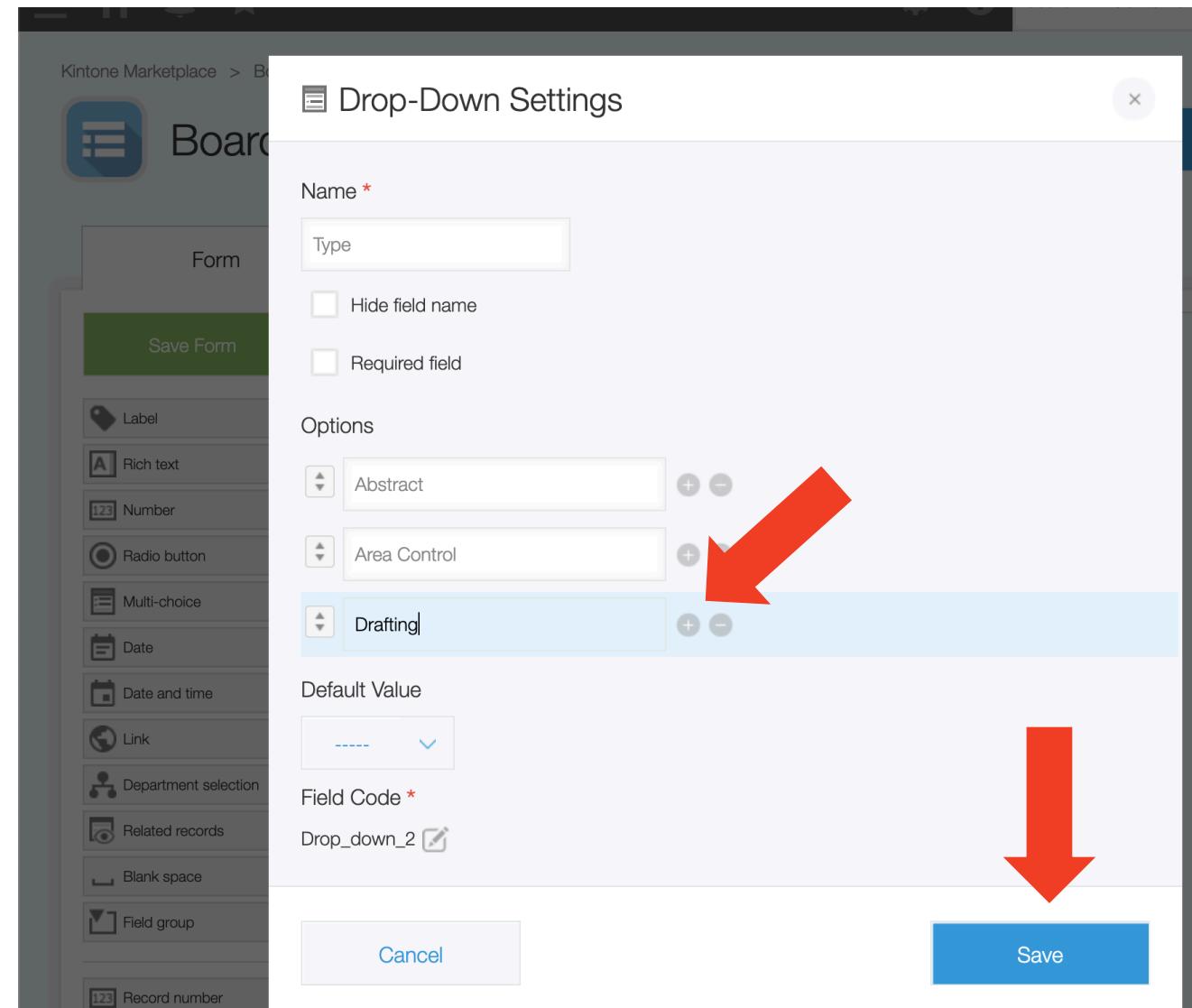
Configure the Drop-down field

Add another Options to the
Drop-down field

> Click on the (+) button next
to the second Options

Type **Drafting**

Then click Save

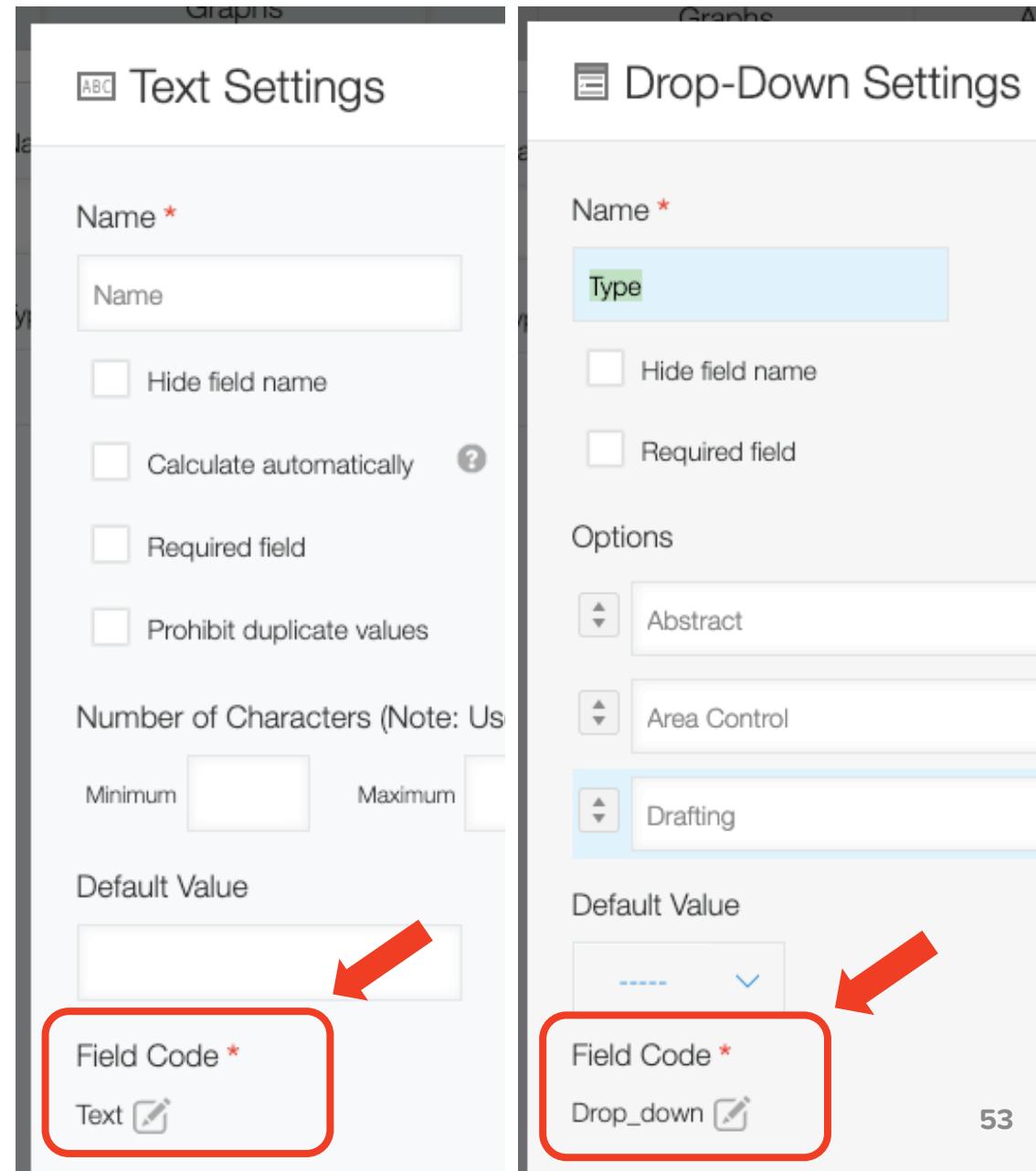


What are Field Codes?

The field code is the identifier for each field, represented as a string

- Name's field code = Text
- Type's field code = Drop_down

These are the default field code values for their respective fields





Save / Deploy the App!

Once you are finished setting up the fields, click **Activate App** to deploy it.

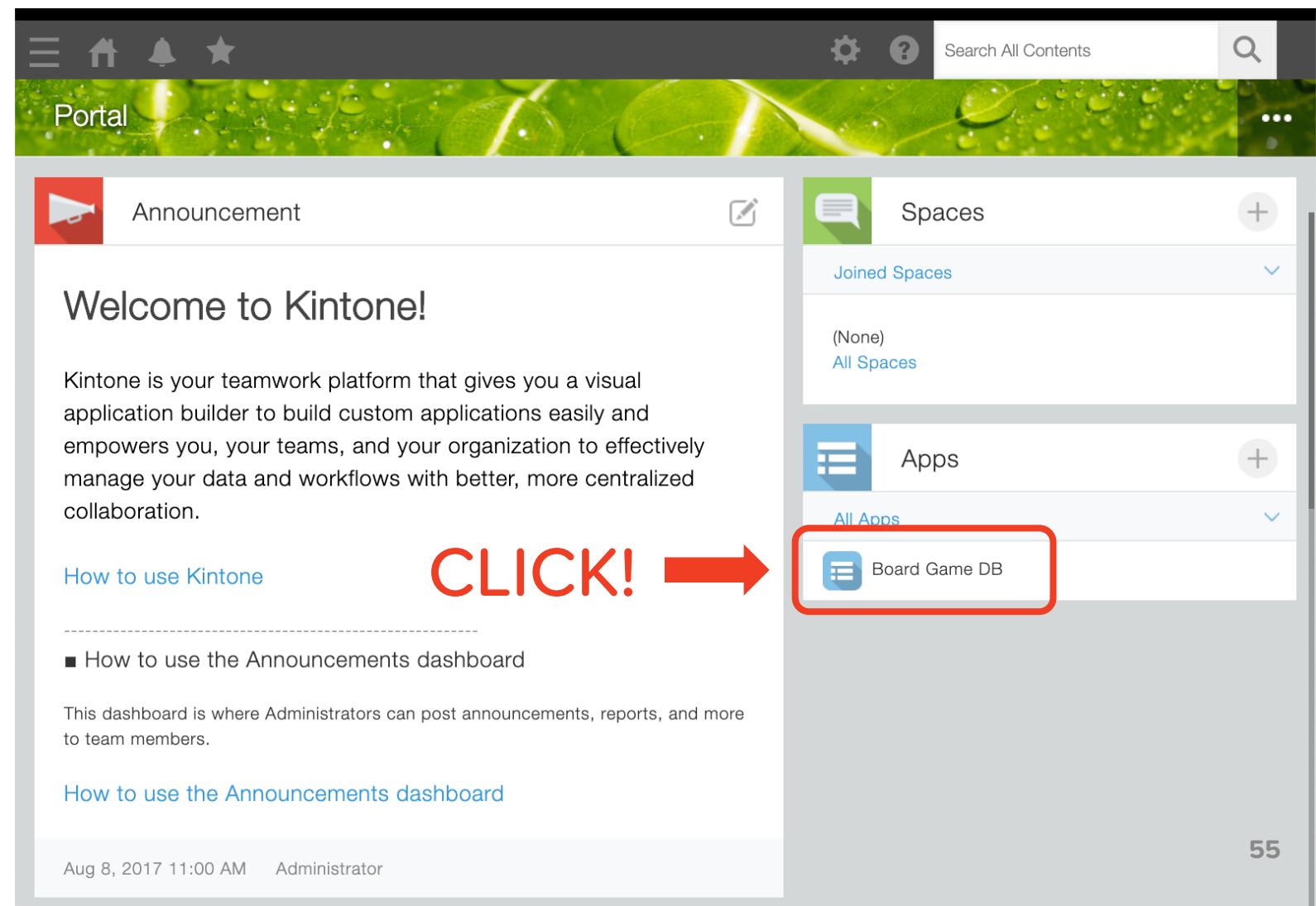
*Apps can always be updated later on

The screenshot shows the kintone application interface. At the top, there is a navigation bar with the kintone logo, user information (Username), and search functionality. Below the navigation bar, the breadcrumb path indicates the current location: Kintone Marketplace > Board Game DB > Settings. The main title "Board Game DB" is displayed next to a blue icon representing a database or form. On the right side of the screen, there are two buttons: "Discard" and "Activate App". A large red box highlights the "Activate App" button, and a red arrow points towards it from below. Below the title, there are four tabs: "Form", "Views", "Graphs", and "App Settings". The "App Settings" tab is currently selected. On the left, there is a green "Save Form" button. To its right is a grid of field types, each with a small icon and a delete icon. The field types listed are: Label, Text, Rich text, Text area, Number, Calculated, Radio button, Check box, Multi-choice, Drop-down, Date, Time, Date and time, and Attachment.

Record View of the Board Game DB

This **Board Game DB** App is now accessible to any users in your Kintone environment

It is under the **Apps** section





Record View of the Board Game DB

Congrats!

You made your first
Kintone App!

The screenshot shows the Kintone Record View interface for the "Board Game DB" application. The top navigation bar includes icons for Home, Bell, Star, Settings, Help, and a search bar labeled "Search in App". Below the header, the app title "Board Game DB" is displayed, along with a breadcrumb trail "App: Board Game DB". The main content area features a toolbar with filters, a search icon, and a chart icon. A message "Records 0 - 0 of 0" is shown above a table. The table has columns for "Record number", "Name", and "Type". A single row displays "(None)". Another message "Records 0 - 0 of 0" is located below the table.

Quick Overview of the App

The screenshot shows a Microsoft Power Apps application titled "Board game DB". The interface includes a navigation bar with a home icon and the app name, a search/filter bar with "All records" and other icons, and a table view of eight records. Each record has columns for Record number, Name, Type, Min Players, and Max Players, with edit and delete icons in the last column. A red box highlights the first two rows (records 7 and 8). A red line points from the text "Data you add to the App is listed here" to the top of this red box. Another red line points from the text "Access the App's settings" to the gear icon in the top right corner of the table header. A red line also points from the text "Add new data" to the plus sign icon in the top right corner of the table header.

Record number	Name	Type	Min Players	Max Players	
8	Love Letter	Social Deduction	2	4	
7	Best Treehouse Ever	Drafting	2	4	
6	El Grande	Area Control	2	5	
5	Onitama	Abstract	2	2	
4	A Fake Artist Goes to New York	Social Deduction	5	10	
3	Ethnos	Area Control	2	6	
2	Treasure Hunter	Drafting	2	6	
1	Royal	Area Control	2	5	

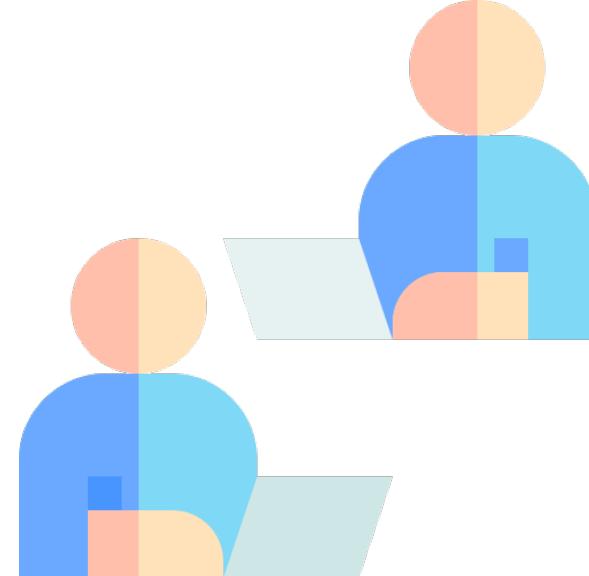
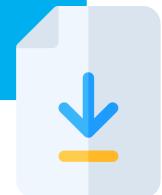


Time To Get Started!

1. Go to the Kintone Portal page
2. Apps section > (+) Button
3. Create App from Scratch
4. Drag-&-Drop the **Text field**, name it **Name**
5. Drag-&-Drop the **Drop-down field**, name it **Type**
6. Add 3x options {Abstract, Area Control, & Drafting}
7. Hit the Blue **Activate App**
8. Raise Hand on Zoom when you are done

Want the Slides?

Hit Download ZIP button at
bit.ly/KDP_PICT



**Want to Win a
\$25 Amazon
Gift Card?**

**Stay tuned till the
end & fill out our
quick survey**



**Short Break
10 min break**

Today's Agenda

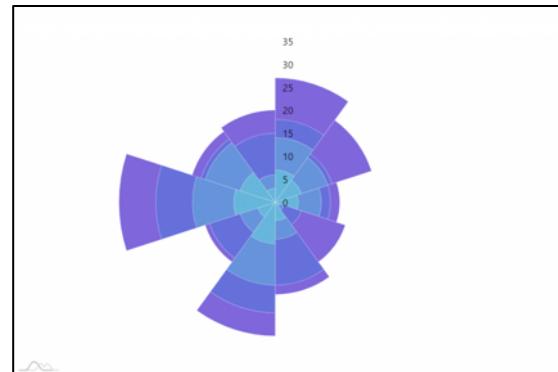
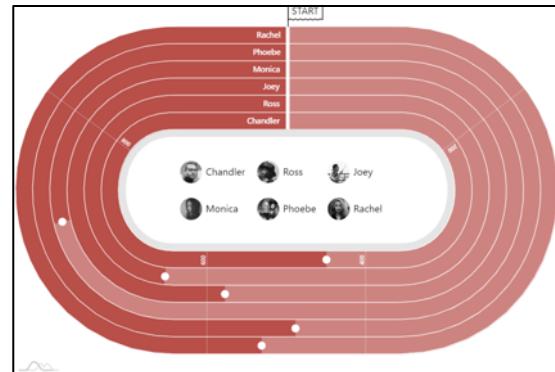
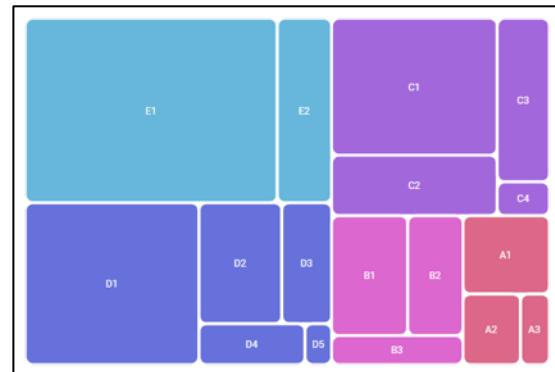
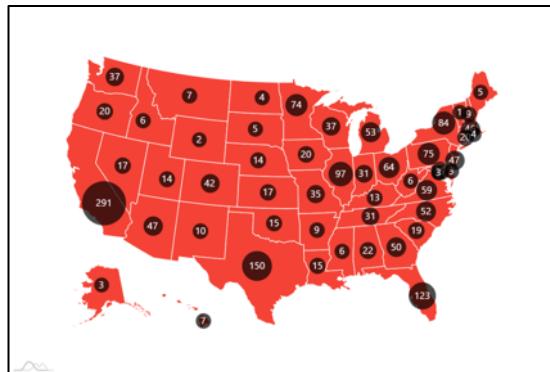
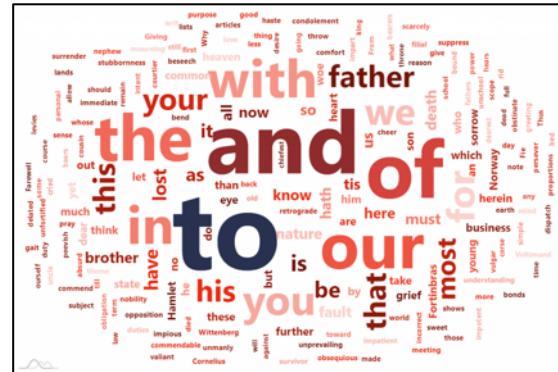
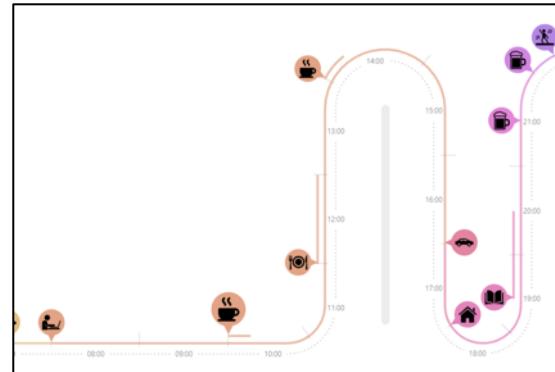
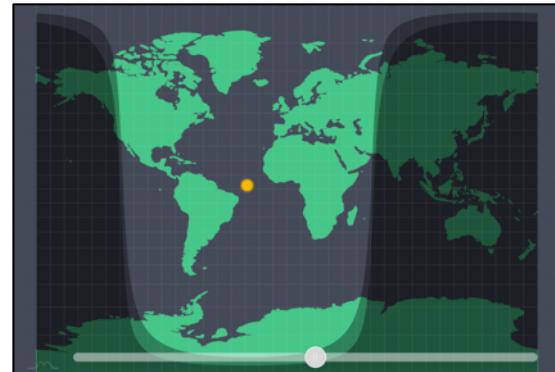
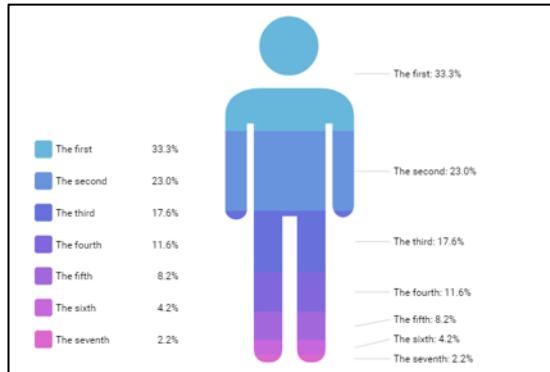
- 1 Get the Big Picture
- 2 Create a Kintone App
- 3 Display amCharts on Kintone
- 4 Call REST APIs from Kintone

What is amCharts?



www.amcharts.com

What Does amCharts Offer?



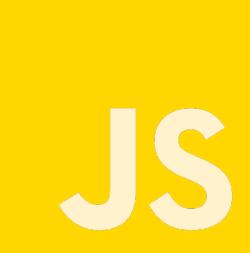
www.amcharts.com

How to Use amCharts (Front-End JavaScript)



Define website details

```
<html>
  <body>
    <h1>My Graph</h1>
    <div id="chartdiv"></div>
  </body>
</html>
```



Read libraries

```
<script src="https://www.amcharts.com/lib/4/core.js"></script>
<script src="https://www.amcharts.com/lib/4/charts.js"></script>
```

Define chart details

```
// Create chart instance
var chart = am4core.create("chartdiv", am4charts.PieChart);
// Add and configure Series
var pieSeries = chart.series.push(new am4charts.PieSeries());
pieSeries.dataFields.value = "litres";
pieSeries.dataFields.category = "country";
```

Define data

```
// Add data
chart.data = [ {
  "country": "Lithuania",
  "litres": 501.9
}, {
  "country": "Czechia",
  "litres": 301.9
}, {
  "country": "Ireland",
  "litres": 201.1
}]
```

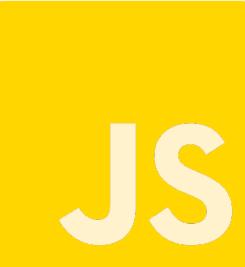
How to Use amCharts on Kintone?



Define website details

```
<html>
  <head>
    <title>My Graph</title>
  </head>
  <body>
    <div id="chartdiv"></div>
  </body>
</html>
```

We will use the Kintone platform's HTML



Read libraries

```
<script src="https://www.amcharts.com/lib/4/core.js"></script>
<script src="https://www.amcharts.com/lib/4/charts.js"></script>
```

We will set these links in the App's settings

Define chart details

```
// Create chart instance
var chart = am4core.create("chartdiv", am4charts.PieChart);
// Add and configure Series
var pieSeries = chart.series.push(new am4charts.PieSeries());
pieSeries.dataFields.value = "litres";
pieSeries.dataFields.category = "country";
```

Define data

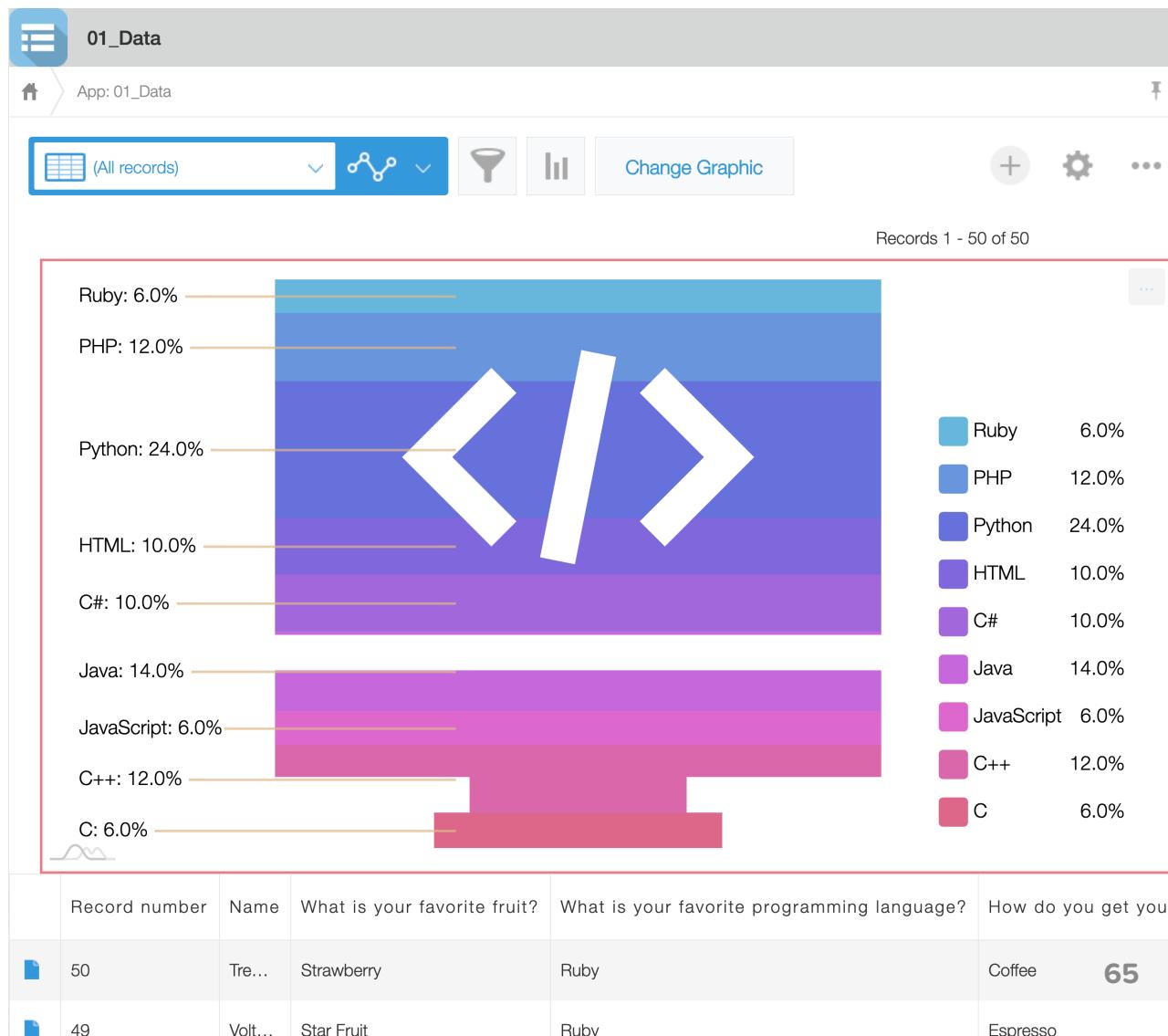
```
// Add data
chart.data = [
  {
    "country": "Ireland",
    "litres": 201.1
  },
  {
    "country": "Czechia",
    "litres": 301.9
  }
];
```

We will use the data that lies inside the Kintone Apps

Overview of amCharts on Kintone

In our next hands-on, we will create a new **App** from a **CSV** file.

We will then **add JavaScript** to the App that utilizes the **amCharts library**, so we can do some stylish data visualization.



Hands-On Walk-Through

- 1** First, let's go over the steps to build the app
- 2** Then, build the app as an exercise



amCharts Customization for Kintone

1. Create a new Kintone App from a CSV file
2. Add amCharts libraries to the App
3. Add a custom JavaScript file to the App
4. Redeploy the Kintone App

amCharts Customization for Kintone

- 1. Create a new Kintone App from a CSV file**
2. Add amCharts libraries to the App
3. Add a custom JavaScript file to the App
4. Redeploy the Kintone App



Create a new Kintone App from a CSV file

1. Get the CSV file from the Gist: bit.ly/KDP_PICT
2. Create a Kintone App:
Portal > [+] button
3. Select Create from CSV
4. Continue & Upload CSV...

The screenshot shows a Kintone application interface. At the top, there is a header with a file icon and the text '01_Data.csv'. A large red arrow points to this header. Below the header is a search bar with the placeholder 'Search this file...'. The main area displays a table with 10 rows of data. The columns are labeled 'Name', 'What is your favorite fruit?', and 'What is your favorite programming language?'. The data is as follows:

1	Name	What is your favorite fruit?	What is your favorite programming language?
2	Sonsing	Date	C#
3	Tempsoft	Star Fruit	Python
4	Hativity	Avocado	C++
5	Sonsing	Apricot	PHP
6	Stim	Blueberry	Ruby
7	Prodder	Date	C#
8	Cardguard	Blueberry	Java
9	Andalax	Date	C++
10	Mat Lam Tam	Apricot	Python



Create a new Kintone App from a CSV file

1. Get the CSV file from the Gist: [bit.ly/KDP_PICT](https://gist.github.com/kevinduval/bit.ly/KDP_PICT)
2. **Create a Kintone App:**
Portal > [+] button
3. Select Create from CSV
4. Continue & Upload CSV...

The screenshot shows the Kintone portal interface. At the top, there's a navigation bar with icons for home, search, and settings. Below it is a banner with a green leafy background. The main content area displays an announcement titled "Welcome to Kintone!" with a brief description of the platform. To the right, there's a sidebar with sections for "Spaces" (listing "Joined Spaces" and "All Spaces"), "Apps" (listing "All Apps" and "Board Game DB"), and a prominent red-highlighted "Create" button. A red arrow points to the "Create" button in the Apps section.



Create a new Kintone App from a CSV file

1. Get the CSV file from the Gist: [bit.ly/KDP_PICT](https://gist.github.com/PICT/1234567890)
2. Create a Kintone App:
Portal > [+] button
3. Select Create from CSV
4. Continue & Upload CSV

Kintone Marketplace

Marketplace Search

By Department

- Sales
- Customer Service
- Human Resources
- IT & Administration
- Research & Development
- Marketing
- Legal & Finance
- Company-wide

How to Find Apps?

Choose from the list of FREE business productivity apps or use our app builder to make your own app.

Click the left category names to look for apps in the Kintone Marketplace, or enter a keyword in the search box.

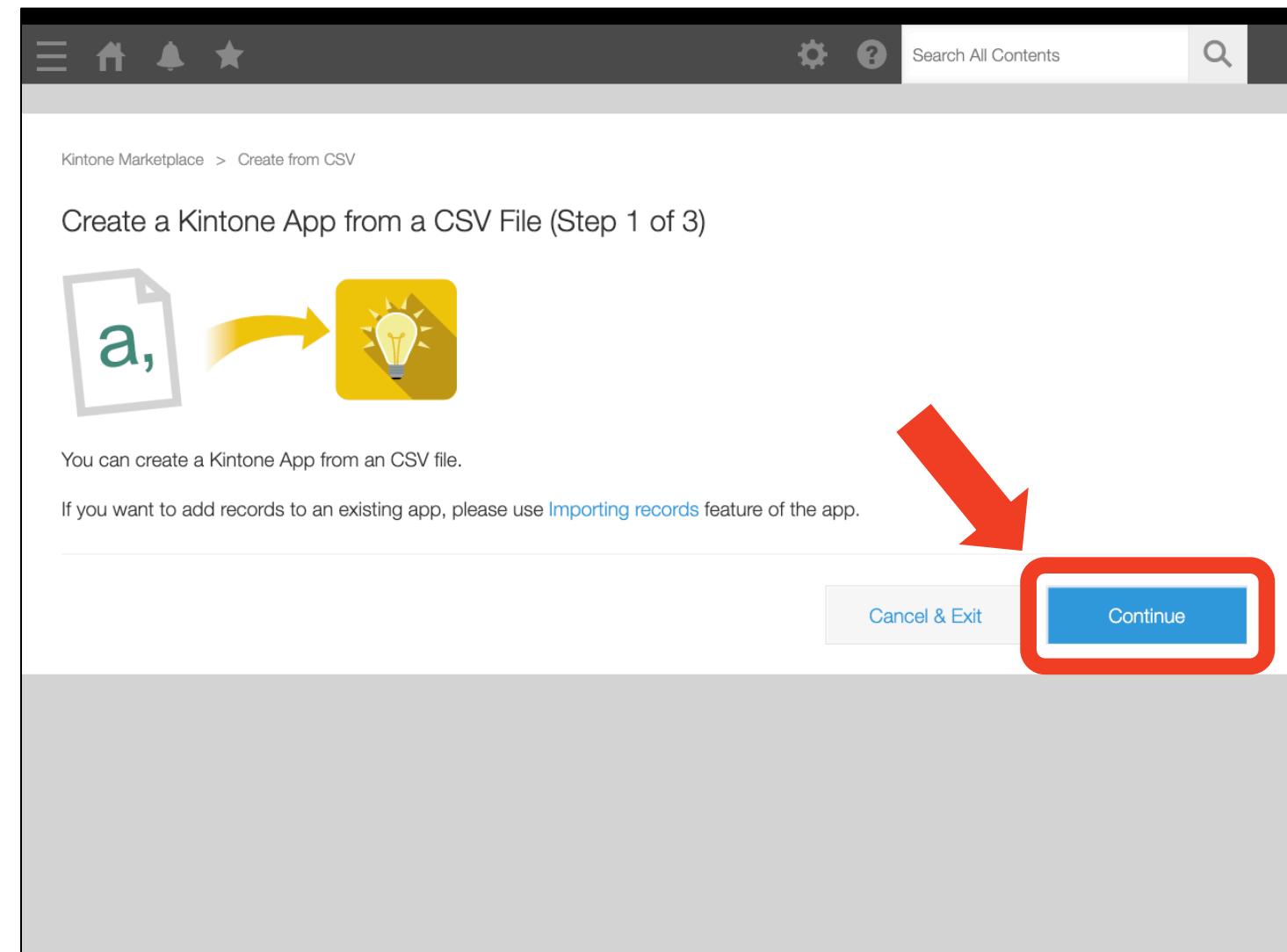
Create New App

- Create App from Scratch
- Create from CSV
- Create from Excel
- Create from Template File
- Create from Existing App



Create a new Kintone App from a CSV file

1. Get the CSV file from the Gist
2. Create a Kintone App
3. Select Create from CSV
4. Continue & Upload CSV
 - Continue button
 - Check all button
 - Continue to the Upload button
 - Upload the CSV file
 - Scroll down to the Convert button





Create a new Kintone App from a CSV file

1. Get the CSV file from the Gist
2. Create a Kintone App
3. Select Create from CSV

4. Continue & Upload CSV

- Continue button
- Check all button
- Continue to the Upload button
- Upload the CSV file
- Scroll down to the Convert button

Kintone Marketplace > Create from CSV

Prepare a CSV File (Step 2 of 3)

Open the CSV file and format the contents accordingly.

The first row contains the column names (at least one character, and no more than 128 characters). *

The number of columns (rows) must be 100 or less. *

The import file must contain no more than 100,000 rows. *

The file size must be 100 MB or smaller. *

[Check all](#)

Please refer to the [help](#) for details about how to prepare CSV files.

Cancel & Exit Back Continue to the Upload screen

	A	B	C	D
1	Contact Date	Department	Name	Age
2	12/01/17	Sales	Chris	35-44
3	12/01/17	Sales	Chris	35-44
4	12/01/17	Sales	Chris	35-44
5	12/01/17	Sales	Chris	35-44
6	12/01/17	Sales	Chris	35-44

Column name

Data (Maximum 100,000 rows)

Maximum 100 columns



Create a new Kintone App from a CSV file

1. Get the CSV file from the Gist
2. Create a Kintone App
3. Select Create from CSV
4. Continue & Upload CSV

- Continue button
- Check all button
- Continue to the Upload button
- Upload the CSV file
- Scroll down to the Convert button

Kintone Marketplace > Create from CSV

Prepare a CSV File (Step 2 of 3)

Open the CSV file and format the contents accordingly.

The first row contains the column names (at least one character, and no more than 128 characters). *

The number of columns (items) must be 100 or less. *

The import file contains no more than 100,000 rows. *

The file size must be 100 MB or smaller. *

[Check all](#)

Please refer to the [help](#) for details about how to prepare CSV files.

Cancel & Exit Back **Continue to the Upload screen**

	A	B	C	D
1	Contact Date	Department	Name	Age
2	12/01/17	Sales	Chris	35-44
3	12/01/17	Sales	Chris	35-44
4	12/01/17	Sales	Chris	35-44
5	12/01/17	Sales	Chris	35-44
6	12/01/17	Sales	Chris	35-44

Column name

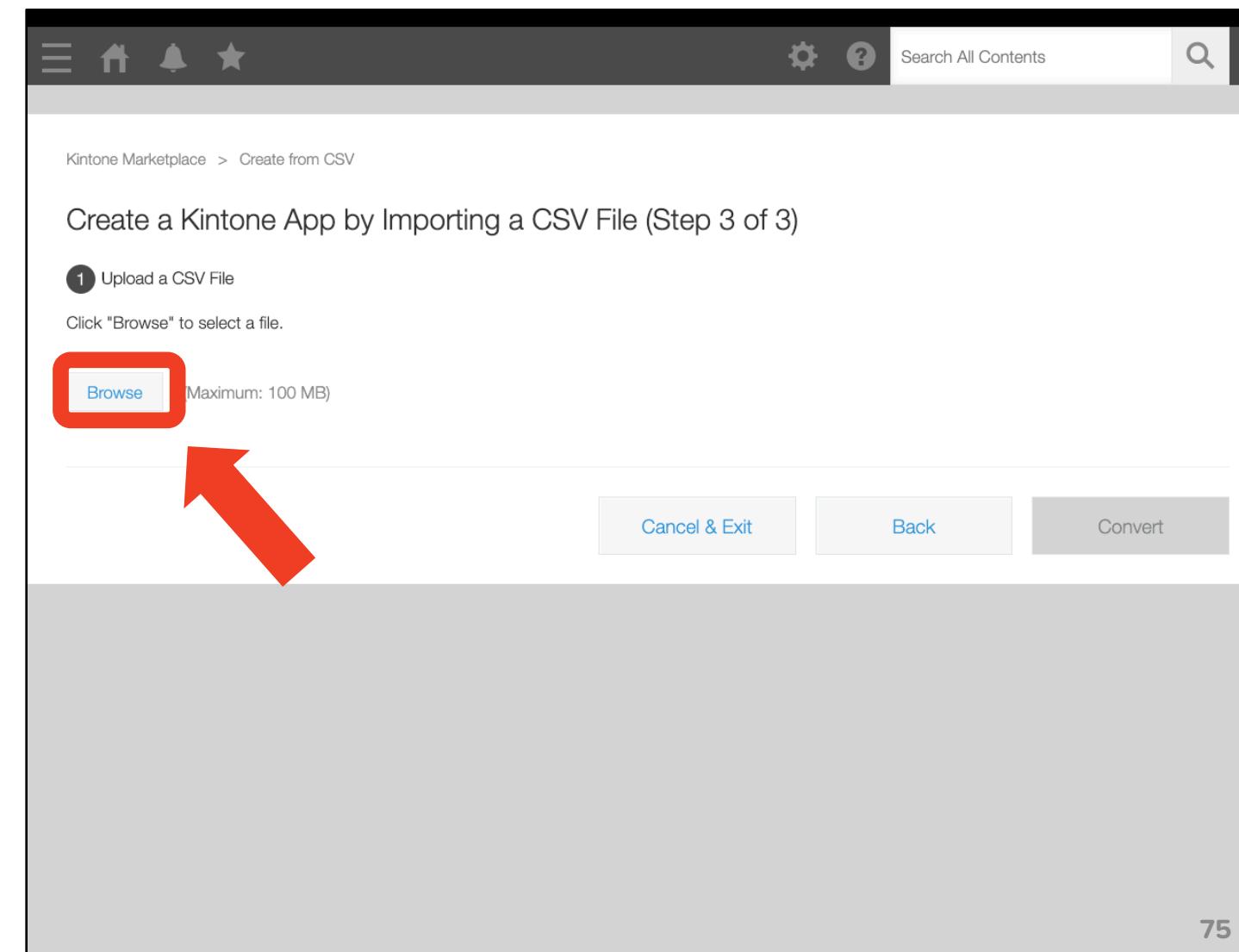
Data (Maximum 100,000 rows)

Maximum 100 columns



Create a new Kintone App from a CSV file

1. Get the CSV file from the Gist
2. Create a Kintone App
3. Select Create from CSV
4. Continue & Upload CSV
 - Continue button
 - Check all button
 - Continue to the Upload button
 - Upload the CSV file
 - Scroll down to the Convert button





Create a new Kintone App from a CSV file

1. Get the CSV file from the Gist
2. Create a Kintone App
3. Select Create from CSV
4. Continue & Upload CSV
 - Continue button
 - Check all button
 - Continue to the Upload button
 - Upload the CSV file
 - Scroll down to the Convert button

Kintone Marketplace > Create from CSV

Create a Kintone App by Importing a CSV File (Step 3 of 3)

1 Upload a CSV File

Click "Browse" to select a file.

01_Data.csv 3 KB

Browse (Maximum: 100 MB)

2 Check the Preview

The table below shows the preview of the App with your data.
Ensure that the first row of the preview table (top-most row with white background) shows the column names. Partial sample data is shown in the second row and after.

Total Records: 50 Character Encoding: English (Latin1) Delimiter: Comma

Name	What is your favorite fruit?	What is your favorite programming language?	How do you get your caffeine?	What is yo
Sonsing	Date	C#	Coffee	Safari
Tempsoft	Star Fruit	Python	Coffee	Internet Exp
Hatty	Avocado	C++	Coffee	Google Chr



Create a new Kintone App from a CSV file

1. Get the CSV file from the Gist
2. Create a Kintone App
3. Select Create from CSV
4. Continue & Upload CSV
 - Continue button
 - Check all button
 - Continue to the Upload button
 - Upload the CSV file
 - Scroll down to the Convert button

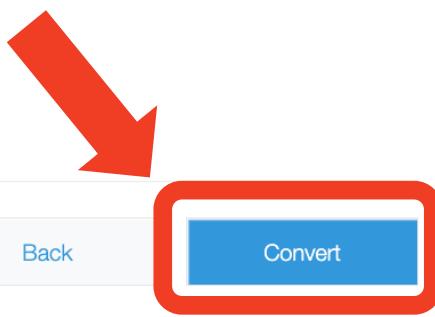
Stim | Blueberry | Ruby | Energy Drinks | Internet Exp

③ Start Converting to an App

Set a field type for each column, then click "Convert" button at the bottom of the screen.
However, field type settings are not mandatory, because Kintone has automatically selected recommended field types.

Field Name (Column Name)	Field Type
Name	Text
What is your favorite fruit?	Drop-down
What is your favorite programming language?	Drop-down
How do you get your caffeine?	Drop-down
What is your favorite web browser?	Drop-down
What is your nationality?	Text

Cancel & Exit | Back | Convert



amCharts Customization for Kintone

1. Create a new Kintone App from a CSV file
- 2. Add amCharts libraries to the App**
3. Add a custom JavaScript file to the App
4. Redeploy the Kintone App



Add JavaScript Libraries to the App

1. Find and click on the newly created app
2. Click on the Gear icon for the App's settings
3. Navigate to the App Settings tab
4. Find the JavaScript and CSS Customization option in the middle.

The screenshot shows the Kintone portal interface. At the top, there is a navigation bar with icons for Home, Bell, Star, Settings, Help, and a search bar labeled "Search All Contents". Below the navigation bar, the title "Portal" is displayed over a green leaf background image. On the left side, there is an "Announcement" card with a megaphone icon, the text "Welcome to Kintone!", and a description of Kintone as a teamwork platform. A modal window titled "How to use Kintone" is open, showing sections like "How to use the Announcements dashboard" and "How to use the Announcements dashboard". In the center, there is a "Spaces" section with "Joined Spaces" and "All Spaces" options. On the right side, there is an "Apps" section with a list of apps: "All Apps", "01_Data" (which has a red arrow pointing to it), and "Board Game DB". The date "Aug 8, 2017 11:00 AM" and the user "Administrator" are at the bottom of the screen.



Add JavaScript Libraries to the App

1. Find and click on the newly created app
2. **Click on the Gear icon for the App's settings**
3. Navigate to the App Settings tab
4. Find the JavaScript and CSS Customization option in the middle.

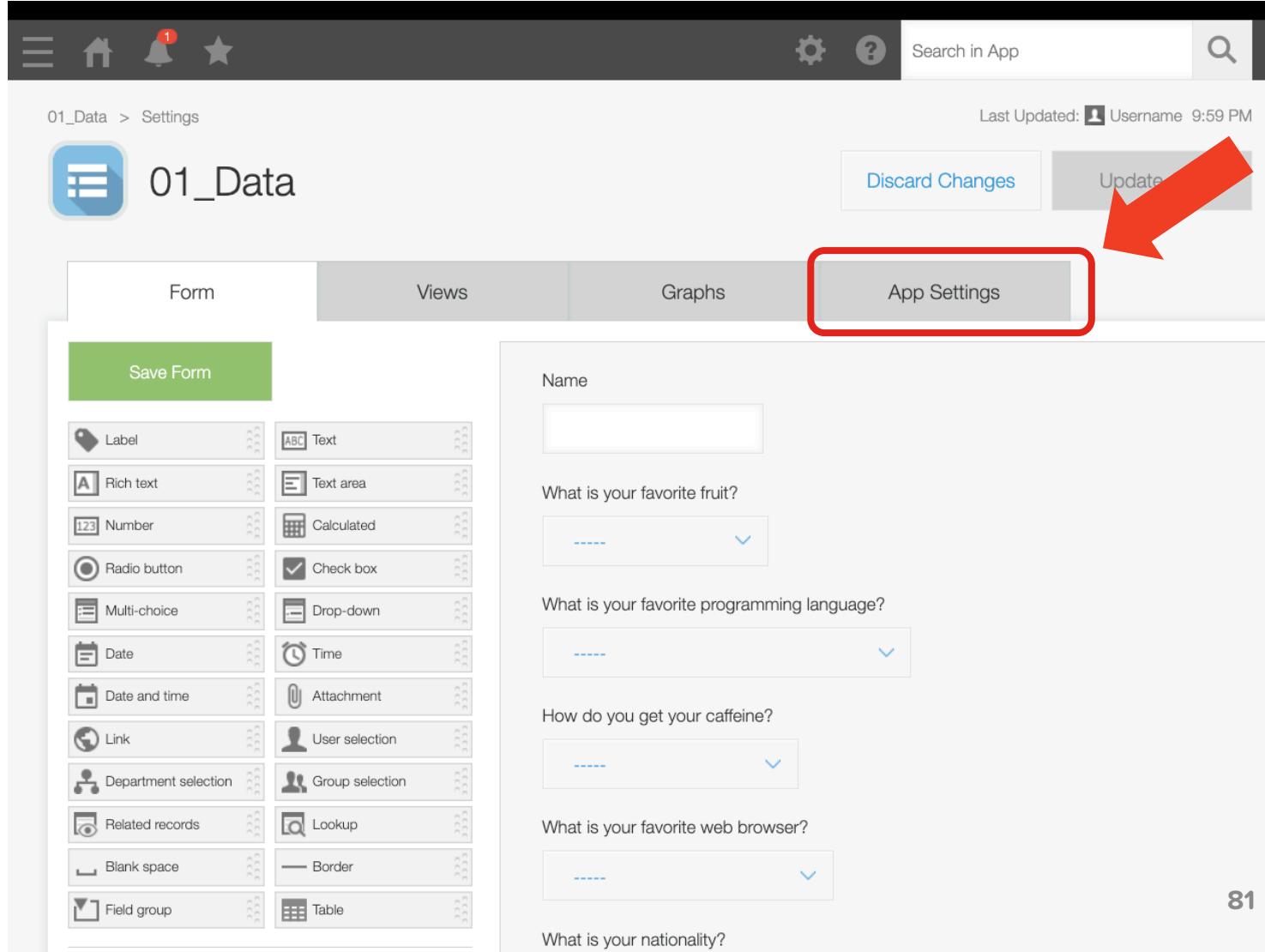
The screenshot shows the amCharts application interface. At the top, there is a navigation bar with icons for home, search, and settings, followed by a search bar labeled "Search in App". A blue banner message says "File imported successfully!". Below the banner, there is a sidebar with a "01_Data" folder icon and a "App: 01_Data" label. On the right side of the screen, there is a table titled "All records" with columns for Record number, Name, What is your favorite fruit?, What is your favorite programming language?, and How do you get your caffeine?. The table contains 50 rows of data. A red arrow points to the gear icon in the top right corner of the table header, which is highlighted with a red box. The bottom right corner of the table header also has a red box around it. The footer of the table says "Records 1 - 50 of 50".

Record number	Name	What is your favorite fruit?	What is your favorite programming language?	How do you get your caffeine?
50	Tre...	Strawberry	Ruby	Coffee
49	Volt...	Star Fruit	Ruby	Espresso
48	Latlux	Apricot	PHP	I avoid caffeine
47	Lotlux	Date	PHP	Energy Drinks
46	Zo...	Date	PHP	Coffee
45	Tre...	Pineapple	Python	I avoid caffeine
44	Job	Avocado	HTML	Black Tea



Add JavaScript Libraries to the App

1. Find and click on the newly created app
2. Click on the Gear icon  for the App's settings
3. **Navigate to the App Settings tab**
4. Find the JavaScript and CSS Customization option in the middle.



The screenshot shows the '01_Data' app settings page. At the top, there are navigation icons (three horizontal lines, home, bell with a '1', star), a gear icon for settings, a search bar, and a status message 'Last Updated: [User] 9:59 PM'. Below the header, the app name '01_Data' is displayed next to its icon. There are four tabs: 'Form', 'Views', 'Graphs', and 'App Settings', with 'App Settings' being the active tab and highlighted with a red box and an arrow pointing to it from the right.

The 'App Settings' tab contains several configuration fields:

- Name: A text input field.
- What is your favorite fruit?: A dropdown menu.
- What is your favorite programming language?: A dropdown menu.
- How do you get your caffeine?: A dropdown menu.
- What is your favorite web browser?: A dropdown menu.
- What is your nationality?: A dropdown menu.

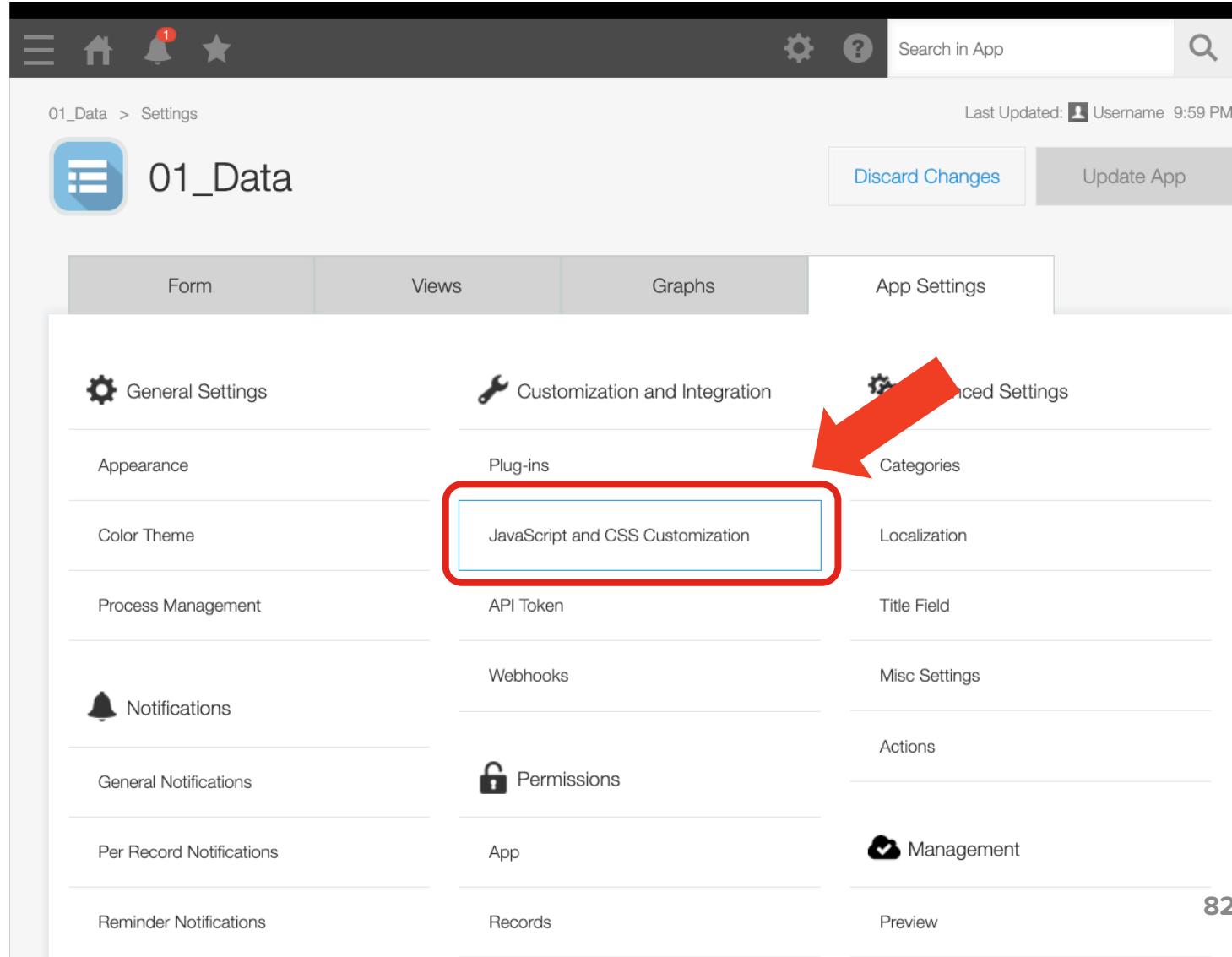
On the left side of the main content area, there is a sidebar titled 'Form' containing a 'Save Form' button and a list of form field components:

- Label
- Rich text
- Number
- Radio button
- Multi-choice
- Date
- Date and time
- Link
- Department selection
- Related records
- Blank space
- Field group
- Text
- Text area
- Calculated
- Check box
- Drop-down
- Time
- Attachment
- User selection
- Group selection
- Lookup
- Border
- Table



Add JavaScript Libraries to the App

1. Find and click on the newly created app
2. Click on the Gear icon  for the App's settings
3. Navigate to the App Settings tab
- 4. Find the JavaScript and CSS Customization option in the middle.**



The screenshot shows the 'App Settings' tab selected in the navigation bar. The 'Plug-ins' section contains a sub-section titled 'JavaScript and CSS Customization', which is highlighted with a red box. A red arrow points from the text in step 4 towards this highlighted area. Other sections visible include 'General Settings', 'Customization and Integration', 'Categories', 'Appearance', 'Color Theme', 'Process Management', 'API Token', 'Webhooks', 'Notifications', 'General Notifications', 'Per Record Notifications', 'Reminder Notifications', 'Permissions', 'App', 'Records', 'Localization', 'Title Field', 'Misc Settings', 'Actions', and 'Management'.



Add JavaScript Libraries to the App

Under **Upload JavaScript for PC**, click on **Add Link** to add the following amCharts libraries in order:

<https://www.amcharts.com/lib/4/core.js>

<https://www.amcharts.com/lib/4/charts.js>

<https://www.amcharts.com/lib/4/themes/animated.js>

Don't click on the top blue
Save button yet!

The screenshot shows the amCharts app's settings interface. At the top, there are navigation icons (three horizontal bars, home, notification with 1, star) and a breadcrumb path: 01_Data > Settings > JavaScript and CSS Customization. Below this is a 'Save' button and a 'Cancel' button. The main area is titled 'JavaScript and CSS Customization'. It contains a descriptive text about customizing the app with JavaScript and CSS, a link to 'JavaScript Coding Guidelines', and three radio button options for 'Scope of Customization': 'Affect all users' (selected), 'Affect only app administrators', and 'Disable'. A red callout box with the text 'Add the 3 links here' and a red arrow points to the 'Add Link' button under the 'Upload JavaScript for PC' heading. There are also 'Add File' and file size limits (Maximum: 20 MB). Below this is another section for 'Upload JavaScript File for Mobile Devices' with similar 'Add Link' and 'Add File' buttons.

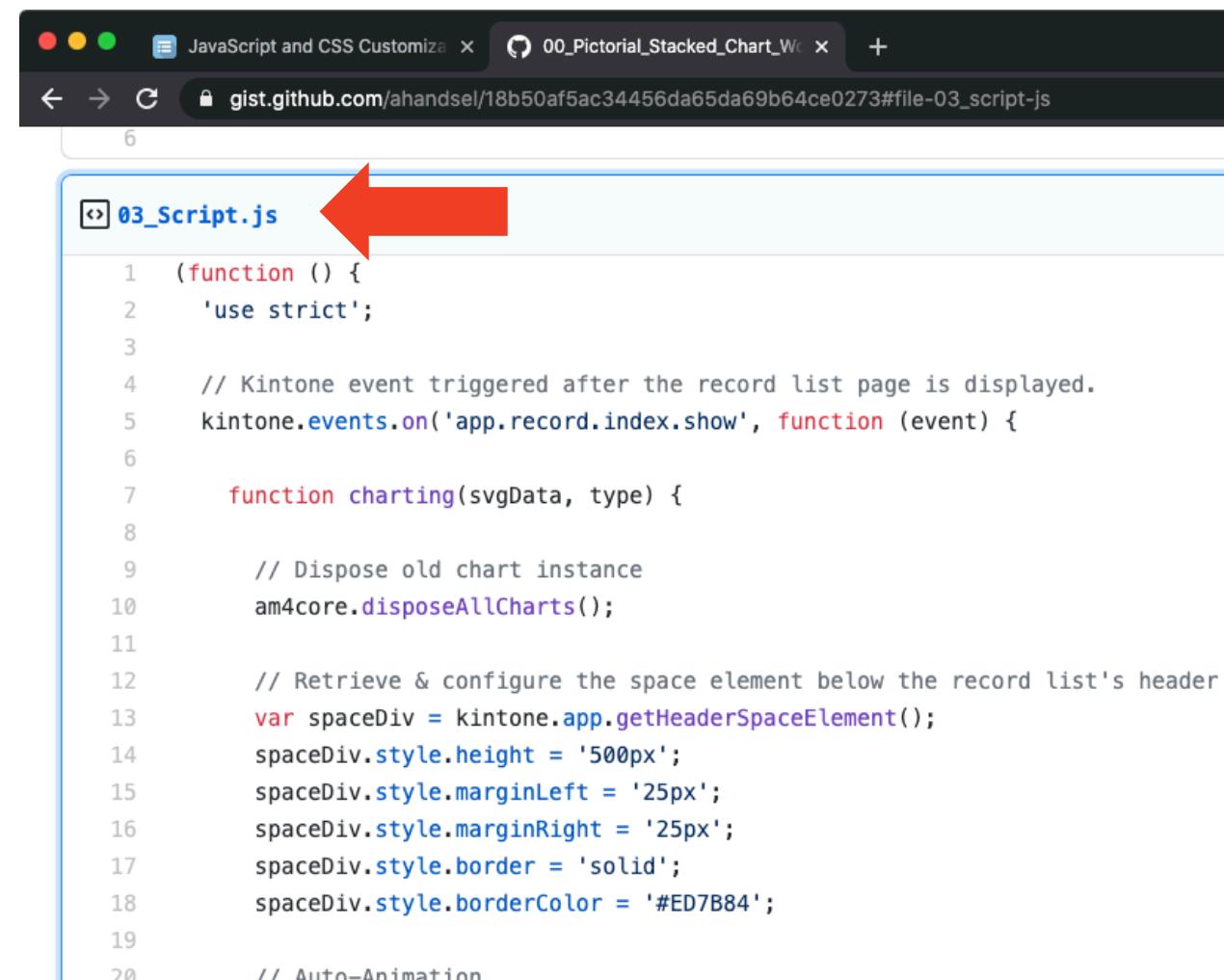
amCharts Customization for Kintone

1. Create a new Kintone App from a CSV file
2. Add amCharts libraries to the App
- 3. Add a custom JavaScript file to the App**
4. Redeploy the Kintone App



Add a Custom JavaScript File to the App

1. Get the JavaScript file:
03_Script.js
bit.ly/KDP_PICT
2. Click on Add File button & upload the JS file
3. Click on Save button
4. Click on Update App button



```
gist.github.com/ahandsel/18b50af5ac34456da65da69b64ce0273#file-03_script-js
6
03_Script.js ←
1 (function () {
2   'use strict';
3
4   // Kintone event triggered after the record list page is displayed.
5   kintone.events.on('app.record.index.show', function (event) {
6
7     function charting(svgData, type) {
8
9       // Dispose old chart instance
10      am4core.disposeAllCharts();
11
12      // Retrieve & configure the space element below the record list's header
13      var spaceDiv = kintone.app.getHeaderSpaceElement();
14      spaceDiv.style.height = '500px';
15      spaceDiv.style.marginLeft = '25px';
16      spaceDiv.style.marginRight = '25px';
17      spaceDiv.style.border = 'solid';
18      spaceDiv.style.borderColor = '#ED7B84';
19
20      // Auto-Animation
```



Add a Custom JavaScript File to the App

1. Get the JavaScript file:
03_Script.js
2. Click on Add File button
& upload the JS file
3. Click on Save button
4. Click on Update App
button

The screenshot shows the 'JavaScript and CSS Customization' screen in a Kintone application. At the top, there are navigation icons (three horizontal bars, home, notification with 1, star), a search bar, and settings. Below the header, the breadcrumb navigation shows '01_Data > Settings > JavaScript and CSS Customization'. There are 'Save' and 'Cancel' buttons. The main content area has a title 'JavaScript and CSS Customization' and a note about customizing the app with JavaScript and CSS, linking to 'JavaScript Coding Guidelines'. It includes sections for 'Scope of Customization' (radio buttons for 'Affect all users', 'Affect only app administrators', and 'Disable'), 'Upload JavaScript for PC' (with three links to AmCharts files), and 'Upload JavaScript File for Mobile Devices' (with a 'Add Link' and 'Add File' button). A red callout box points to the 'Add File' button with the instruction 'Add 03_Script.js file here'.



Add a Custom JavaScript File to the App

1. Get the JavaScript file:
03_Script.js
2. Click on Add File button &
upload the JS file
3. Click on Save button
4. Click on Update App
button

The screenshot shows the 'JavaScript and CSS Customization' page in a Kintone application. At the top, there are navigation icons (three horizontal bars, home, bell with a '1', star), a search bar, and settings. Below the header, the breadcrumb path is '01_Data > Settings > JavaScript and CSS Customization'. A red box highlights the 'Save' button in the top center. A red arrow points from the 'Save' button down to the 'Upload JavaScript for PC' section. This section contains four items: 'https://www.amcharts.com/lib/4/core.js', 'https://www.amcharts.com/lib/4/charts.js', 'https://cdn.amcharts.com/lib/4/themes/animated.js', and '03_Script.js'. The '03_Script.js' item is highlighted with a yellow background. At the bottom of the page, there are 'Add Link' and 'Add File' buttons, and a note '(Maximum: 20 MB)'. To the right of the main content area, there are sections for 'Customization samples' (link to 'Kintone Customization Gallery') and 'Community support' (link to 'Kintone Developers').

amCharts Customization for Kintone

1. Create a new Kintone App from a CSV file
2. Add amCharts libraries to the App
3. Add a custom JavaScript file to the App
- 4. Redeploy the Kintone App**



Redeploy the Kintone App

1. Get the JavaScript file:
03_Script.js
2. Click on Add File button
& upload the JS file
3. Click on Save button
4. Click on Update App
button

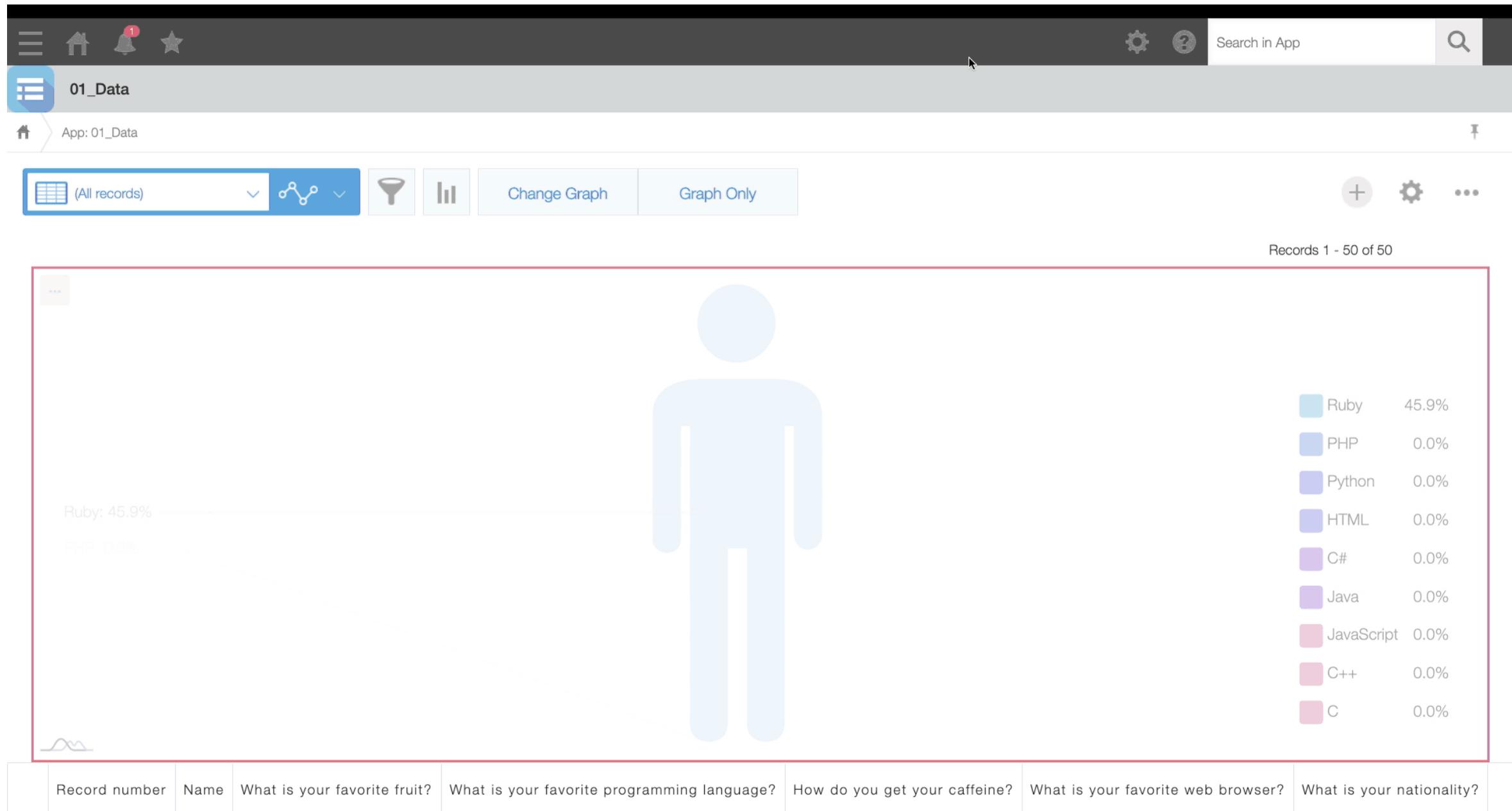
This will apply the
changes made (adding
libraries & JS file)

The screenshot shows the 'Settings' screen for the '01_Data' app. At the top right, there are buttons for 'Discard Changes' and 'Update App'. A red box highlights the 'Update App' button, and a red arrow points to it from below. The main area contains tabs for 'Form', 'Views', 'Graphs', and 'App Settings'. Under 'App Settings', there are sections for General Settings, Customization and Integration, Advanced Settings, Notifications, Permissions, and Management. Each section lists various configuration options.

General Settings	Customization and Integration	Advanced Settings
Appearance	Plug-ins	Categories
Color Theme	JavaScript and CSS Customization	Localization
Process Management	API Token	Title Field
Notifications	Webhooks	Misc Settings
General Notifications	Permissions	Actions
Per Record Notifications	App	Management
Reminder Notifications	Records	Preview



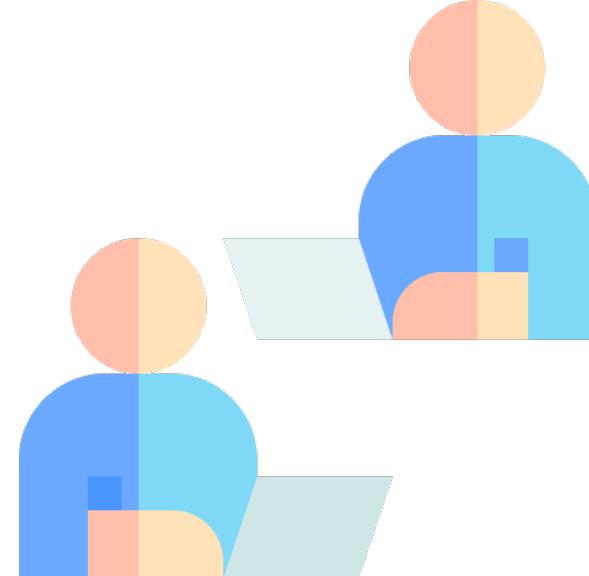
Results



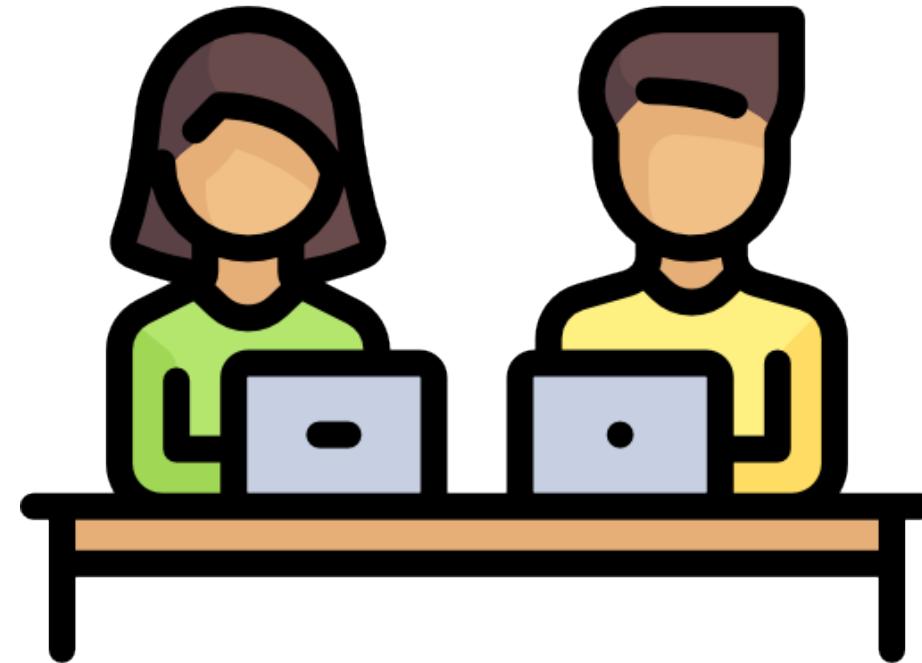
Time To Get Started!

1. Create a Kintone App from a CSV file
 - **Create from CSV** option
 - Import the CSV file
2. Add JavaScript libraries to the App
 - amCharts CDN links
3. Add a custom JavaScript file to the App
4. Redeploy the Kintone App
 - Click on **Update App**
5. Raise Hand on Zoom when you are done

Want the Slides? Hit the
Download ZIP button at
bit.ly/KDP_PICT



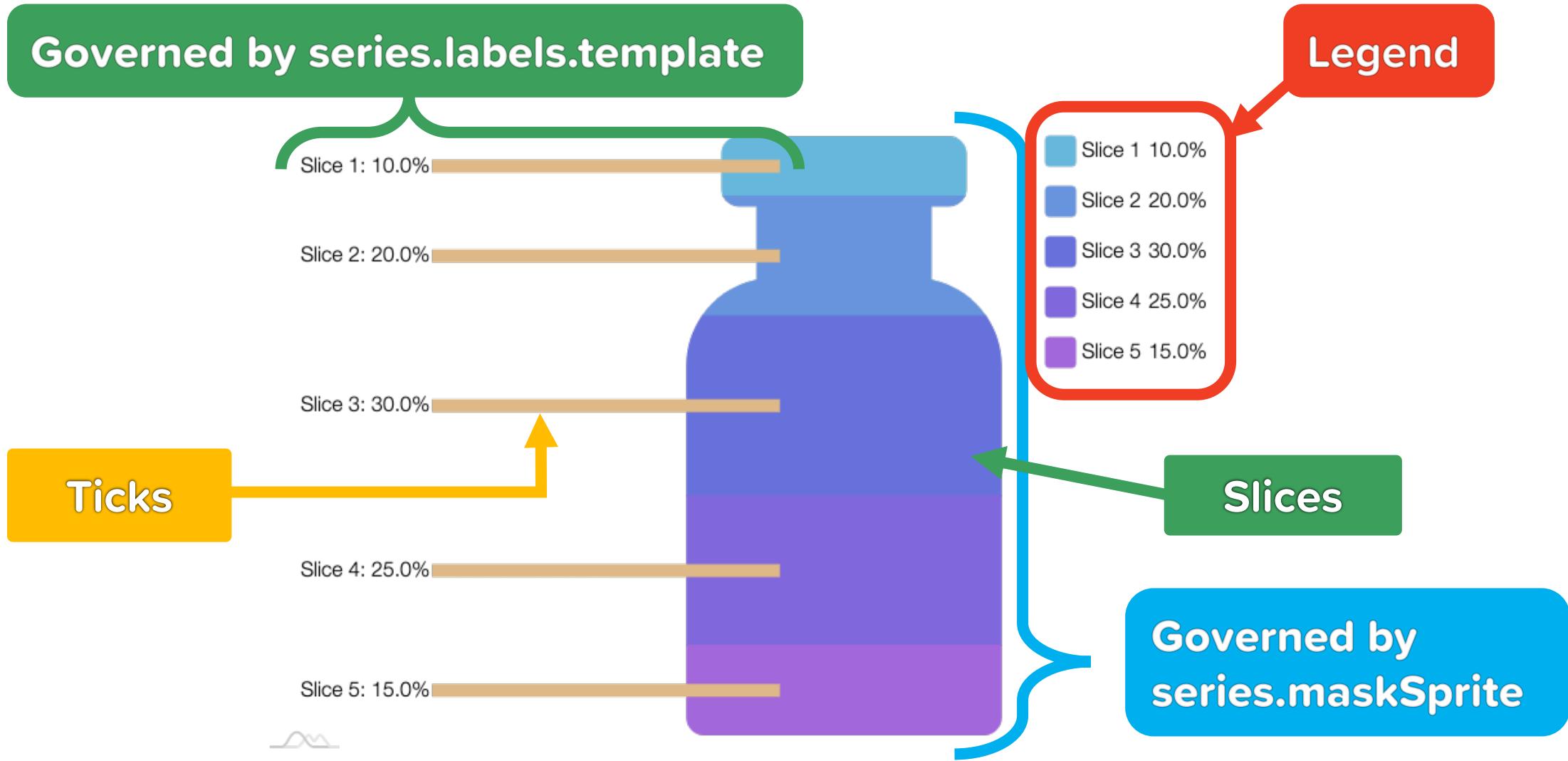
Let's look through the code!



Terminology

- **SlicedChart** - Any chart that displays data categories as "Slices"
 - Pictorial Stacked Chart is a **Sliced Chart** in the shape of a picture.
- **Series** - a collection of grouped data points, comprising multi-value data element that is used to display the chart
 - **Ticks** - a short dash connecting a slice to it's textual label
 - **maskSprite** - holds the SVG path that the series will shape into
- **SVG** (Scalable Vector Graphics) - XML-based markup language for graphics
- **Legend** - color coded compilation of the slices' categories

Anatomy of a Pictorial Stacked Chart



amCharts Libraries

Save Cancel

JavaScript and CSS Customization

You can customize this app with JavaScript and CSS. Please make sure you read through the [JavaScript Coding Guidelines](#) prior to the development.

Scope of Customization

Affect all users Affect only app administrators Disable

Upload JavaScript for PC

- <https://www.amcharts.com/lib/4/core.js>
- <https://www.amcharts.com/lib/4/charts.js>
- <https://cdn.amcharts.com/lib/4/themes/animated.js>

03_Script.js 12 ↴

Add Link Add File (Maximum: 20 MB)

Core library needed for all amCharts

amCharts library for creating charts

Library that contains the amCharts "Animated" theme which is automatically provides smooth transitions

Script Outline

Define SVG Paths

- Defining SVG paths to generate the pictorial charts
- 7 SVG paths are saved as variables in the bottom of the code

Create Charts

- **charting** function creates the actual amCharts chart instance
- Takes in the SVG path as a parameter
- Aggregates the data from the app records
- Called upon from by the buttons

Add Buttons

- Creating & attaching buttons to Kintone header menu space element
- Iterate through the svgArray to generate various pictorial charts

Set Events and Retrieve HTML Elements

Kintone native event that triggers when the Record List page loads

Retrieve & configure the space element below the record list's header

```
(function () {
  'use strict';

  kintone.events.on('app.record.index.show', function (event) {

    var spaceDiv = kintone.app.getHeaderSpaceElement();
    spaceDiv.style.height = '500px';
    spaceDiv.style.marginLeft = '25px';
    spaceDiv.style.marginRight = '25px';
    spaceDiv.style.border = 'solid';
    spaceDiv.style.borderColor = '#ED7B84';
  });
});
```

Record number	Country	Continent	Country Code	Total Earned Prize Money (\$)	Number of Players
100	Albania	Europe	al	38621.6	22
99	Algeria	Africa	dz	73040.04	40
98	Argen...	South America	ar	3202331.29	579
97	Armenia	Asia	am	224960.72	26
96	Australia	Oceania	au	16706580.61	9199
95	Bahrain	Middle East	bw	100000.0	100
94	Bangladesh	Asia	bd	100000.0	100
93	Barbados	Caribbean	bb	100000.0	100
92	Bolivia	South America	bo	100000.0	100
91	Bosnia and Herzegovina	Europe	ba	100000.0	100

Create the Chart Instance

am4themes_animated is a theme that automatically animates many amCharts actions. It is a system-wide setting.

The charting function takes in the Kintone App's records and SVG path

Dispose old chart instance to prevent using CPU & RAM resources for old charts.

```
am4core.useTheme(am4themes_animated);
```

```
function charting(svgData) {
```

```
am4core.disposeAllCharts();
```

```
var chart = am4core.create(spaceDiv, am4charts.SlicedChart);
```

```
...
```

Create a Chart instance. The first parameter is the target HTML element to create the chart in. The second parameter references an amCharts chart type class.

Input to Output

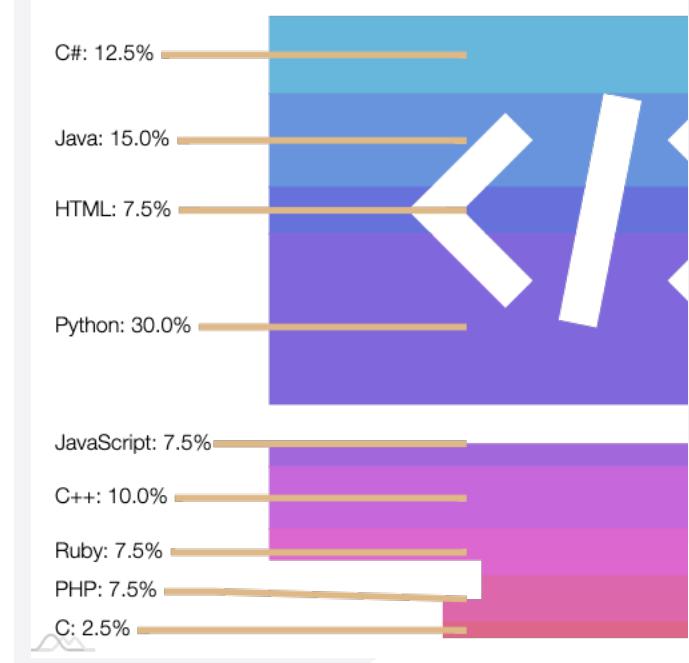
Kintone Records

	Name	Fav Coding	Fav Caffeine?
1	Tresom	Ruby	Coffee
2	Voltsillam	Ruby	Espresso
3	Latlux	PHP	I avoid caffeine
4	Lotlux	PHP	Energy Drinks
5	Zoolab	PHP	Coffee
6	Tresom	Python	I avoid caffeine

JSON Object

```
[  
  {  
    "name": "Ruby",  
    "value": 3  
  },  
  {  
    "name": "PHP",  
    "value": 6  
  }...  
]
```

Pictorial Chart



Data

Iterate through Kintone records' Drop_down_0 fields.

Creates a category for every unique value & tallis them up.

Create new category or increment as appropriate

```
var kData = event.records.reduce(function (accumulator, current) {  
    var category = accumulator.find(function (value) {  
        return value.name === current.Drop_down_0.value;  
    });  
    if (category) {  
        category.value++;  
    } else {  
        accumulator.push({  
            name: current.Drop_down_0.value,  
            value: 1  
        });  
    }  
    return accumulator;  
}, []);  
chart.data = kData;
```

Check if this category already exists

kData is an array storing each category & the number of times it appeared

Do You Remember?

The field code is the identifier for each field, represented as a string

- Name's field code = Text
- Type's field code = Drop_down

These are the default field code values for their respective fields

The image shows two side-by-side field configuration panels. The left panel is titled 'Text Settings' and the right panel is titled 'Drop-Down Settings'. Both panels have a 'Name *' field where 'Name' and 'Type' are entered respectively. Under 'Text Settings', there are four checkboxes: 'Hide field name', 'Calculate automatically', 'Required field', and 'Prohibit duplicate values'. Below these are 'Number of Characters' input fields for 'Minimum' and 'Maximum'. A 'Default Value' input field is present. At the bottom is a 'Field Code *' field containing 'Text' with a pencil icon, also enclosed in a red box. A red arrow points to this field. The right panel has similar sections but with 'Type' instead of 'Name'. Its 'Field Code *' field contains 'Drop_down' with a pencil icon, also enclosed in a red box. A red arrow points to this field. Both panels have an 'Options' section at the bottom.

Create & Configure the Series

Create a series for the chart to display

```
var series = chart.series.push(new am4charts.PictorialStackedSeries());
```

```
series.dataFields.value = 'value';  
series.dataFields.category = 'name';
```

dataFields property is an object indicating which of our Serie's data values are located in which field in data. In this case, the "value" property contains the value of the slice while "name" property contains the slice's category.

Chart with Labels, Ticks, Legend, & SVG

Putting labels next to the slices

```
series.alignLabels = true;  
series.labelsOpposite = false;
```

Ticks connects slices to its label. This configures its location, length, opacity, and color.

```
series.ticks.template.locationX = 0.3;  
series.ticks.template.locationY = 0.5;  
series.ticks.template.strokeWidth = 2;  
series.ticks.template.strokeOpacity = 0.7;  
series.ticks.template.stroke = am4core.color("#DEB886");
```

Create a Legend to provide visual reference & allow for toggling per Slices.

```
chart.legend = new am4charts.Legend();  
chart.legend.position = 'right';  
chart.legend.valign = 'bottom';  
chart.legend.maxWidth = 'undefined';
```

Set the SVG path to mask Sprite

```
series.maskSprite.path = svgData;
```

Extra functionality: Set Export Options

Enable an exporting feature on the Pictorial Stacked Chart so that it can be downloaded as an image



```
chart.exporting.menu = new am4core.ExportMenu();  
chart.exporting.backgroundColor = am4core.color('#f00', 0);  
}
```

Extra functionality: Buttons

Prevent button duplication

```
if (document.getElementById('changeButton') != null) {  
    return; }
```

Style the buttons to match Kintone UI

```
var styling = 'display:inline-block;box-sizing:border-box;padding:0 16px;min-width:163px;height:48px;...';
```

Create the button element

```
var svgButton = document.createElement('button');  
  
svgButton.id = 'changeButton';  
  
svgButton.innerText = 'Change Graph';  
  
svgButton.onclick = changingGraphs;  
  
svgButton.style = styling;
```

Extra functionality: Buttons

Iterate through the
svgArray to change
the chart graphic

```
var pointer = 0;  
  
var svgArray = [svgApple, svgTerminal, ...];  
  
function changingGraphs() {  
    pointer++;  
  
    if (pointer >= svgArray.length) {  
        pointer = 0;  
    }  
}
```

Generate a new
graph

Append the buttons
to Kintone Header

```
charting(svgArray[pointer]);  
  
}  
kintone.app.getHeaderMenuSpaceElement().appendChild(svgButton);  
});
```

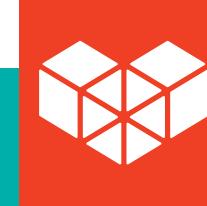
SVG Paths

SVG Paths stored after
Line 118

The path is used to
shape the
PictorialStackedSeries
that will be placed
onto the Chart.

Shapes are based on
Flaticon's SVG files

```
var svgTerminal = 'M0 15.845v300.181h512V15.845H0zm203.943  
204.304l-21.214 21.214-75.439-75.438 75.439-75.439 21.214  
21.214-54.225 54.225 54.225 54.224zm49.356 36.241-29.425-  
5.853L258.7 75.458l29.425 5.853-34.826 175.078zm75.972-  
15.026l-21.214-21.214 54.225-54.224-54.225-54.225 21.214-  
21.214 75.439 75.439-75.439 75.438zM512 436.104v-  
90.076H0v90.076h164.332v30.049h-30.036v30.002h243.408v-  
30.002h-30.037v-30.049z';  
  
var svgCoffee = 'M36.591,39.606c8.158-0.328...';  
  
var svgBrowser = 'M475.047 40.484H36.953C16...';  
  
var svgHuman = 'M53.5,476c0,14,6.833,21, ...';  
  
var svgApple = 'M265.081,133.419c-7.95-26.2...';  
  
var svgBottle = 'm 367.859,339.663 c 0,-11...';  
  
var svgCan = 'm 50,956.36217 c -14.3594,0...';  
  
var svgJam = 'M391 241v-45c0-36.219-25.81-6...';
```



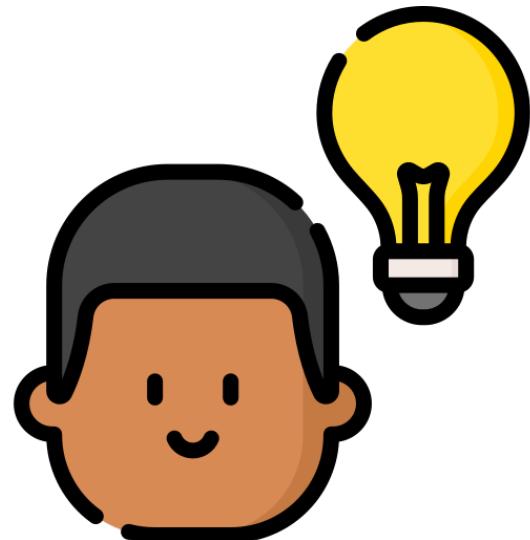
Any
Questions?

developer.kintone.io

Today's Agenda

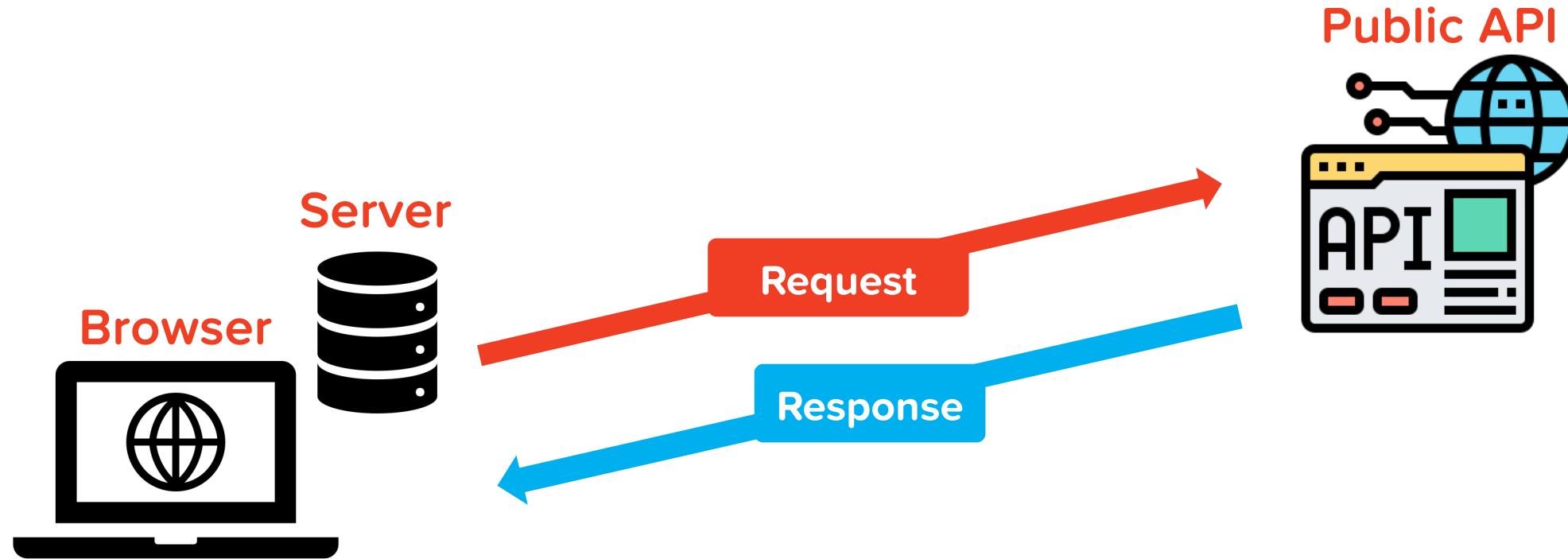
- 1 Get the Big Picture
- 2 Create a Kintone App
- 3 Display amCharts on Kintone
- 4 Call REST APIs from Kintone

Since We Are Talking About Data



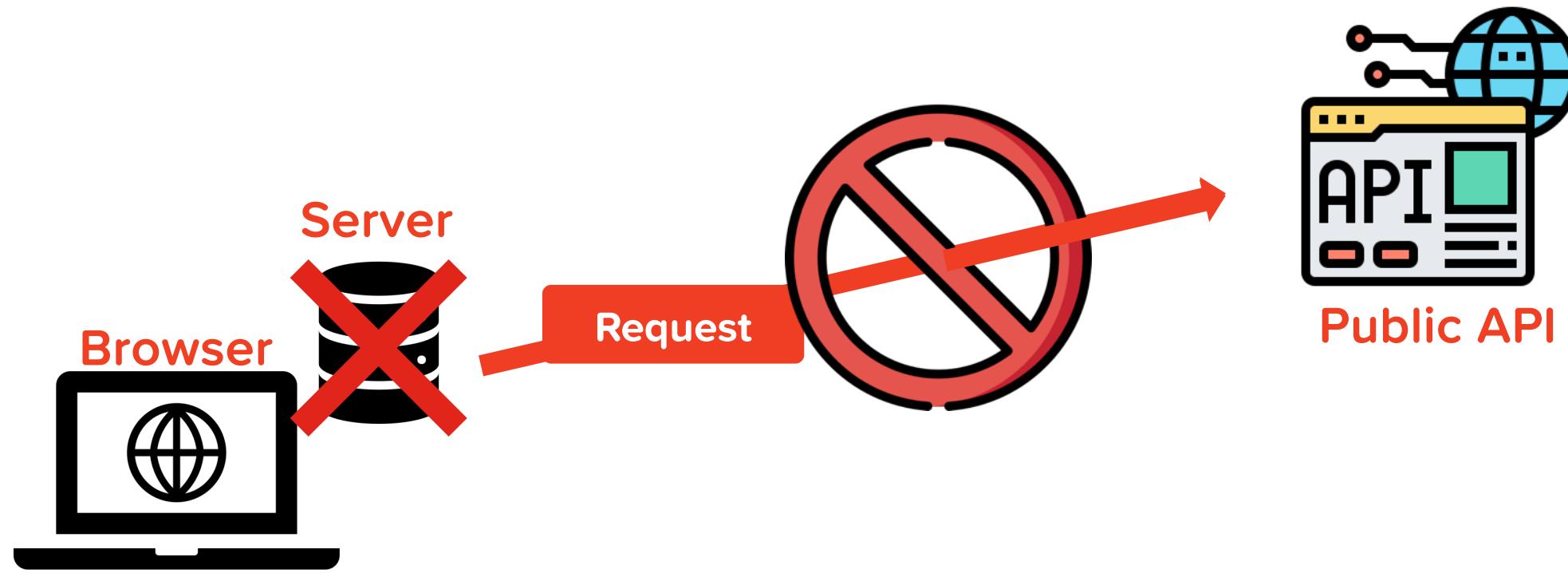
Wouldn't it be great, if we could get data from public APIs?

REST API Calls From the Server



REST API calls are usually called through a server

REST API Calls From the Browser

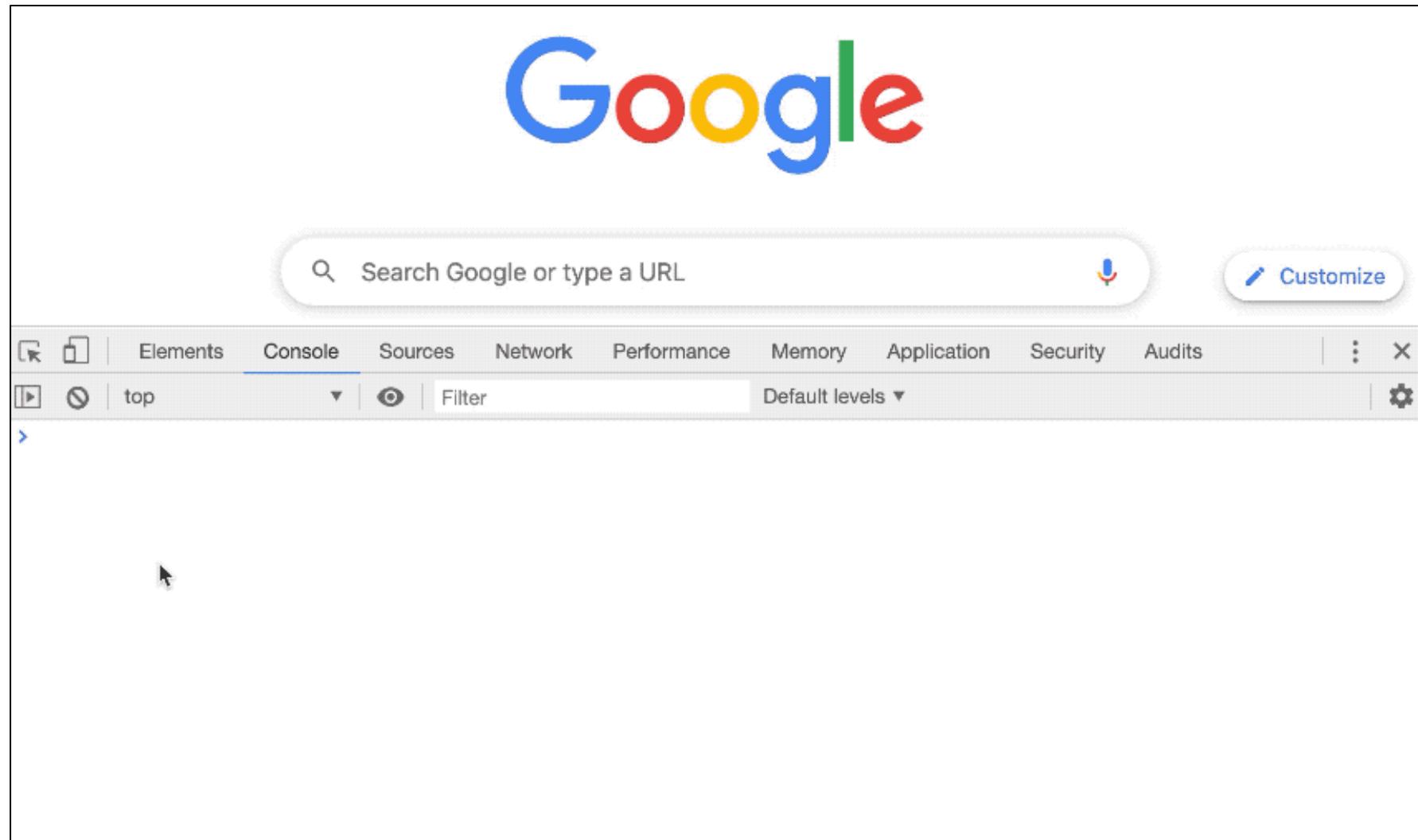


Calling REST APIs directly from the browser can often result in CORS errors

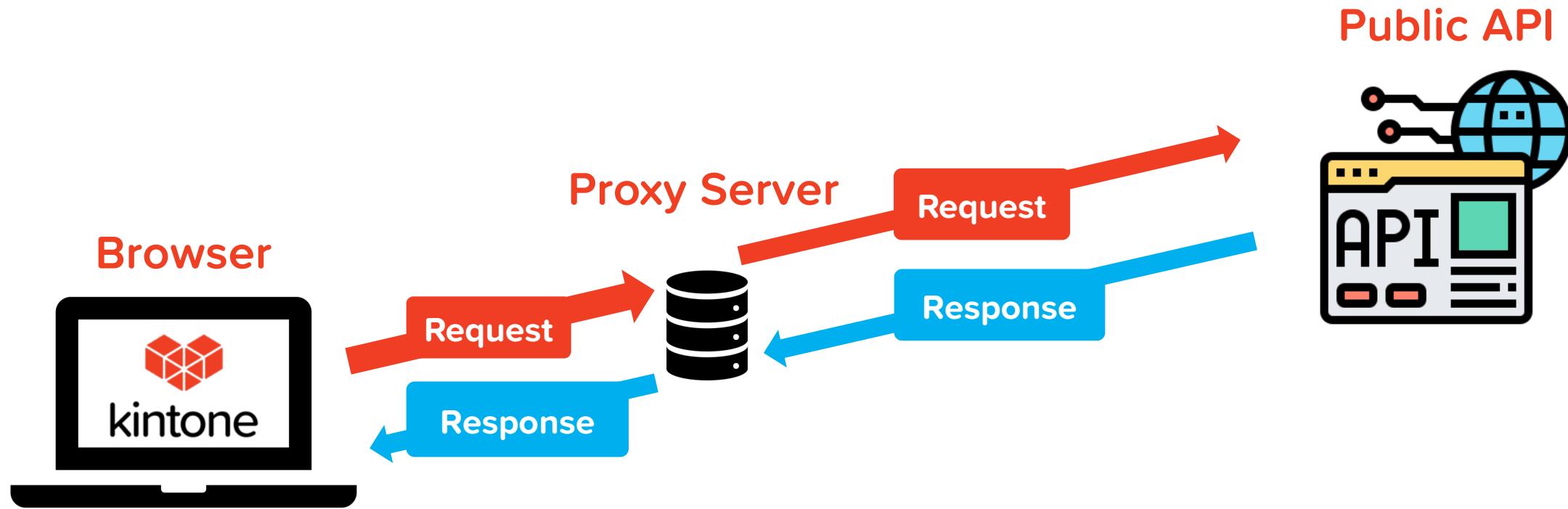
CORS Error Example



Yes, xkcd has an API for retrieving comic images.



REST API Calls from Kintone



The JavaScript codes on Kintone can call REST APIs by passing the call through a proxy server

The REST API Initiator

Kintone has a method called **kintone.proxy()** that calls REST APIs from the client-side JavaScript without running into any CORS errors.

the API endpoint

the HTTP method

```
kintone.proxy(url, method, headers, data, callback, errback)
```

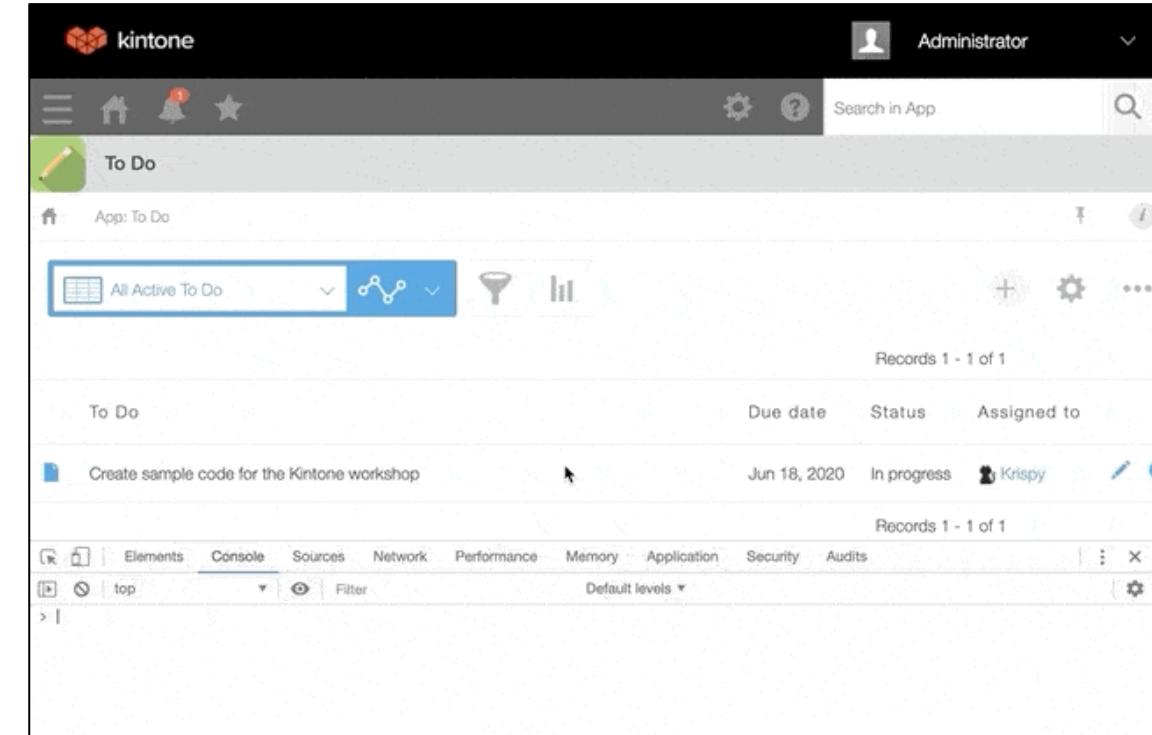
Callback functions – ignoring this
will return a Promise object

the request header

the request body

Example Call Result

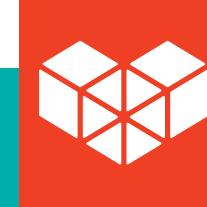
```
1 (function () {
2   'use strict';
3   var url = "https://xkcd.com/327/info.0.json";
4
5   kintone.events.on('app.record.index.show', function (event) {
6     kintone.proxy(url, 'GET', {}, {}, function (success) {
7       var jsonResponse = JSON.parse(success);
8       console.log(jsonResponse);
9       window.open(jsonResponse.img,"","width=800,height=200");
10    }, function(error) {
11      console.log(error);
12    });
13    return event;
14  });
15 })();
```



kintone.proxy(url, method, headers, data, callback, errback)

Benefits of the REST API Initiator

- Similar to how the fetch method works, **kintone.proxy returns a promise** object
- **kintone.proxy** can be used on all browsers that Kintone is compatible with, **including IE**
- **REST API calls can be made from the browser without being blocked by CORS errors**



Any
Questions?

developer.kintone.io

Wrap Up

1 Get the Big Picture

- Kintone is a **no-code/low code** cloud platform
- You can use your **free Kintone Developer License** for your projects

2 Create a Kintone App

- **Databases** can be created with **no coding**
- **Customize** any Kintone App with **JavaScript**

3 Display amCharts on Kintone

- Kintone Apps can **run JavaScript** files
- JavaScript files can **interact with data** stored in Kintone Apps

4 Call REST APIs from Kintone

- Front-end JavaScript can make **REST API calls**
- REST API calls from Kintone can **bypass CORS errors**

Benefits of Using Kintone for Your Projects

-  There is no need to set up or maintain a server
-  Databases can be created easily with GUI
-  Front-end JavaScript can utilize the Database data
-  REST APIs can be called from Front-end JavaScript and avoid CORS errors

Projects to Work On Next!

For Developers who want to try out more visualization projects on Kintone

Fancy Data-Viz

- Chart Types
- Column & Bar
- Line & Area
- Pie & Donut
- XY & Bubble
- Maps
- Candlestick & OHLC
- Stock
- TimeLine
- Pictorial
- Gauges
- Radar & Polar

Fancy Data-Viz

COVID-19 Spread Data

World Mar 20, 2020

Confirmed 100% | Recovered 100% | Deaths 100%

Legend: Active, Confirmed, Recovered, Deaths

Coronavirus animated dashboard

IN 2019 I CYCLED 3300 km, SWIMMED 1000 m, AND SPENT 100 HOURS IN THE GARDEN.

Chart design inspired by Brian Gracis

Radar Chart visualizing yearly activities

COVID-19 U.S. Spread Data

United States (Total), Apr 03, 2020

Confirmed 100% | Recovered 100% | Deaths 100%

Legend: Active, Confirmed, Recovered, Deaths

Coronavirus animated dashboard

Donut chart showing data distribution

There are many more charts you can use on the amCharts website:

<https://www.amcharts.com/demos/>

Try linking to different libraries & reuse the code we used in the workshop!

Projects to Work On Next!

For Developers who want to create projects on Kintone,
and want to retrieve and store data from public APIs

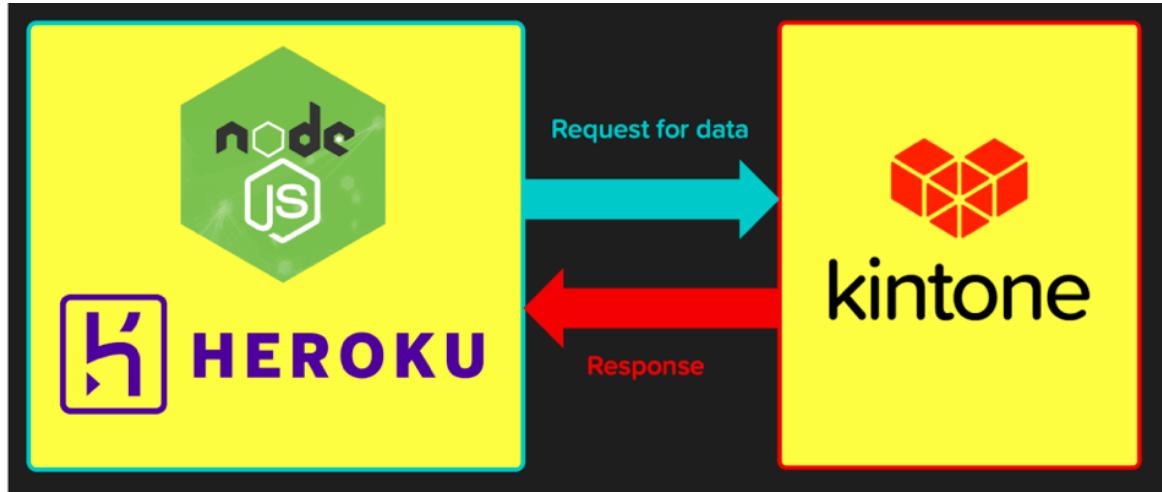
Health					
API	Description	Auth	HTTPS	CORS	
BetterDoctor	Detailed information about doctors in your area	apiKey	Yes	Unknown	
Covid-19	Covid 19 spread, infection and recovery	No	Yes	Yes	
Diabetes	Logging and retrieving diabetes information	No	No	Unknown	
Flutrack	Influenza-like symptoms with geotracking	No	No	Unknown	
Healthcare.gov	Educational content about the US Health Insurance Marketplace	No	Yes	Unknown	
Lexigram	NLP that extracts mentions of clinical concepts from text, gives access to clinical ontology	apiKey	Yes	Unknown	
Makeup	Makeup Information	No	No	Unknown	
Medicare	Access to the data from the CMS - medicare.gov	No	Yes	Unknown	
NPPES	National Plan & Provider Enumeration System, info on healthcare providers registered in US	No	Yes	Unknown	
Nutritionix	Worlds largest verified nutrition database	apiKey	Yes	Unknown	
openFDA	Public FDA data about drugs, devices and foods	No	Yes	Unknown	
USDA Nutrients	National Nutrient Database for Standard Reference	apiKey	Yes	Unknown	

You can find a list of APIs
to call from the link below:

<https://github.com/public-apis/public-apis#index>

Projects to Work On Next!

For Developers who want to use Kintone as a back-end database, and retrieve data via Kintone's REST API



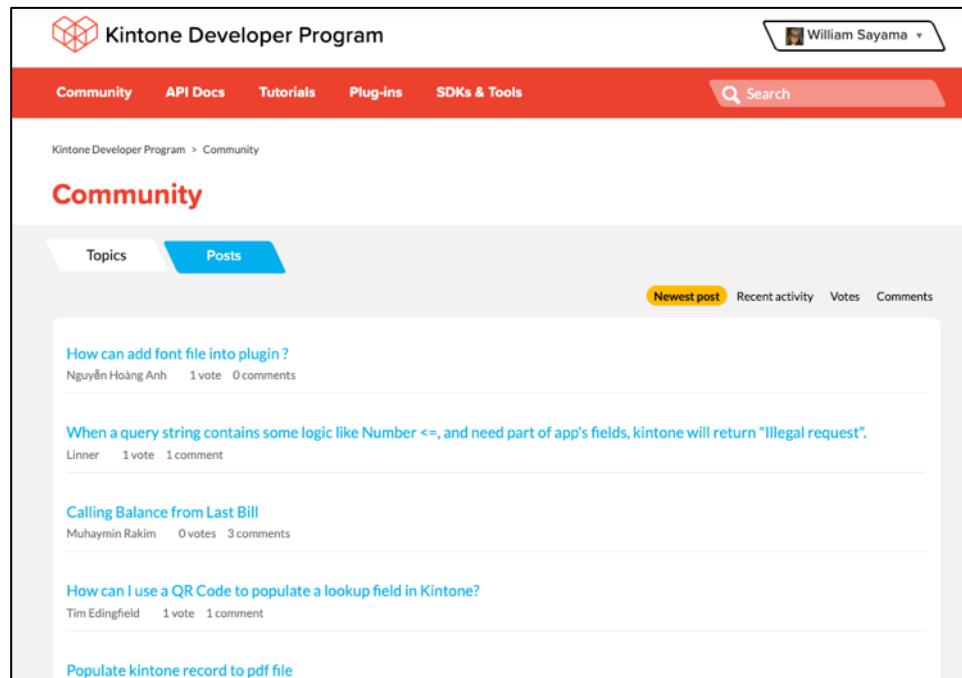
You can follow a tutorial where Node.js is used to call Kintone's REST APIs from the link below:

https://dev.to/will_yama/deploy-a-rest-api-calling-node-js-app-to-heroku-2mia

Finally

Where Can I Get Help?

If you're stuck, share your code on the Kintone Developer Community forum or on Stack Overflow!



The screenshot shows the Kintone Developer Program Community forum. The top navigation bar includes links for Community, API Docs, Tutorials, Plug-ins, and SDKs & Tools, along with a search bar and a user profile for William Sayama. The main content area is titled "Community" and shows a list of posts. The first post is titled "How can add font file into plugin?", made by Nguyễn Hoàng Anh, with 1 vote and 0 comments. The second post is titled "When a query string contains some logic like Number <=, and need part of app's fields, kintone will return "Illegal request".", made by Liner, with 1 vote and 1 comment. The third post is titled "Calling Balance from Last Bill", made by Muhammin Rakim, with 0 votes and 3 comments. The fourth post is titled "How can I use a QR Code to populate a lookup field in Kintone?", made by Tim Edingfield, with 1 vote and 1 comment. The fifth post is titled "Populate kintone record to pdf file.", which is currently collapsed.



Upcoming Online 48-hr Hackathons

SillyHacks.online

September 18 - 20

Theme: Hack for FUN!

Focus on showing off your creativity & let Kintone handle the database needs!

sillyhacks.online



**NASA SPACE APPS
CHALLENGE 2020**

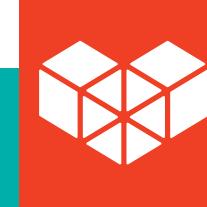
October 2 - 4

Theme: Take Action!

NASA & Kintone invites everyone to come together to create virtual teams & solve challenges using NASA's open-source data!

spaceappsboston.org





Any
Questions?

developer.kintone.io

Thank You to Our Community Partners!



**GENERAL
ASSEMBLY**

Our Upcoming Workshops!

Join us at the next No Server Data Visualization workshop!

Build a **Bar Chart Race** Data Project

Tue, Sept 29th - 6 PM to 8 PM PDT

bit.ly/KDP_Events

Workshop Recording on YouTube

This workshop's recording
will be posted on our
YouTube Channel!



We have recordings of our past
workshops for you as well:

- Bubble Cloud
- Color-Coded Map
- Word Cloud

Check it out at

bit.ly/KDP_Video

Thank You for Your Participation!

**Fill out the quick survey for a
chance to win a
\$100 Amazon gift card!**



bit.ly/KDP_Q