



Welcome to the

Word Cloud Workshop!



Recording will
be shared

**Download
Code & Slide**

bit.ly/KDP_WordCloud

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.



**\$25 Gift Card
Raffle at the End**



Instantly share code, notes, and snippets.



ahansel / 00_Word_Cloud_Workshop.md

Last active 2 minutes ago

Star 0

Fork 0

Code

Revisions 10

Embed ▾

<script src="https://>



Download ZIP

00_Word_Cloud_Workshop.md

Click here to download
EVERYTHING

Raw

No Server Data Visualization: Build a Word Cloud Project!

Thank you for attending our Kintone x Word Cloud workshop!

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

Download Links

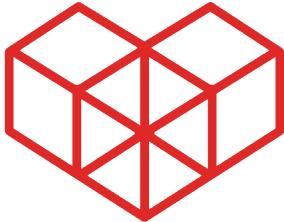
- Download [Everything](#) (Code, data, and slides)
- Only the [slides.pdf](#)
- Only the [CSV file](#) Save the page as CSV

Click here to ONLY
download the SLIDES

Scroll down
to view the
other files



Sign Up for a KDP Account



kintone
developer program

bit.ly/KDP_signup

⚠ Do NOT use Safari ⚠

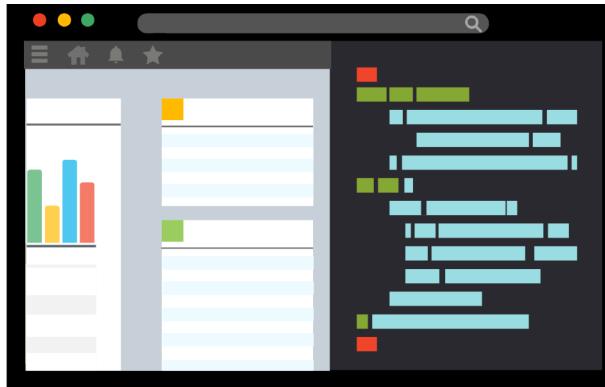
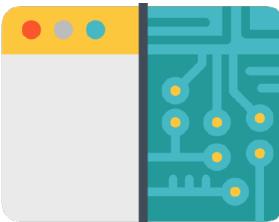
⚡ Accept Cookies First ⚡

✓ 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 with a giraffe image and a yellow sidebar containing links like 'What is the' and 'Learn how to unlock'. The main form area is titled 'Sign up to Kintone Developer Program' and asks for 'Your full name *' and 'Your email *'. It includes a reCAPTCHA checkbox labeled 'I'm not a robot'. A large blue 'Sign up' button is at the bottom right, and a 'Cancel' link is at the bottom left.



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*](#)

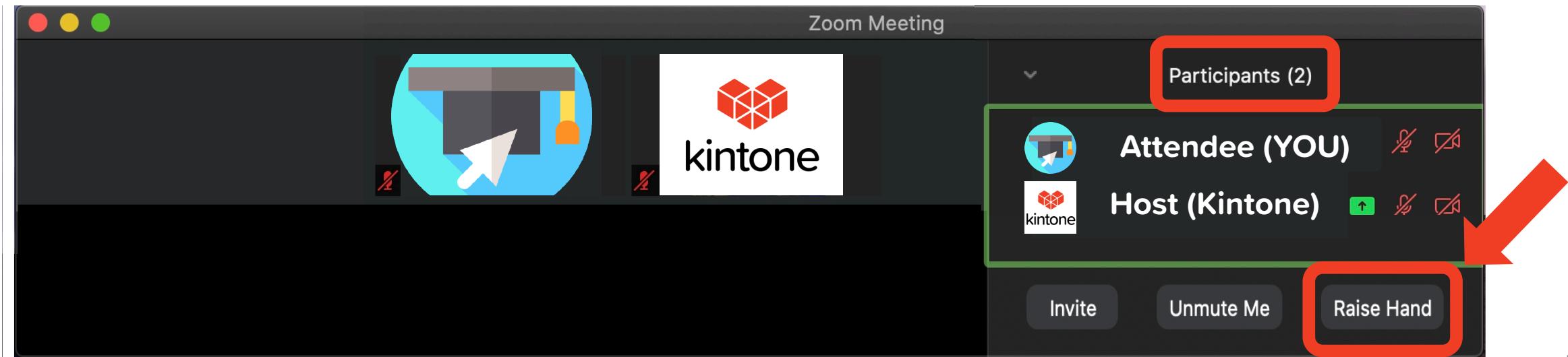
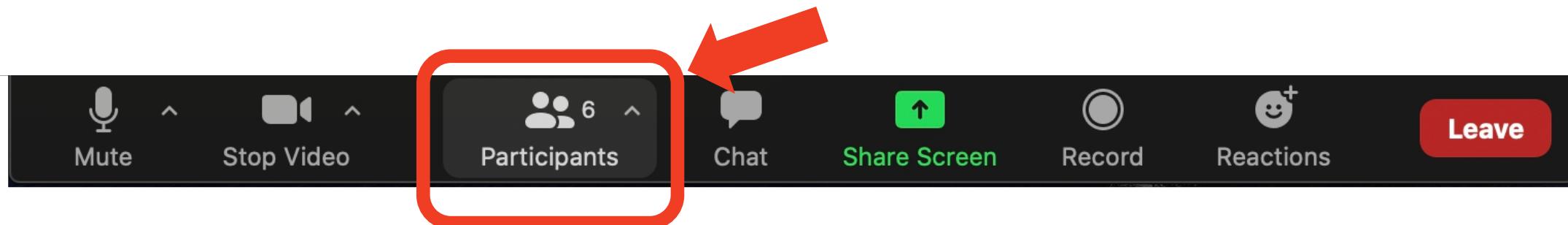
protected by reCAPTCHA Privacy - Terms

Sign Up



Let's Practice Raising Your Hand in Zoom

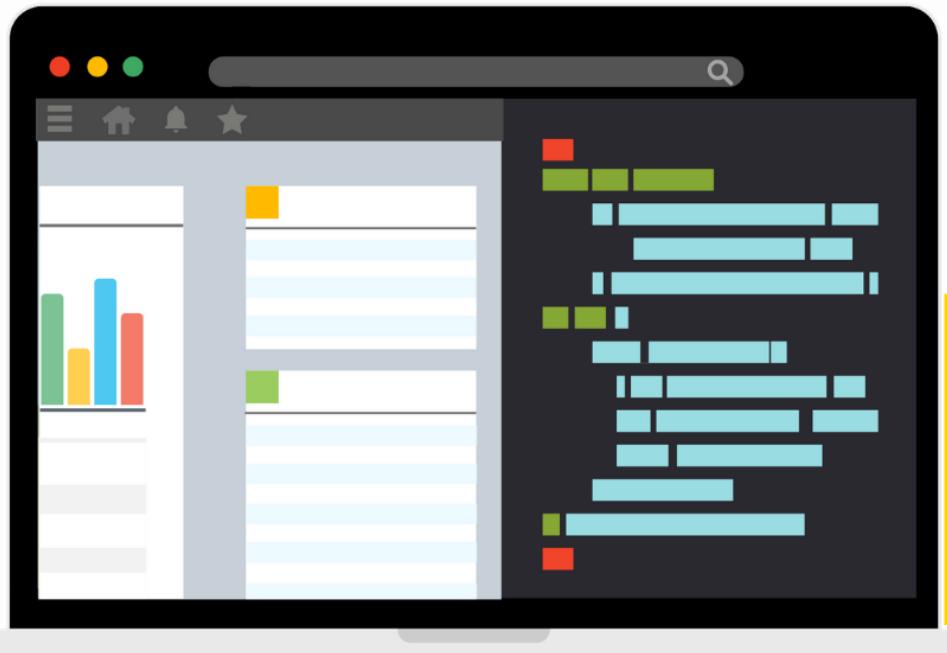
This helps us out who to look out for throughout this workshop.





No Server Data Visualization

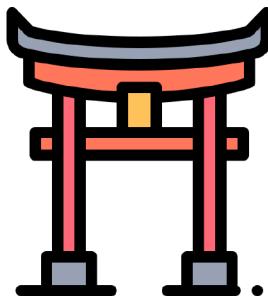
Build a Word Cloud!



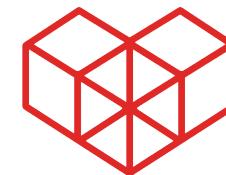
JS

Kunig 21

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. A search bar is also present. Below the navigation, a large banner features a collage of animal photos (giraffe, lion, elephant) and the text "Welcome to the Kintone Developer Program" in red, followed by a subtitle: "The source for API Docs, Tutorials, Tools, and Support for Kintone customizations". A yellow callout box contains the question "What is the Kintone Developer Program?" with a key icon, and a "Learn more →" button. At the bottom, there are three cards: "Quick start" (with a gear icon), "Community" (with a person icon), and "API Docs" (with a document icon).

Home Kintone Developer Program

Community API Docs Tutorials Plug-ins SDKs & Tools Search

Welcome to the Kintone Developer Program

The source for API Docs, Tutorials, Tools, and Support for Kintone customizations

What is the Kintone Developer Program? Learn more →

Quick start

Dive right into your first Kintone

Community

Receive support and advice on

API Docs

Complete documentation of the

Hey! I'm Nim.

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

Hack Reactor SF



Kintone Sales Engineer



Lead Sales Engineer



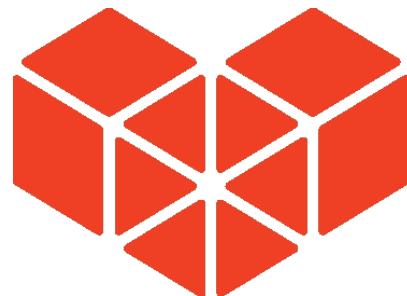
Sales Engineering Manager



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

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

Scope of Traditional Data Analytics

Nearly all conversations about Data Analytics revolve around three goals:

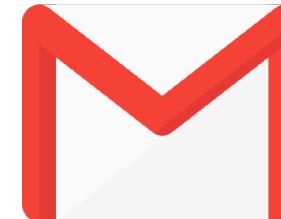
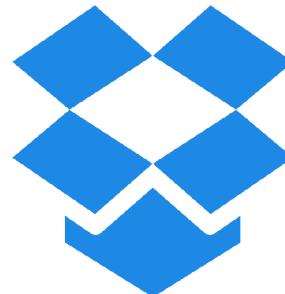
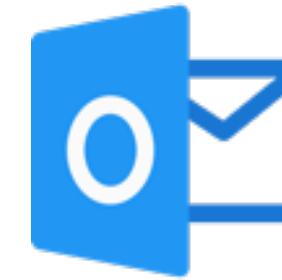
- Make data look pretty
- Understand the data easily
- Generate actionable insight

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!



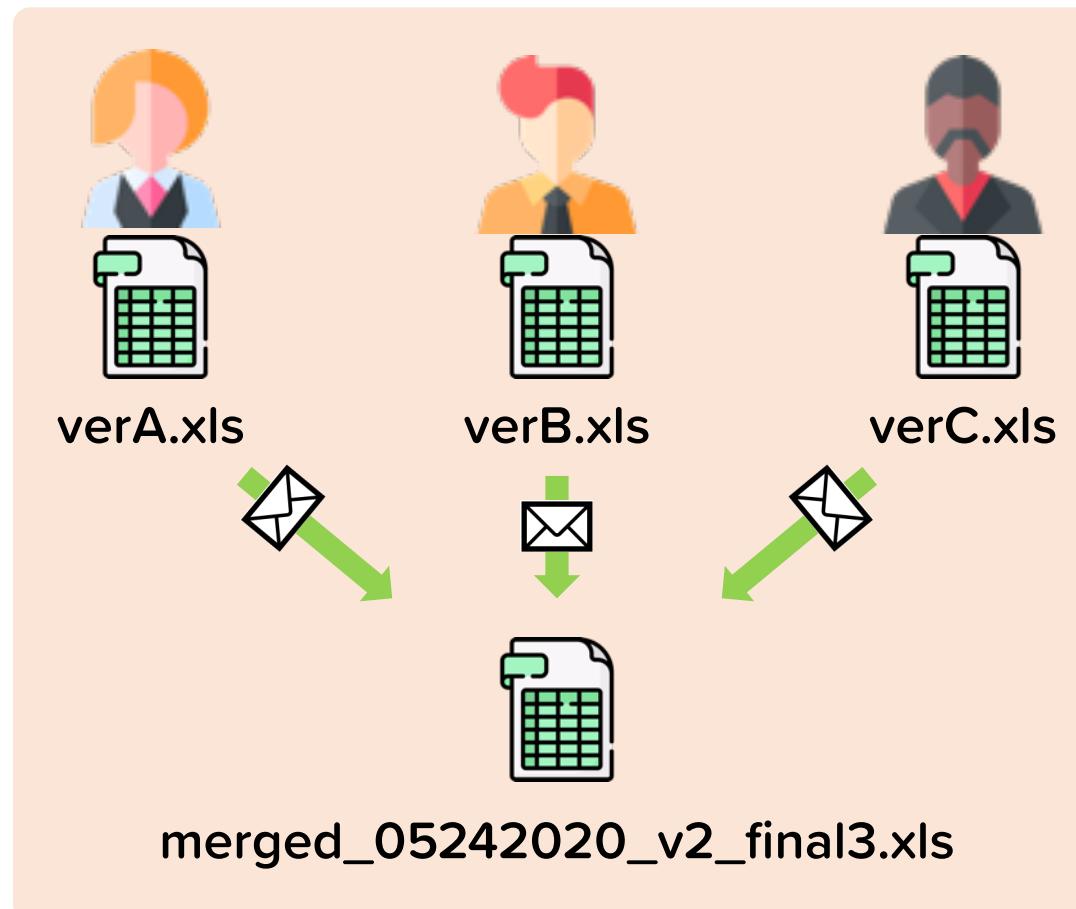
What is Kintone?

The screenshot displays the Kintone interface with a green header labeled "Sales". On the left, there's an "Announcement" section and a "Customer Database" card (Admin:Green). In the center, there are three cards: "Sales Leads" (Admin:Green), "Contact Log" (Admin:Green), and a "Dashboard" card. The "Dashboard" card contains two charts: a bar chart for "Sales Leads: Monthly Expected Sales (per priority)" and a pie chart for "Total(Amount)". The bar chart shows sales for Middle, High, and Low priorities over time. The pie chart breaks down the total amount by creator type. To the right, there are sections for "Threads" (Deal Flow, Sales Division, Monthly Reports), "Apps" (Vendor Database, Item Database, Product List, Invoices, Seminar Survey, Attendee Lists, Event Calendar, Activity Log, Sales Leads, Customer Database), and "People" (Members: Hiroko, Mary, John, Rudy, Polly, Bill, Glen, Paul, Mark, Dannie).

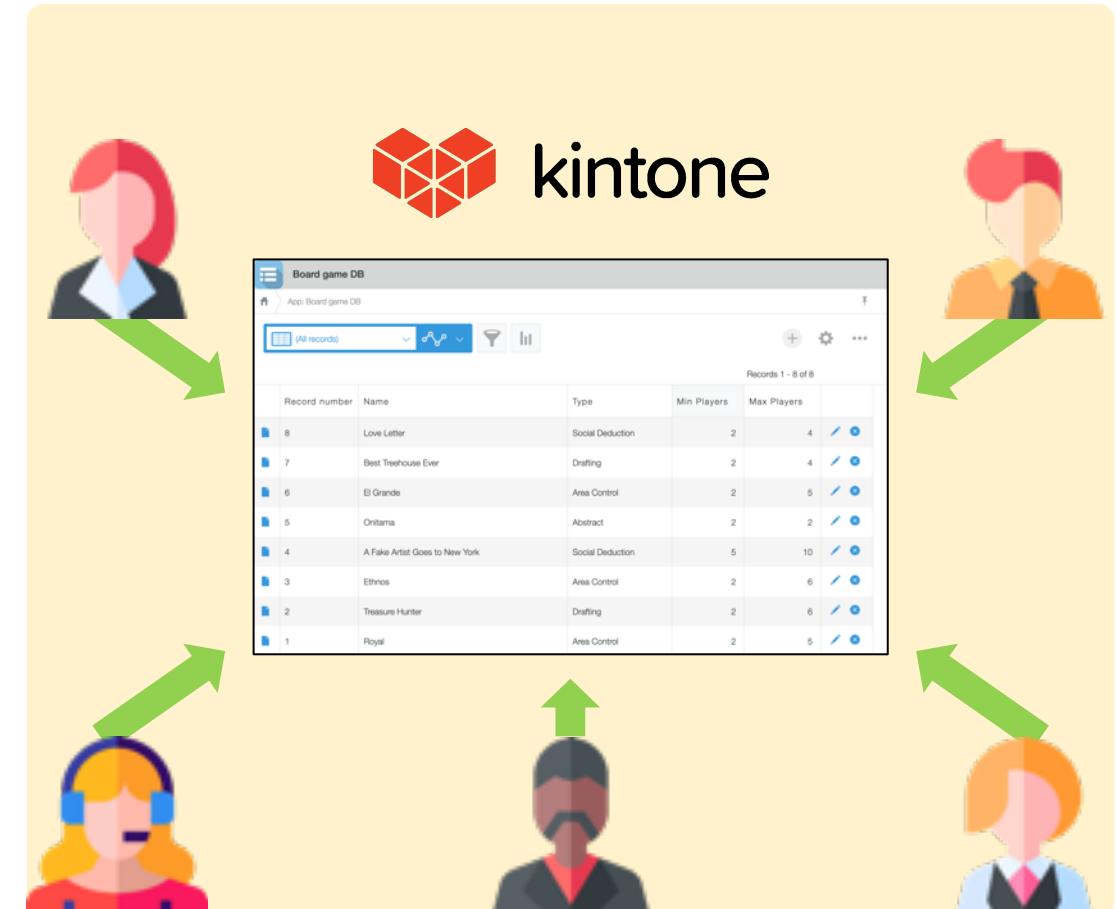
Kintone is a **no-code / low-code** cloud platform for teams to easily share and **collaborate** on their **data** efficiently.

Sharing Data With Teams Is Easier

When sharing data is hard

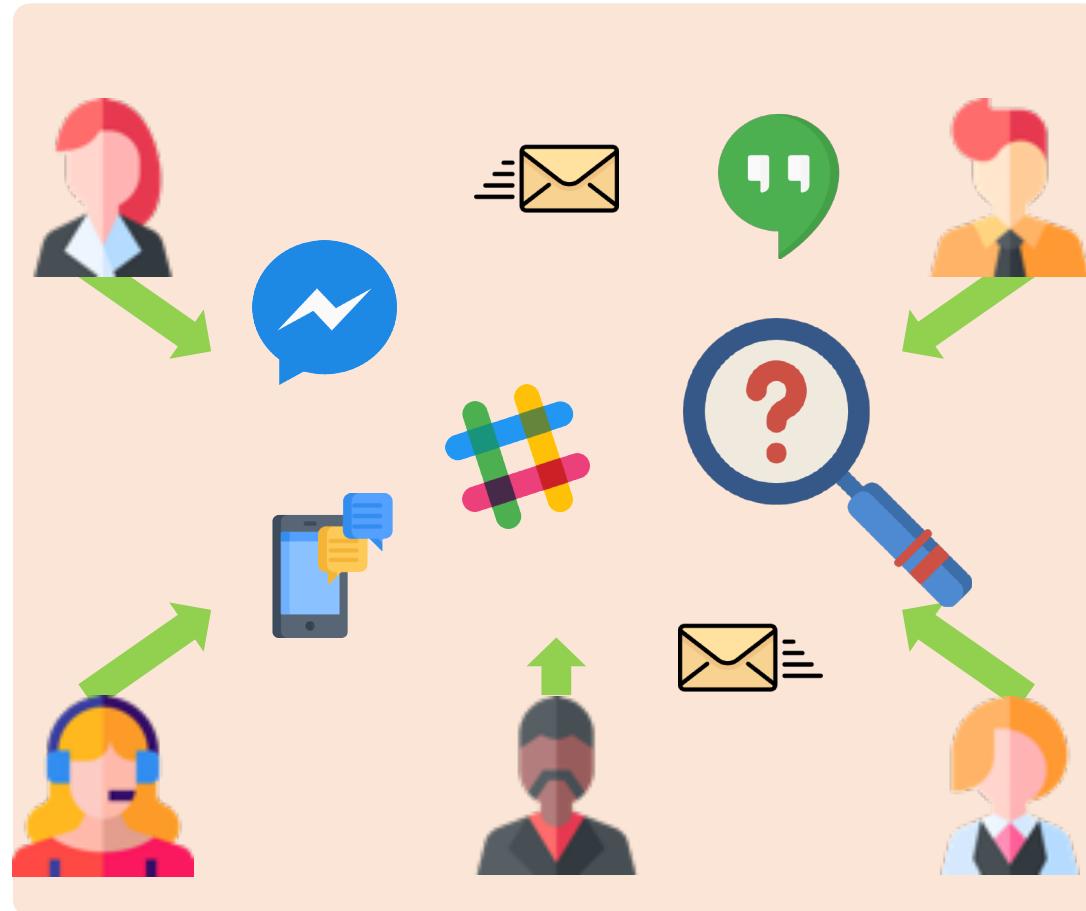


When sharing data is easy



Keep Your Conversations Accessible

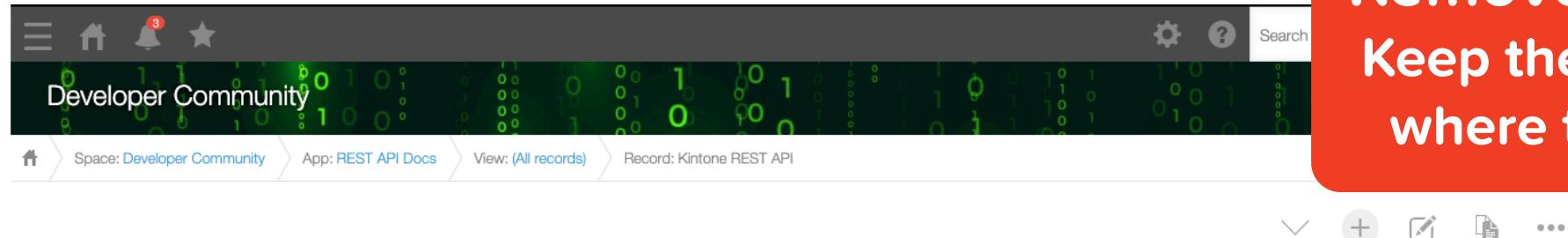
When communicating is hard



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 same Kintone REST API documentation page as above, but with a blue border around the entire content area. It includes the "Fix History" table from the previous screenshot.

A screenshot of a communication feed titled "Write your comment here." It shows a conversation between three users: "3: Clare - Support" (@Sharon - Developer @Genji), "2: Sharon - Developer" (@Genji), and "1: Genji". The messages are: "Done!", "Oh, shoot, thanks for catching my mistake!", and "Please take a look at this document." There are "Like" and "Reply" buttons for each message.

Where
Communication
Lives

What is Possible?

Workflow
Loop the right
people at the
right time

The screenshot shows a software interface with a dark header bar containing icons for home, notifications (with 5), star, gear, question mark, and search. The main area has a binary code background. The navigation path is: Space: Developer Community > App: KDP Event > View: Summary > Record: No Server Data Visualization: Build a Word Cloud Data Project.

A modal window titled "Assign Reporter" is open, showing the current status "Writing Report" and a list of assignees:

- Genji
- Sharon - Developer
- John - Manager
- Clare - Support (selected)

Below the modal is a URL: visualization-build-a-word-cloud-data-project-tickets-115435658161

The main summary view includes sections for "Community", "Data Project", "Support", and "Event Image". The "Support" section lists the same four people. On the right, there's a comment section with a message from John - Manager (@Genji) assigning the task to Clare - Support (@Clare - Support). There are also like and reply buttons.

Another comment from Genji (@Sharon - Developer) is shown below, thanking them for putting together 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

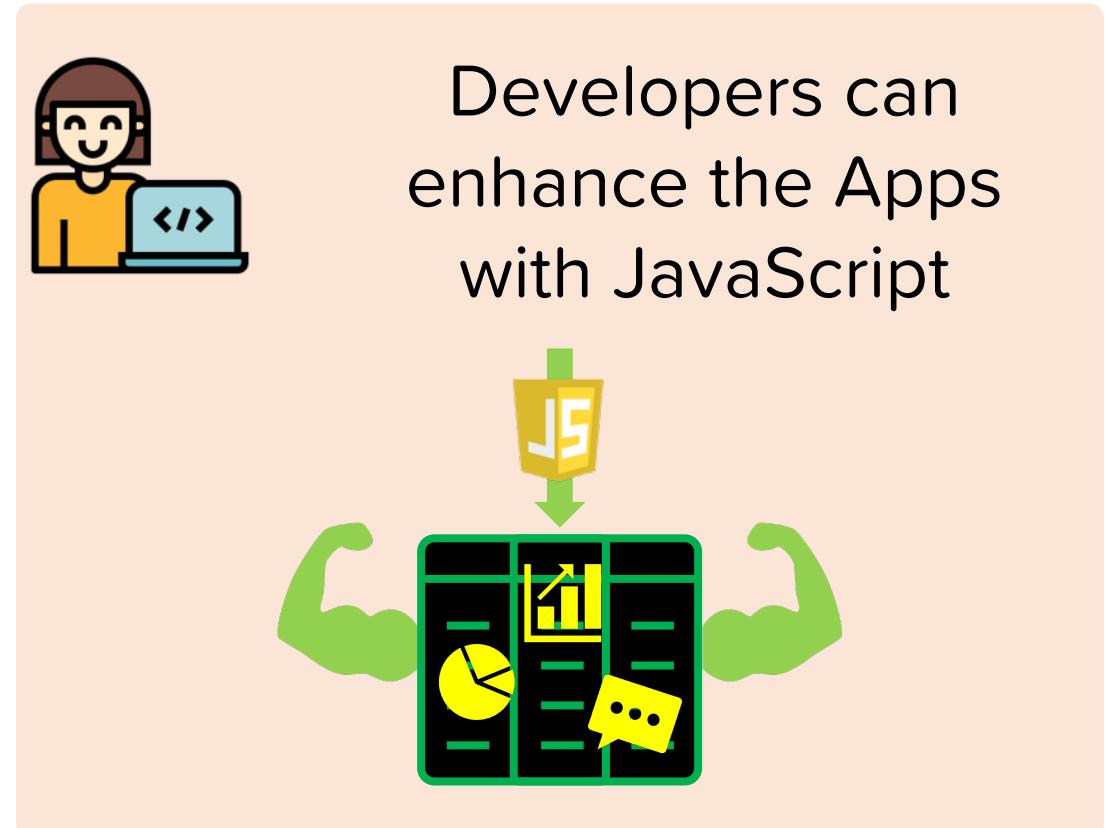
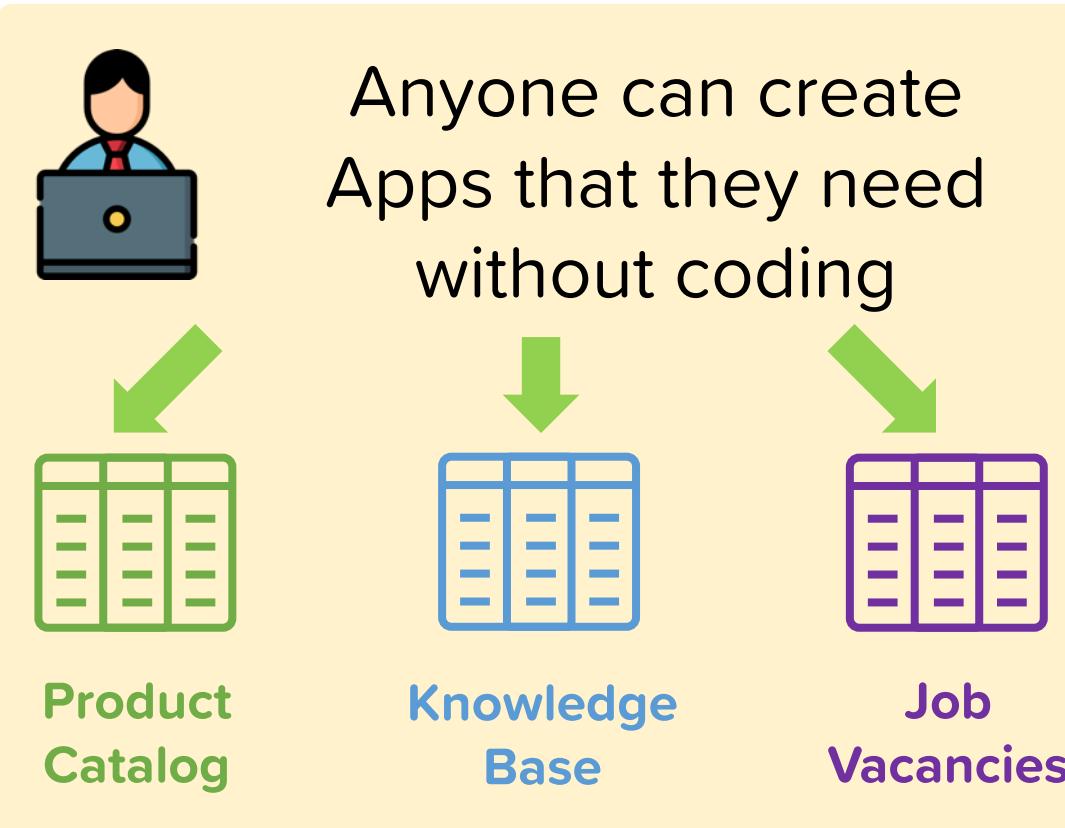
Control exactly who to share the data with. The granular permission controls can be configured to the Apps, the Records, or even at Field-by-field basis.

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 a star. The title 'Shared To Do' is displayed, along with the subtitle 'App: Shared To Do'. Below the title, 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.' The main area features a table with the following columns: To Do, Priority, Due date, Status, Details, and Attachment. The table contains five records:

| 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, it says 'Records 1 - 5 of 5'. The interface also includes a header bar with buttons for 'My To Do', a graph icon, a filter icon, and a list icon. There are also buttons for '+' (add), settings, and three dots.

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

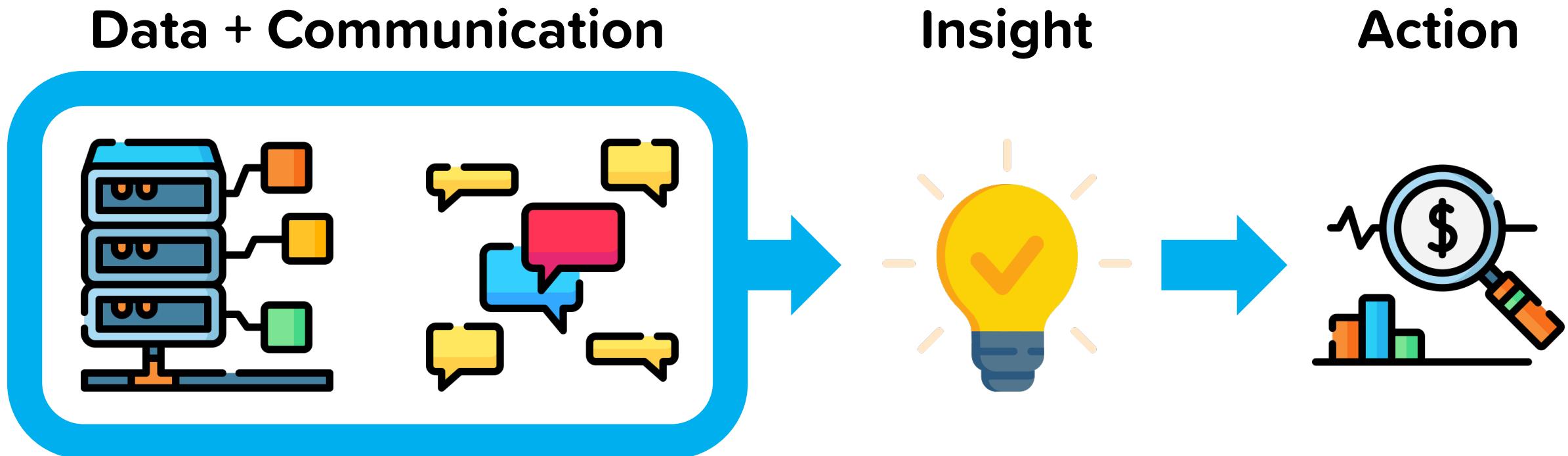
The screenshot shows the Kintone app builder interface. At the top, there's a navigation bar with 'Sales & Leads > Settings'. Below it, a header says 'Last Updated: Mary Simpson 12:10 AM'. The main title is 'Sales & Leads'. A toolbar has tabs for 'Form', 'Views', 'Graphs', and 'App Settings', with 'App Settings' being active. A green button labeled 'Save Form' is visible. On the left, a sidebar lists various field types: Label, Rich text, Number, Radio button, Multi-choice, Date, Date and time, Link, Department selection, Related records, Blank space, Field group, Record number, Created datetime, and Updated datetime. The main area shows a form titled 'Leads & Sales' with fields for 'Lead Title' and 'Sales Representative'. Below that is a section for 'Contact Info' with fields for 'Company Name' and 'Website', and another for 'Contact Name' and 'Job Title'. At the bottom, there's a table with columns 'Product Name', 'Product ID', 'Unit Price', and 'Quantity'.

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

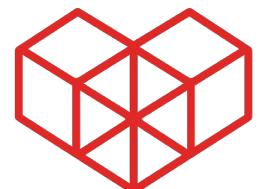
Apps are extensively **customizable** with client-side **JavaScript**.

Fulfill the Promise of Data Analytics

Gain meaningful insights about the data that become operationalized quickly.



How Developers Contribute

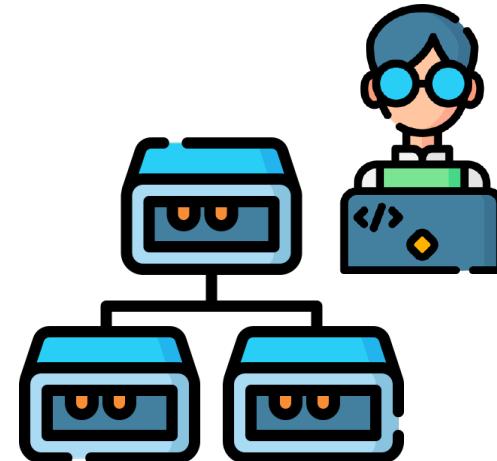


kintone
developer program

How Developers Contribute

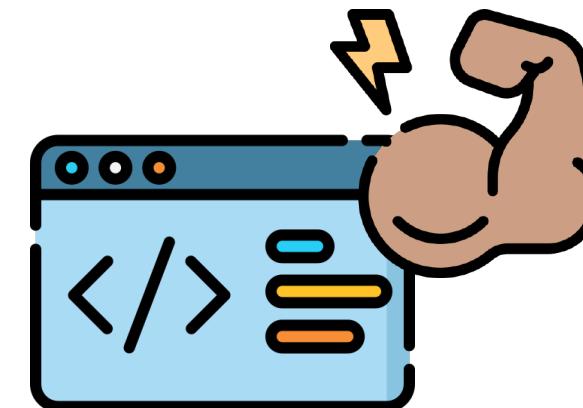
Command Center

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



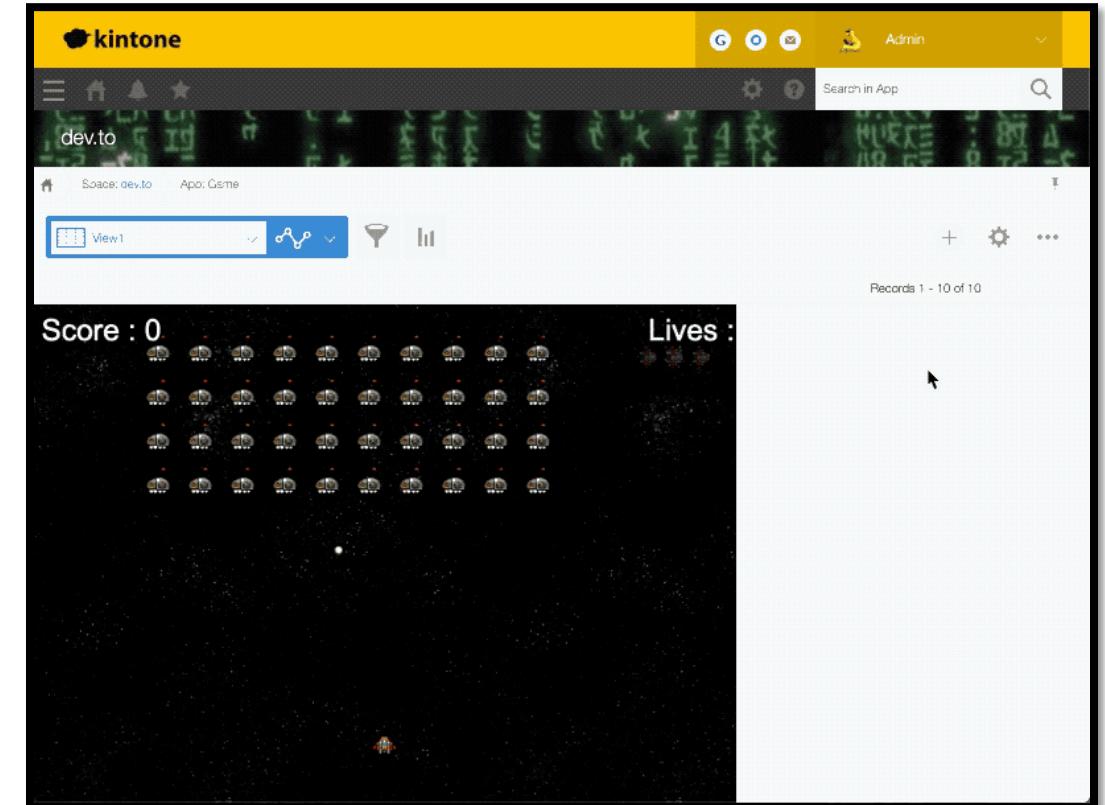
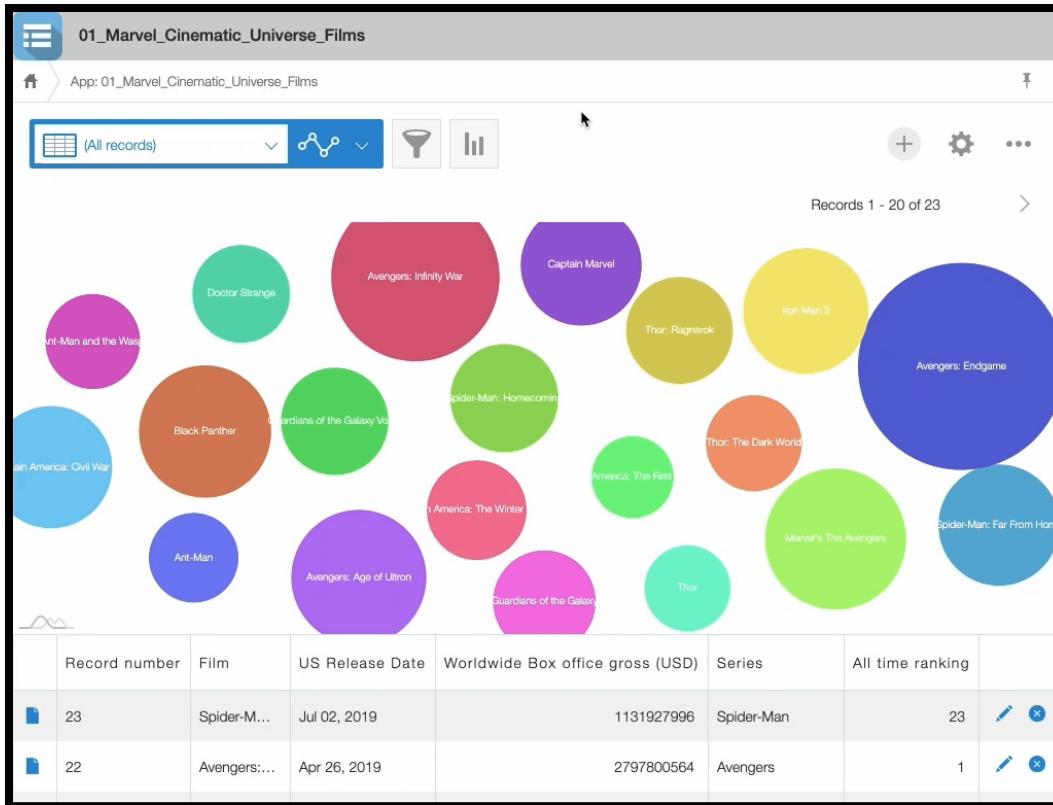
Enhancements

- Develop JavaScript customizations
- Build & share extensions



Create a Custom Look and Feel

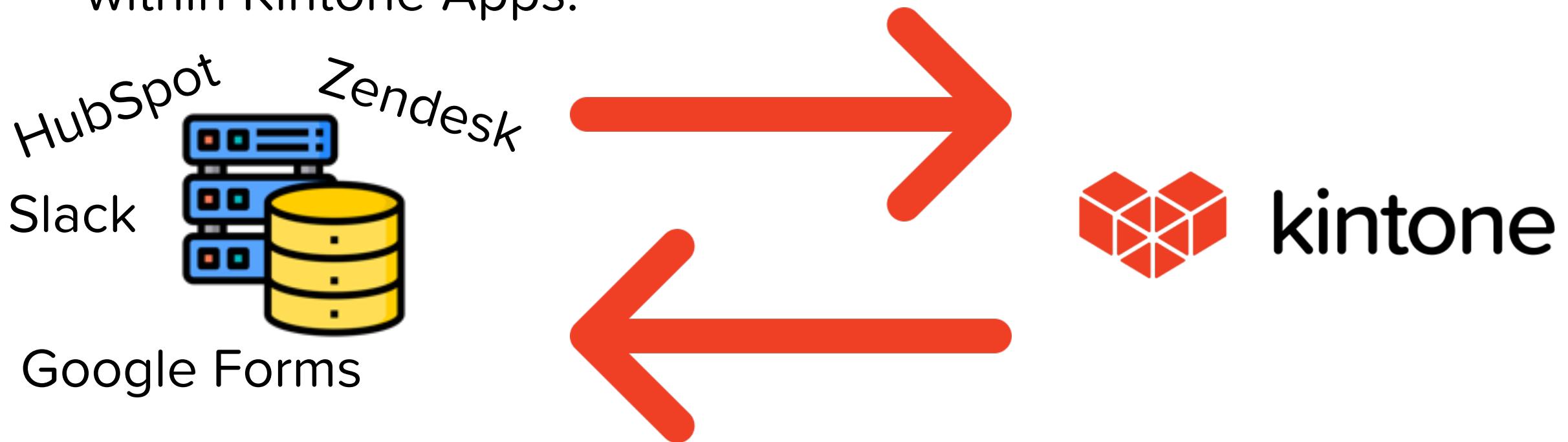
Display data the way you want with HTML, JS, and CSS



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!

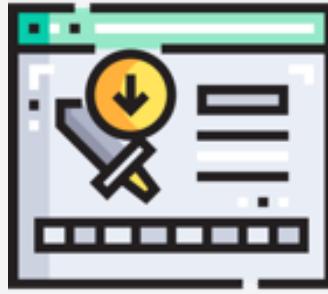


Contribute your
learnings to tech
blogs



Share your
projects with your
community!

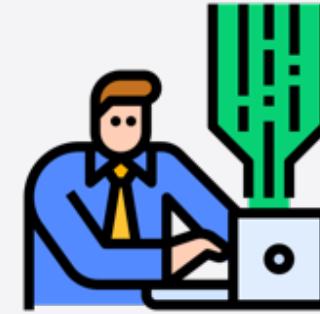
Kintone For Creating Revenue



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

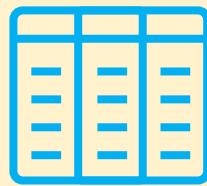
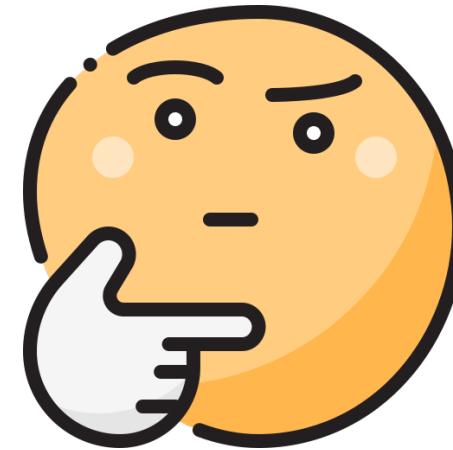
Today's Agenda

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

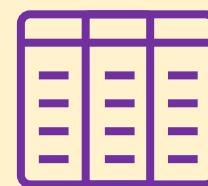
\$25 Amazon Gift Card
Raffle at the end!

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

What sort of database shall we make?



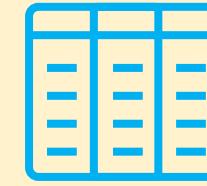
Employee List



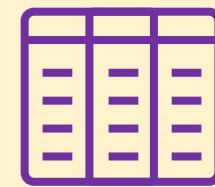
CRM



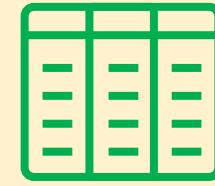
Expense Report



Company FAQ



Board Game DB



Lunch DB

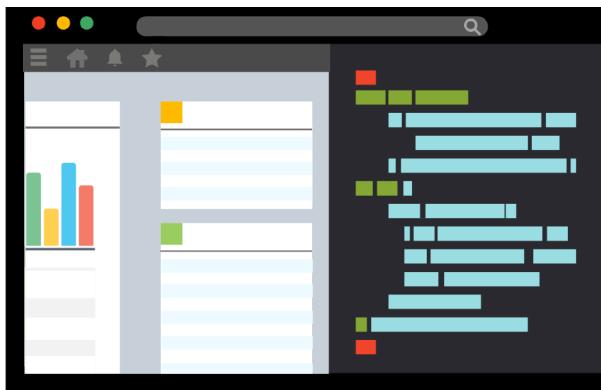


Hands-On Walk-Through

- 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 displays a "Set Initial Password" form. 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 right 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/...](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 'Services' section containing a large 'Administration' button with a gear icon. To the right of the administration button, there is a 'Notices' section with a message: 'Click to add users. User administration and login security settings are available.' A red arrow points from the text 'Click on Kintone button on the Left side' to the 'kintone' button, which is highlighted with a red 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 'Spaces' (Joined Spaces, All Spaces) and 'Apps' (All Apps, Add New App). A red arrow points from the text 'Click on the [+] button on the left side' to the '+ Add New App' button in the 'Apps' section. The main content area displays the 'Announcement' dashboard, which includes a welcome message, instructions on how to use Kintone, and a timestamp of Aug 8, 2017 11:00 AM by Administrator. Below the announcement is a 'Notifications' section showing zero unread notifications.



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 options: "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 toolbar with tabs for 'Form', 'Views', 'Graphs', and 'App Settings', with 'App Settings' currently selected. On the left, there is a sidebar titled 'Save Form' containing various field types: Label, Text, Rich text, Text area, Number, Calculated, Radio button, Check box, Multi-choice, Drop-down, Date, Time, Date and time, and Attachment. To the right of the sidebar, a large grey arrow points downwards with the text 'Drag and drop fields here.' below it.

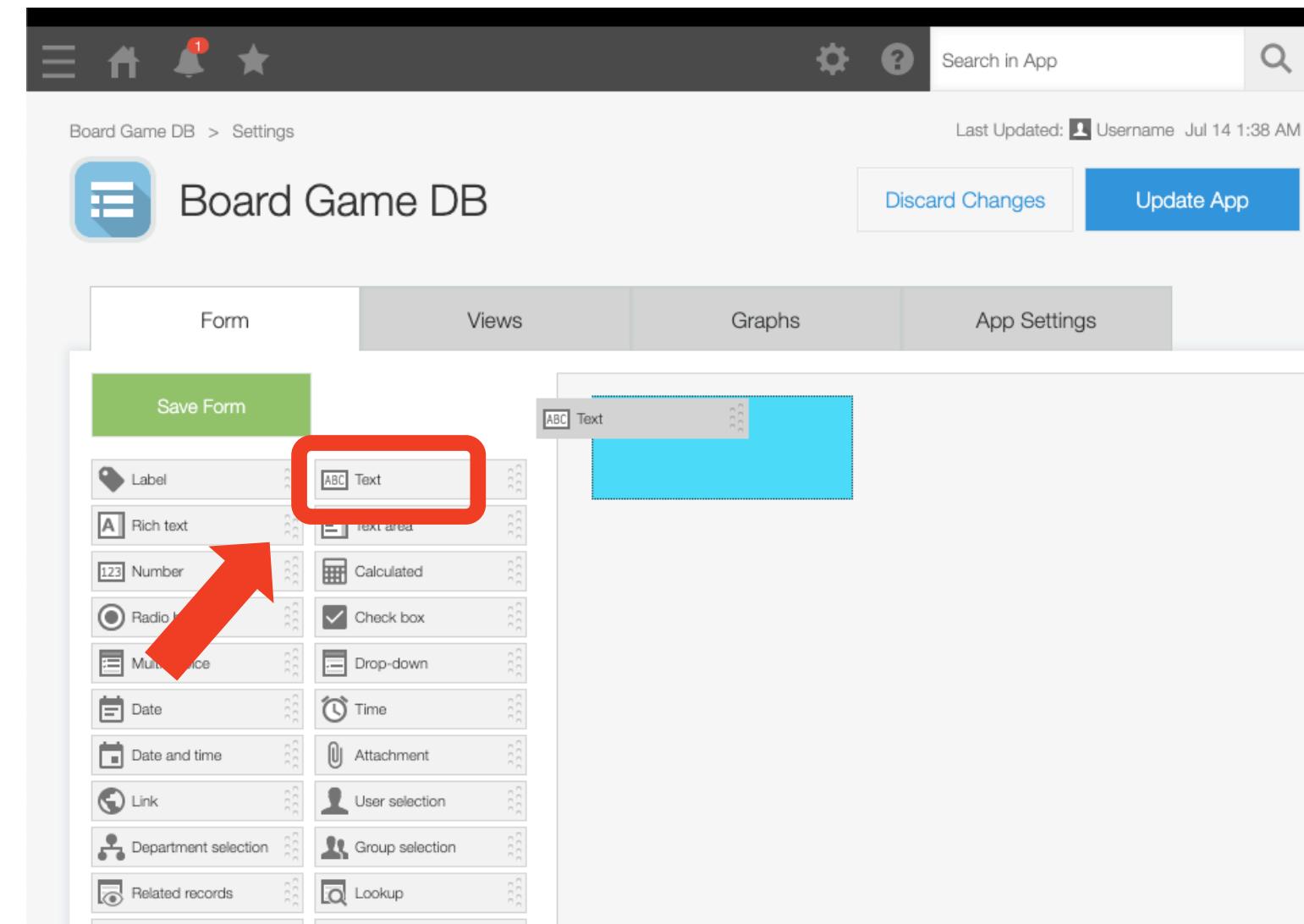


Drag and Drop the Text Field

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

The screenshot shows the Kintone app settings interface for the 'Board Game DB' application. At the top, there are navigation icons: three horizontal bars, a house, a bell, and a star. Below the title 'Board Game DB' are tabs for 'Form', 'Views', 'Graphs', and 'App S'. A green 'Save Form' button is visible. In the bottom left, there's a list of field types: Label, Rich text, Number, Text, Text area, Calculated, and Related records. The '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'.

The screenshot shows the 'Text Settings' configuration dialog. At the top right are 'Cancel' and 'Save' buttons. The main area includes fields for 'Name' (with a red arrow pointing to it), 'Hide field name', 'Calculate automatically', 'Required field', and 'Prohibit duplicate values'. It also has sections for 'Number of Characters (Note: Use integer)' with 'Minimum' and 'Maximum' fields, and 'Default Value'. At the bottom is a 'Field Code' section with a 'Text' input field containing 'Text' and a pencil icon.



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 and a question mark icon. To the right of the search bar is a timestamp: 'Last Updated: [User] Jul 14 1:38'. On the far right are two buttons: 'Discard Changes' and 'Update App'. The main area has tabs for 'Form', 'Views', 'Graphs', and 'App Settings', with 'Form' selected. A large green button labeled 'Save Form' is visible. On the left, there is a list of field types with their corresponding icons: Label, Rich text, Number, Radio button, Multi-choice, Date, Date and time, Link, Department selection, Text, Text area, Calculated, Check box, Drop-down, Time, Attachment, User selection, Group selection, and Person. The 'Drop-down' field type is highlighted with a blue selection box. To the right, there is a section titled 'Name' with a text input field. A large blue selection box covers the entire right side of the screen, indicating the target area for dragging the 'Drop-down' field.



Configure the Drop-down field

Hover over the **Drop-down** field

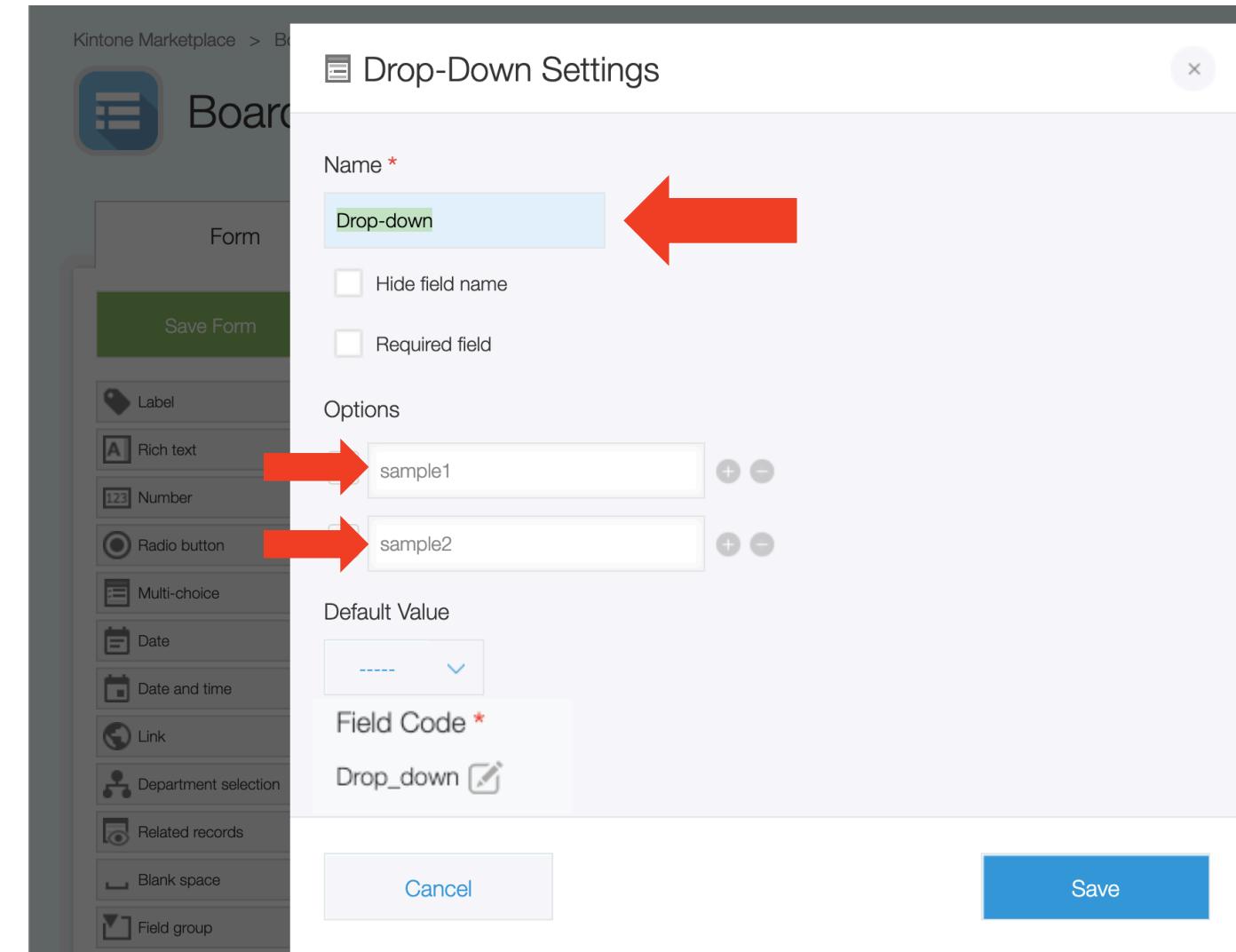
> Click on the Gear icon 

Replace the following text:

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

> "sample1" with **Abstract**

> "sample2" with **Area Control**





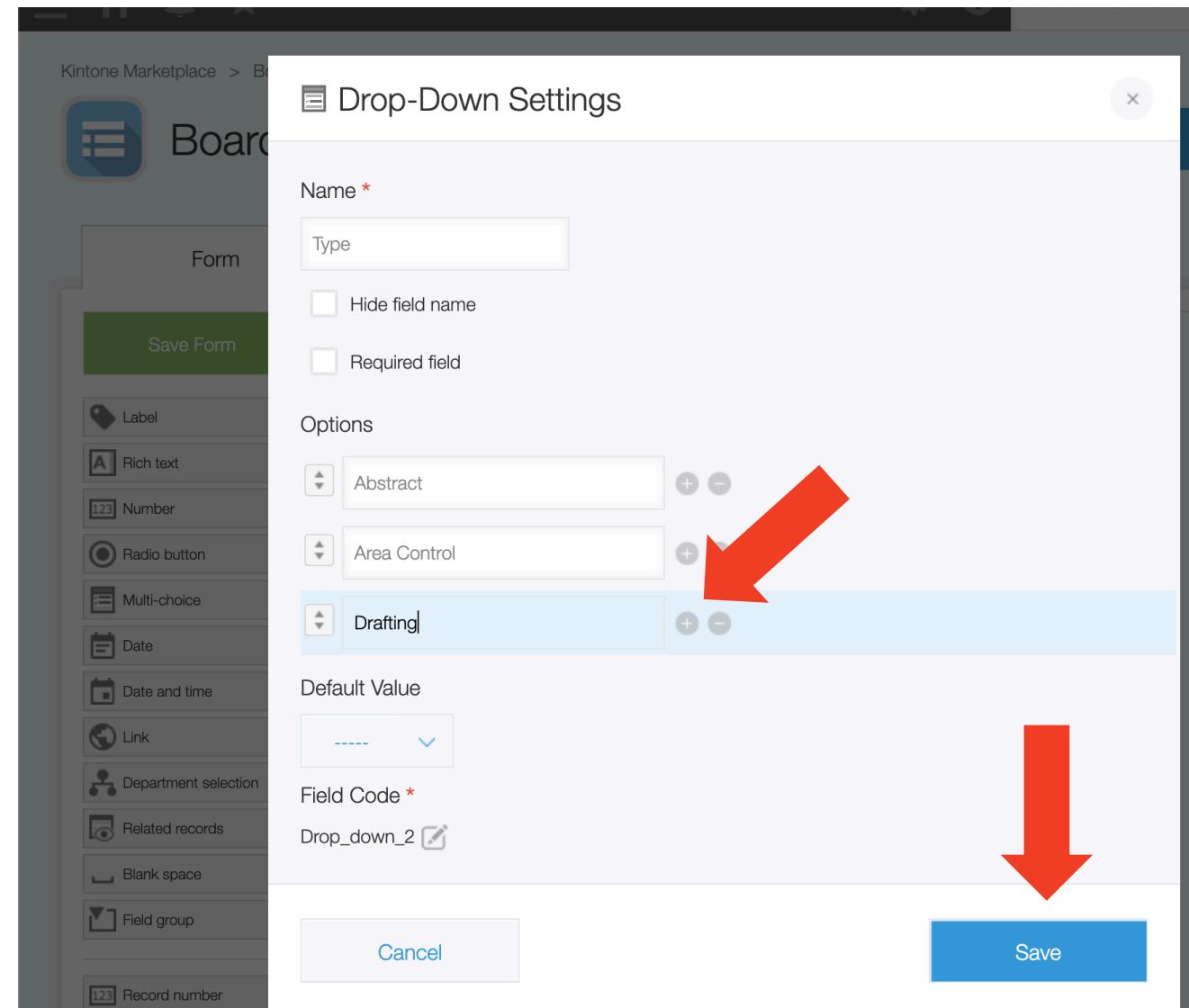
Configure the Drop-down field

Add another Options to the
Drop-down field

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

Type **Drafting**

Then click Save

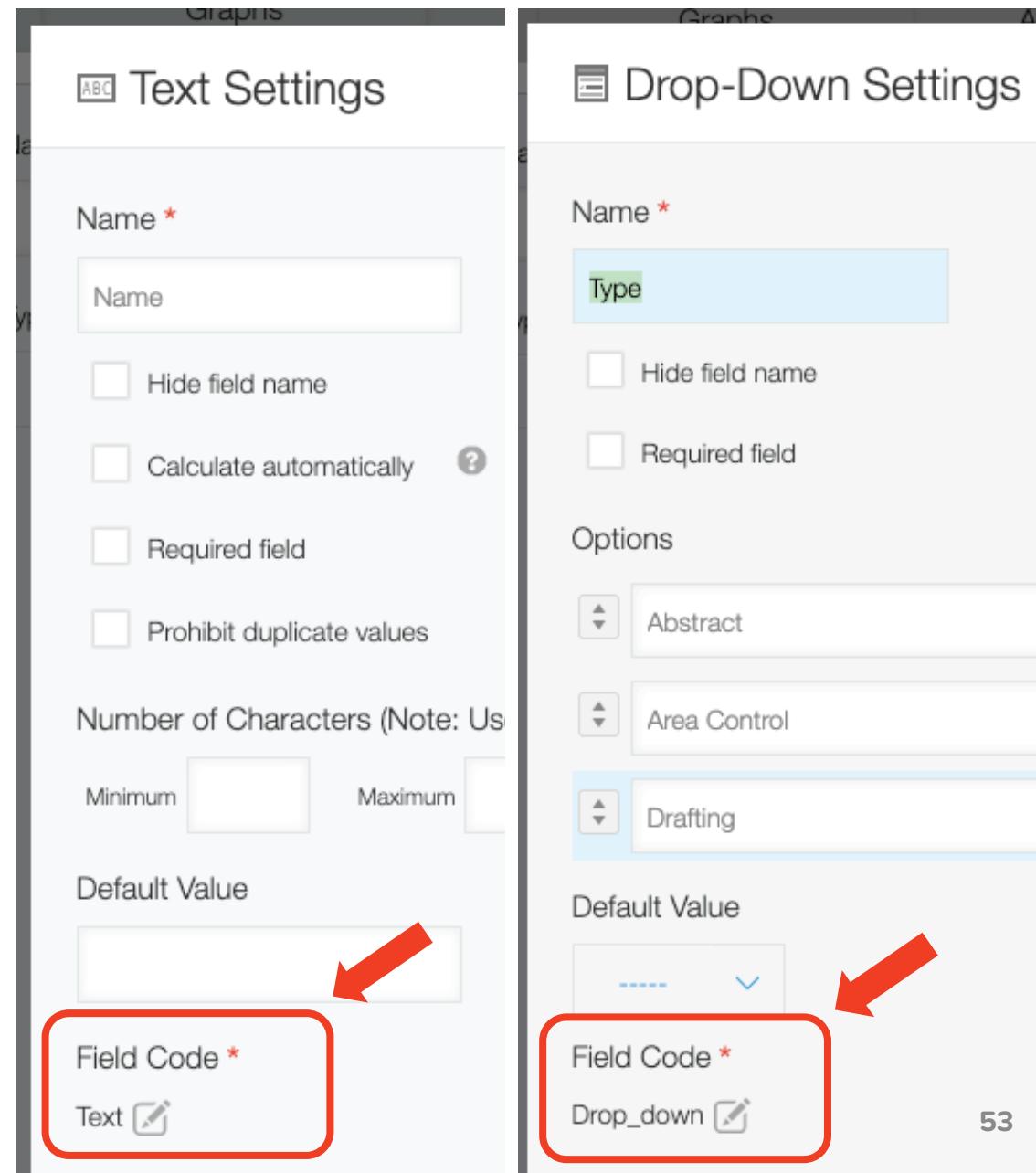


What are Field Codes?

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 current location is shown as "Kintone Marketplace > Board Game DB > Settings". The main content area displays the "Board Game DB" app settings. 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. The "App Settings" tab is selected. On the left, there is a "Form" tab and a "Save Form" button. Below the "Save Form" button is a grid of field types: Label, Text, Rich text, Text area, Number, Calculated, Radio button, Check box, Multi-choice, Drop-down, Date, Time, Date and time, and Attachment. To the right of the field types, there are input fields for "Name" and "Type".



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 three, home, bell, star, settings, help, and search. The title "Board Game DB" is displayed above the breadcrumb "App: Board Game DB". Below the title is a toolbar with a grid icon labeled "(All records)", a chart icon, a funnel icon, and a bar chart icon. To the right are buttons for adding a record (+), settings gear, and three dots for more options. The main area displays a table with columns: "Record number", "Name", and "Type". A message "(None)" indicates no records found. The status "Records 0 - 0 of 0" is shown below the table.

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

The screenshot shows the Kintone portal interface. At the top, there's a navigation bar with icons for Home, Announcements, and Favorites, along with a gear for settings, a question mark for help, and a search bar labeled "Search All Contents". Below the navigation bar is a banner with a green leaf and water droplets. The main content area has a heading "Portal" and a sub-section titled "Announcement" with a megaphone icon. A large "Welcome to Kintone!" message is displayed, followed by a description of what Kintone is. To the right, there's a sidebar with sections for "Spaces" (listing "Joined Spaces" and "(None) All Spaces"), "Apps" (listing "All Apps"), and a specific entry for "Board Game DB" which is highlighted with a red border and a red arrow pointing to it. At the bottom of the screen, there's a footer with the date "Aug 8, 2017 11:00 AM" and the word "Administrator".

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 toolbar with filters and search icons, and a main table view displaying eight records. The table columns are: Record number, Name, Type, Min Players, Max Players, and actions (edit, delete).

Annotations in red text and arrows provide instructions:

- Access the Details page of the row (record)**: Points to the edit icon in the first row.
- Data you add to the App is listed here**: Points to the table body.
- Add new data**: Points to the plus sign icon in the top right corner of the table.
- Access the App's settings**: Points to the gear icon in the top right corner of the table.

| 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 | |

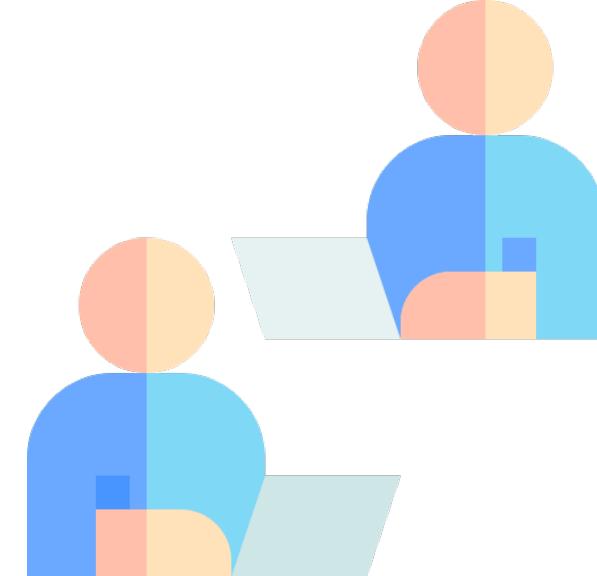
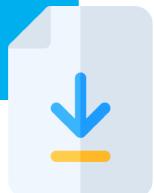


Time To Get Started!

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_WordCloud



Today's Agenda

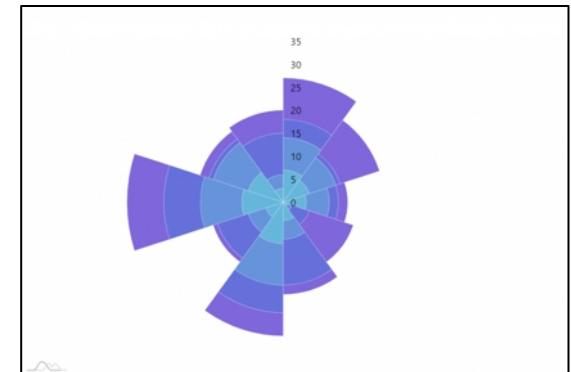
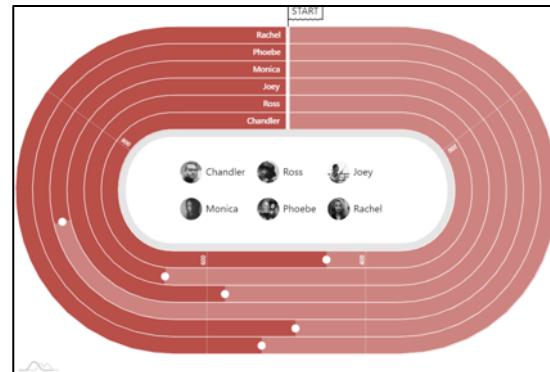
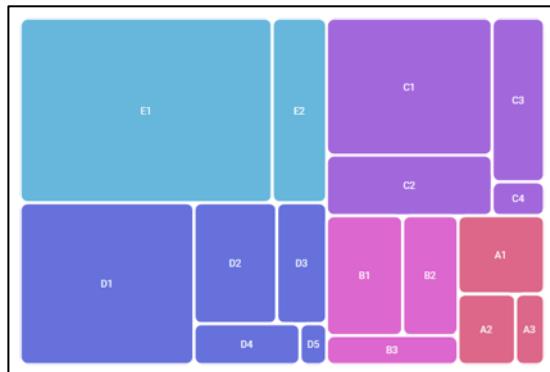
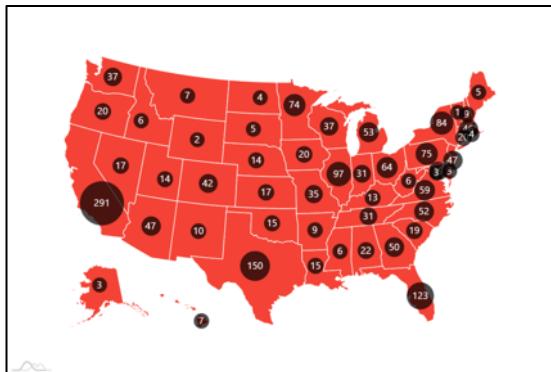
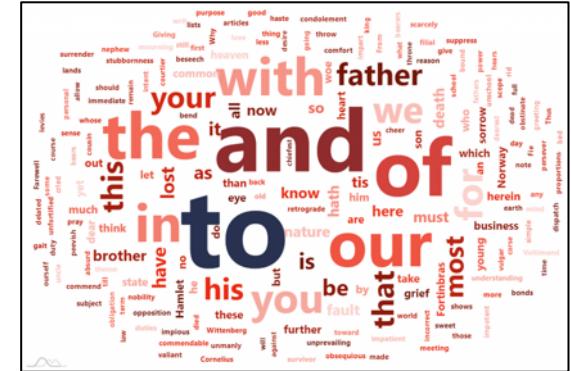
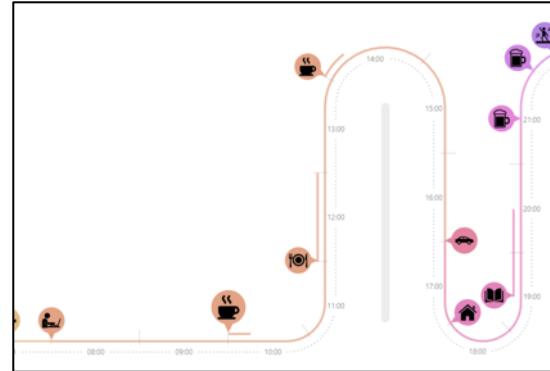
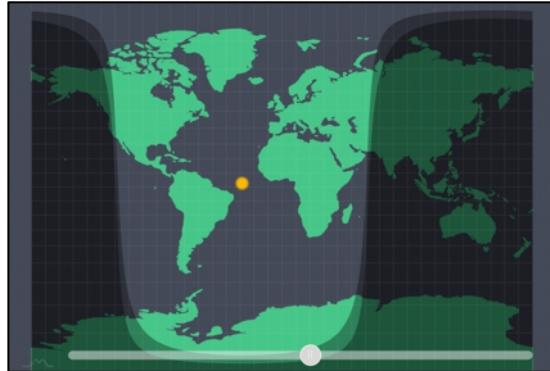
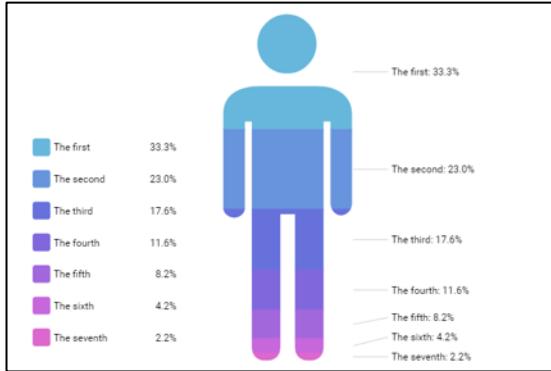
- 1 Get the Big Picture
- 2 Create a Kintone App
- 3 Display amCharts on Kintone
- 4 Call REST APIs from Kintone

What is amCharts?



www.amcharts.com

What Does amCharts Offer?



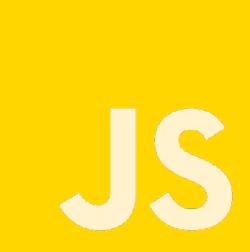
www.amcharts.com

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
}
```

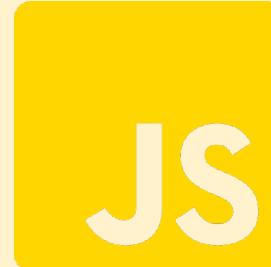
How to Use amCharts on Kintone?



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

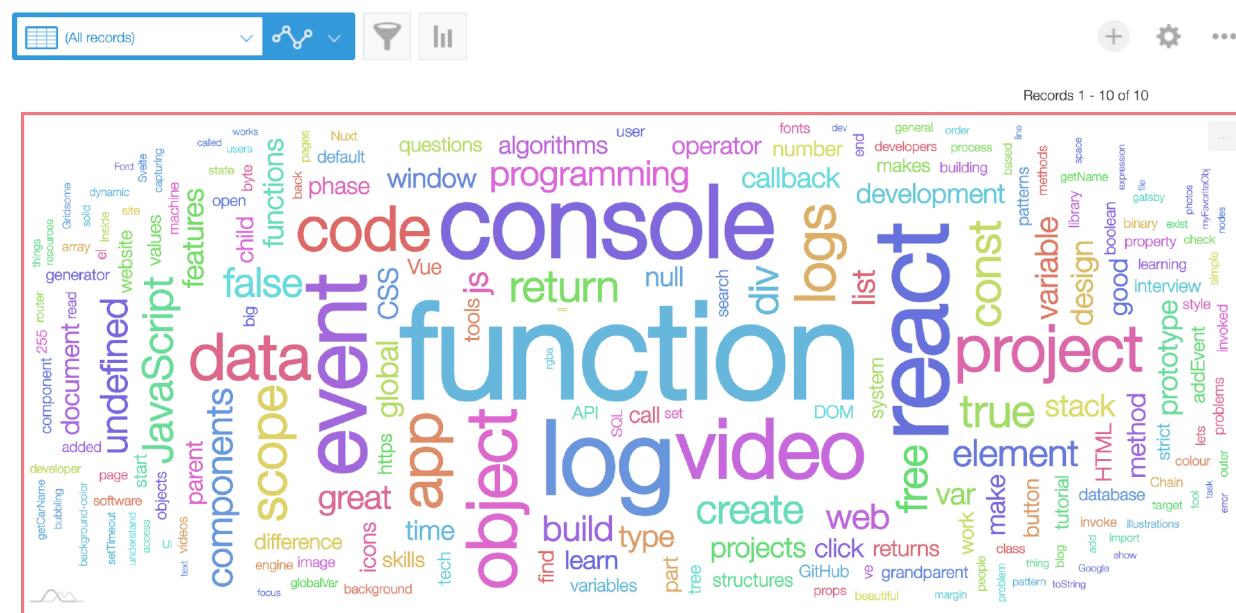
```
// Add data
chart.data = [
  {
    "country": "Ireland",
    "litres": 201.1
  },
  {
    "country": "Czechia",
    "litres": 301.9
  }
];
```

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.



Record number	Article Title	Written By	Link	Content	
10	9 Projects you can do to become a Frontend Master in 2020	Simon Holdorf	https://dev.to/simonholdorf/9-projects-you-can-do-to-become-a-frontend-master-in-2020	introduction Whether you are new to progr...	
9	The Interview Study Guide For Software Engineers	SeattleDataGuy	https://dev.to/seattledataguy/the-interview-study-guide-for-software-engineers	By Ben Rogojan Software engineering inter...	
8	🚀 JavaScript Visualized: the JavaScript Engine	Lydia Hallie	https://dev.to/lydiahallie/javascript-visualized-the-javascript-engine	JavaScript is cool (don't @ me), but how c...	
7	70 JavaScript Interview Questions	Mark A	https://dev.to/macmacky/70-javascript-interview-questions	"Hi Guys Good Day and a Happy New Year...	
6	50+ free tools and resources to create awesome user interf...	Davide Pacilio	https://dev.to/davidepacilio/50-free-tools-and-resources-to-create-awesome-user-interf...	"You're only as good as the tools you use" ...	
5	6 GitHub Repos For Instant Knowledge Boost	Miroslaw Farajewicz	https://dev.to/mfarajewicz/6-github-repos-for-instant-knowledge-boost	Github is not only a place for storing our co...	
4	10 Great Programming Projects to Improve Your Resume a...	SeattleDataGuy	https://dev.to/seattledataguy/10-great-programming-projects-to-improve-your-resume-a...	One of the common questions we get whe...	
3	💡 JavaScript Visualized: Event Loop	Lydia Hallie	https://dev.to/lydiahallie/javascript-visualized-event-loop	JavaScript Visualized (7 Part Series) Oh boi...	
2	My favorite CSS hack	Gajus Kuizinas	https://dev.to/gajus/my-favorite-css-hack	There is one CSS snippet that I have been ...	
1	What is a Full Stack Developer in 2020	SeattleDataGuy	https://dev.to/seattledataguy/what-is-a-full-stack-developer-in-2020	Full Stack Developer	

Hands-On Walk-Through

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

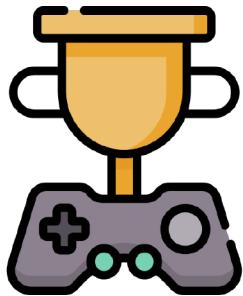


amCharts Customization for Kintone

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

dev.to Articles

The CSV file's data is a compilation of dev.to's most popular articles from this year. Check out <https://dev.to/> to get inspired for your next project or get helpful coding tips!



CSV file: 01_Article_Data.csv

Raw

Search this file...

1	Article Title	Written By	Link
2	22 Miraculous Tools for React Developers in 2019	jsmanifest	https://dev.to/jsmanifest/22-miraculous-tools-for-react-developers-in-
3	My favorite CSS hack	Gajus Kuizinas	https://dev.to/gajus/my-favorite-css-hack-32g3
4	💡 JavaScript Visualized: Event Loop	Lydia Hallie	https://dev.to/lydiahallie/javascript-visualized-event-loop-3dif
5	10 Great Programming Projects to Improve Your Resume and Learn to Program	SeattleDataGuy	https://dev.to/seattledataguy/10-great-programming-projects-to-impr
6	50+ free tools and resources to create awesome user interfaces	Davide Pacilio	https://dev.to/davidepacilio/50-free-tools-and-resources-to-create-aw
7	70 JavaScript Interview Questions	Mark A	https://dev.to/macmacky/70-javascript-interview-questions-5gfi
8	🚀 JavaScript Visualized: the JavaScript Engine	Lydia Hallie	https://dev.to/lydiahallie/javascript-visualized-the-javascript-engine-4o
9	The Interview Study Guide For Software Engineers	SeattleDataGuy	https://dev.to/seattledataguy/the-interview-study-guide-for-software-
10	9 Projects you can do to become a Frontend Master in 2020	Simon Holdorf	https://dev.to/simonholdorf/9-projects-you-can-do-to-become-a-fron



Create a new Kintone App from a CSV file

1. Download the CSV file:

bit.ly/KDP_WordCloud

- Click on the **CSV file** link
- Right-click the page & **Save As...** as a CSV file

2. Create a Kintone App:

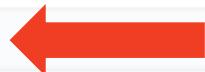
Portal > [+] button

3. Select Create from CSV

4. Continue & Upload CSV...

- 50+ free tools and resources to create awesome user interfaces by Davide Pacilio
- 70 JavaScript Interview Questions by Mark A
- 🎨 JavaScript Visualized: the JavaScript Engine by Lydia Hallie
- The Interview Study Guide For Software Engineers by SeattleDataGuy

01_Article_Data.csv



Search this file...

1 Article Title	Written By	Link
2 22 Miraculous Tools for React Developers in 2019	jsmanifest	https://dev.to/jsmmanifest/22-miraculous-tools-for-react-developers-in-2019
3 My favorite CSS hack	Gajus Kuizinas	https://dev.to/gajus/my-favorite-css-hack-32g3
4 🎨 JavaScript Visualized: Event Loop	Lydia Hallie	https://dev.to/lydiahallie/javascript-visualized-event-loop-3df1
5 10 Great Programming Projects to Improve Your Resume and Learn to Program	SeattleDataGuy	https://dev.to/seattledataguy/10-great-programming-projects-to-improve-your-resume-and-learn-to-program
6 50+ free tools and resources to create awesome user interfaces	Davide Pacilio	https://dev.to/davidepacilio/50-free-tools-and-resources-to-create-awesome-user-interfaces
7 70 JavaScript Interview Questions	Mark A	https://dev.to/macmacky/70-javascript-interview-questions-5gfi
8 🎨 JavaScript Visualized: the JavaScript Engine	Lydia Hallie	https://dev.to/lydiahallie/javascript-visualized-the-javascript-engine-4-5ggi
9 The Interview Study Guide For Software Engineers	SeattleDataGuy	https://dev.to/seattledataguy/the-interview-study-guide-for-software-engineers
10 9 Projects you can do to become a Frontend Master in 2020	Simon Holdorf	https://dev.to/simonholdorf/9-projects-you-can-do-to-become-a-frontend-master-in-2020

02_CDN_URLs.txt

```
1 // Order matters when inserting CDN URLs into Kintone App settings
2
3 https://cdn.amcharts.com/lib/4/core.js
4 https://cdn.amcharts.com/lib/4/charts.js
5 https://cdn.amcharts.com/lib/4/plugins/wordCloud.js
6 https://cdn.amcharts.com/lib/4/themes/animated.js
```

03_WordCloud.js

```
1 function () {
2   "use strict";
3 }
```

Raw

69



Create a new Kintone App from a CSV file

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

The screenshot shows the Kintone Portal interface. The main content area displays an announcement titled "Welcome to Kintone!" with a brief description of the platform's purpose. Below the announcement, there is a section titled "How to use Kintone" with a link to "How to use the Announcements dashboard". On the right side of the screen, there is a sidebar with several sections: "Announcement" (selected), "Spaces" (with options for "Joined Spaces" and "All Spaces"), "Apps" (with a red arrow pointing to the "+ Add App" button), and "Board Game DB" (a listed app). The bottom of the screen shows the date and time: "Aug 8, 2017 11:00 AM" and "Administrator".



Create a new Kintone App from a CSV file

1. Download the CSV file:
bit.ly/KDP_WordCloud
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

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

How to Find Apps?

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 Excel
- Create from CSV** (highlighted by a red box)
- Create from Template File

Featured Apps



Create a new Kintone App from a CSV file

1. Download the CSV file
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
 - Change Character Encoding to **Unicode (UTF-8)**
 - Scroll down to the Convert button

The screenshot shows the Kintone Marketplace homepage. At the top, there's a yellow header bar with the Kintone logo and an 'Administrator' user icon. Below the header is a dark navigation bar with icons for Home, Notifications, and Favorites. To the right of the navigation bar is a search bar labeled 'Search All Contents' and a magnifying glass icon.

The main content area is titled 'Kintone Marketplace'. On the left, there's a sidebar with sections for 'Marketplace Search' (with a search bar), 'By Department' (listing Sales, Customer Service, Human Resources, IT & Administration, Research & Development, Marketing, Legal & Finance, and Company-wide), 'Scenario' (listing Mobile, Project Management, Business to Customer, and NPO), and 'Miscellaneous' (listing 'What's new' and 'Recommended Apps').

In the center, there's a section titled 'How to Find Apps?' with a note: 'Choose from the list of FREE business productivity apps or use our app builder to make your own app.' Below this is a 'Create New App' section with four options:

- Create App from Scratch** (icon: white square)
- Create from Excel** (icon: Excel sheet)
- Create from CSV** (icon: CSV file)
- Create from Template File** (icon: template file)

A large red arrow points to the 'Create from CSV' button. At the bottom of the page, there's a 'Featured Apps' section with cards for 'Sales CRM Pack' by kintone Corporation and 'Project Management...' by kintone Corporation.

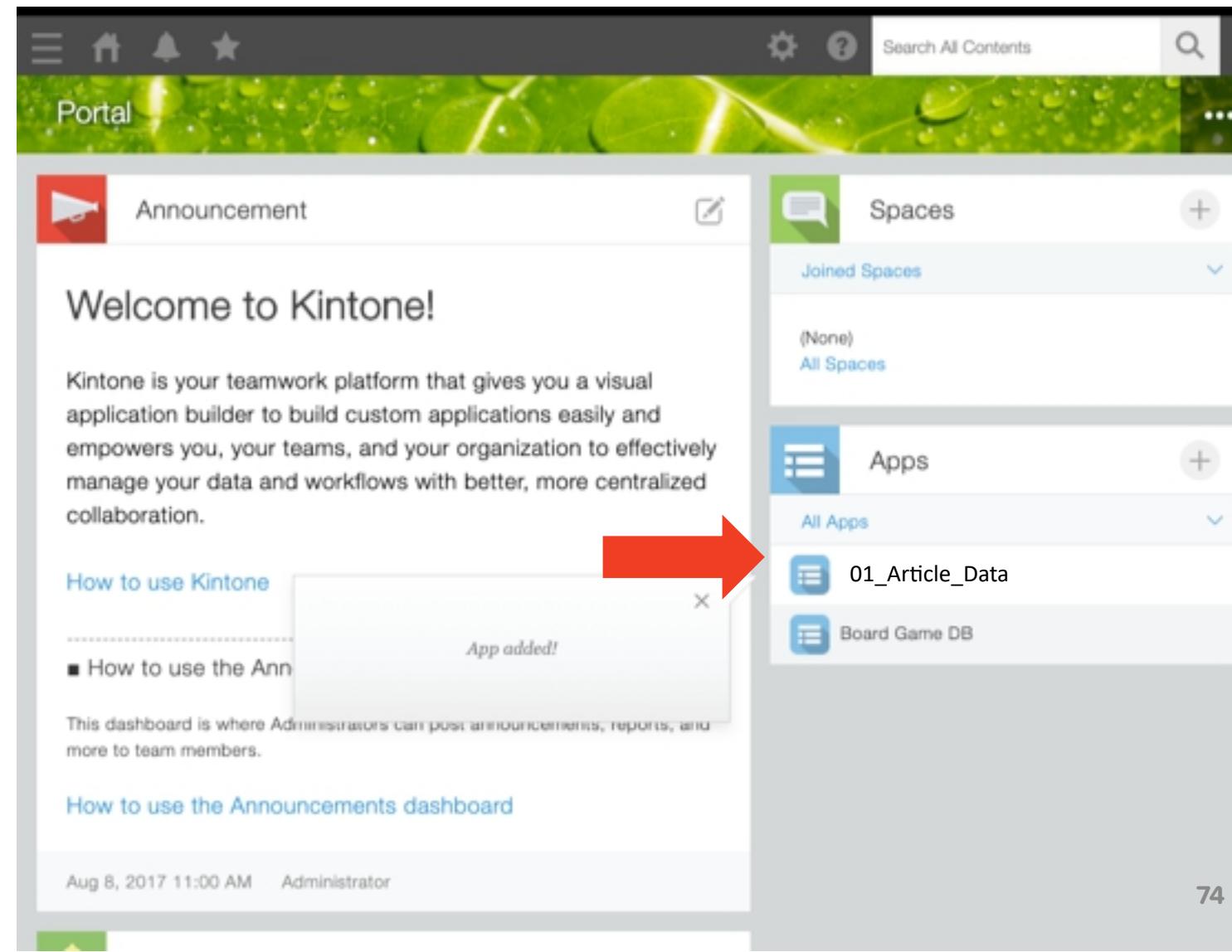
amCharts Customization for Kintone

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 Esports Earnings 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.





Add JavaScript Libraries to the App

1. Find and click on the Esports Earnings 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.

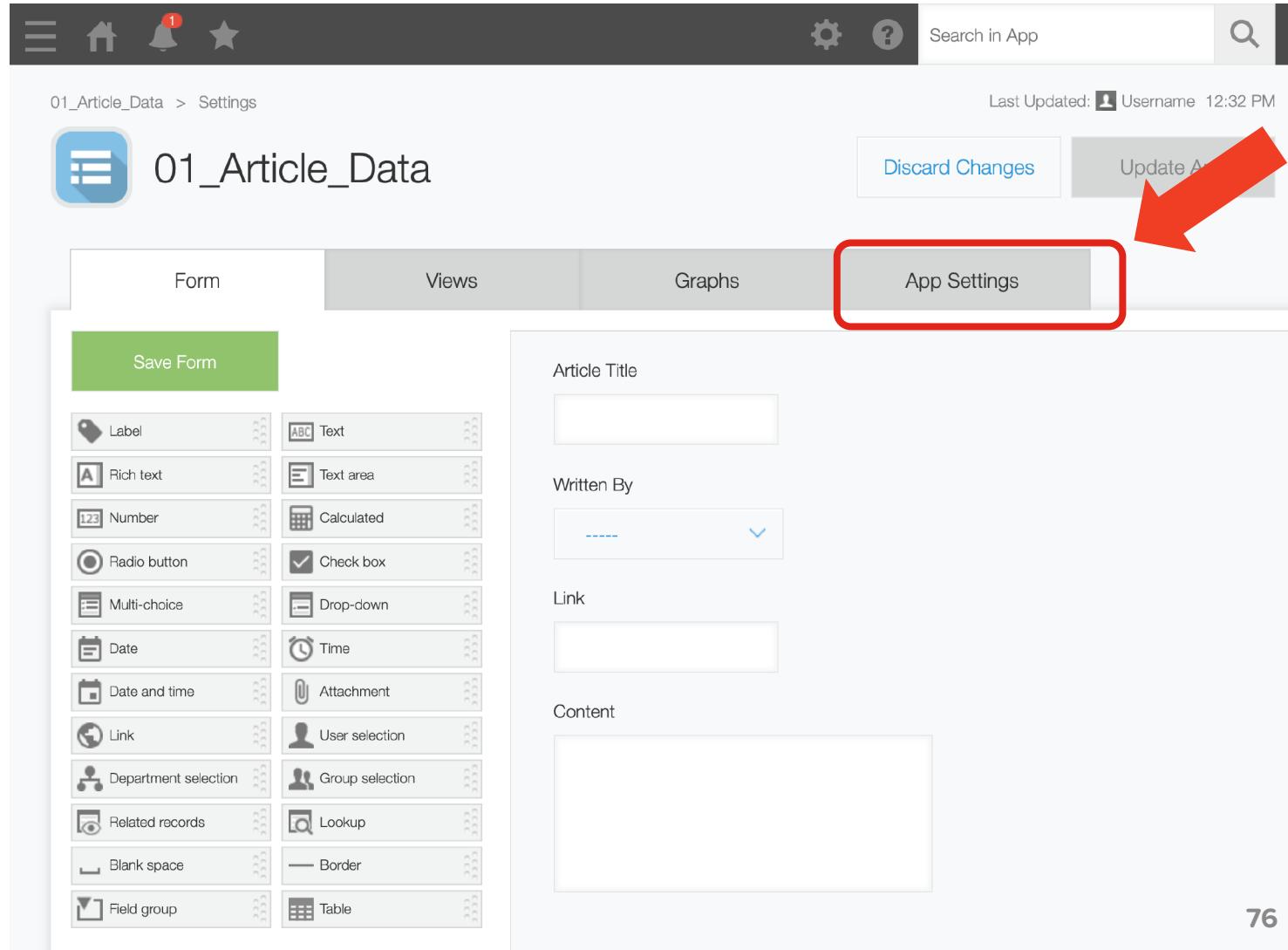
The screenshot shows a software application interface. At the top, there is a navigation bar with icons for home, search, and settings. A blue banner message says "File imported successfully!". Below the banner, there is a list item "01_Article_Data" with a sub-item "App: 01_Article_Data". At the bottom right of the main area, there is a gear icon inside a red square box, indicating it is the target for step 2. A large red arrow points downwards towards this gear icon.

	Record number	Article Title	Written By	Link	Content	
10	10	9 Projects you can do to become a Frontend Dev	Simon Holdorf	https://dev.to/simoneholdorf/9-projects-you-can-do-to-become-a-frontend-developer	Introduction Whether you ar...	
9	9	The Interview Study Guide For Software Developers	SeattleDataGuy	https://dev.to/seattledataguy/the-interview-study-guide-for-software-developers	By Ben Rogojan Software e...	
8	8	🚀 JavaScript Visualized: the JavaScript Event Loop	Lydia Hallie	https://dev.to/lydiahallie/javascript-visualized-the-javascript-event-loop	JavaScript is cool (don't @ ...	
7	7	70 JavaScript Interview Questions	Mark A	https://dev.to/marka/70-javascript-interview-questions	Hi Guys Good Day and a Ha...	
6	6	50+ free tools and resources to create a portfolio	Davide Pacilio	https://dev.to/davidepacilio/50-free-tools-and-resources-to-create-a-portfolio	"You're only as good as the ...	
5	5	6 GitHub Repos For Instant Knowledge	Miroslaw Farajewicz	https://dev.to/mfara/6-github-repos-for-instant-knowledge	Github is not only a place for...	
4	4	10 Great Programming Projects to Improve Your Skills	SeattleDataGuy	https://dev.to/seattledataguy/10-great-programming-projects-to-improve-your-skills	One of the common questi...	
3	3	💡 JavaScript Visualized: Event Loop	Lydia Hallie	https://dev.to/lydiahallie/javascript-visualized-event-loop	JavaScript Visualized (7 Part...)	



Add JavaScript Libraries to the App

1. Find and click on the Esports Earnings 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.

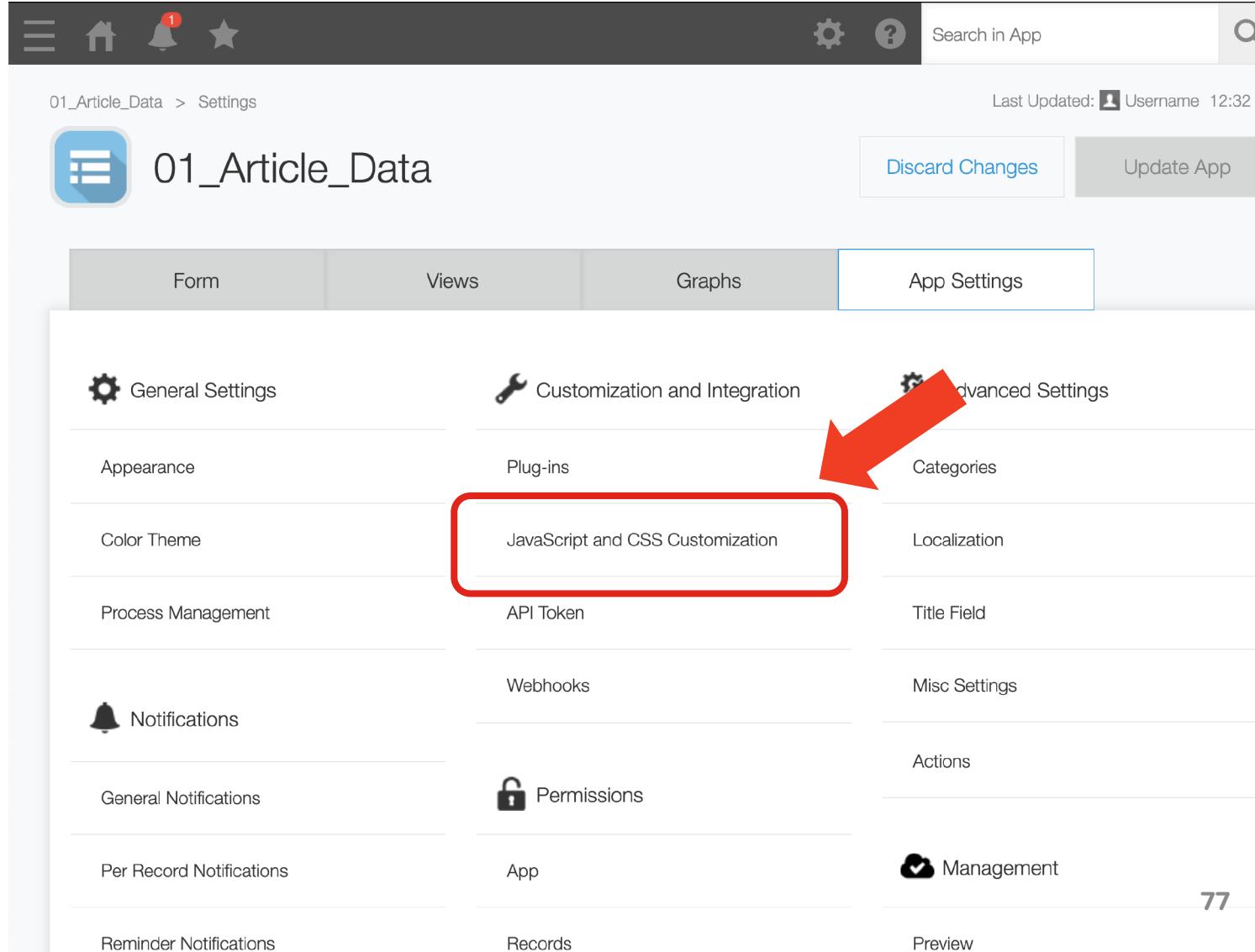


The screenshot shows the '01_Article_Data' app settings page. At the top, there are navigation icons (three horizontal lines, home, bell with 1 notification, star), a gear icon for settings, a question mark icon, a search bar ('Search in App'), and a status message ('Last Updated: [User] Username 12:32 PM'). Below the header, there are tabs: 'Form', 'Views', 'Graphs', and 'App Settings'. The 'App Settings' tab is highlighted with a red box and an arrow pointing to it. On the left, there is a sidebar with various form field icons: 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, Drop-down, Time, Attachment, User selection, Group selection, Lookup, Border, and Table. To the right, there are input fields for 'Article Title', 'Written By' (with a dropdown menu), 'Link', and 'Content'.



Add JavaScript Libraries to the App

1. Find and click on the Esports Earnings 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_Article_Data' app settings page. The 'App Settings' tab is active. In the 'Plug-ins' section, the 'JavaScript and CSS Customization' option is highlighted with a red box and a red arrow pointing to it from the text in step 4.

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



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://cdn.amcharts.com/lib/4/plugins/wordCloud.js>

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

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

The screenshot shows the 'JavaScript and CSS Customization' section of a configuration interface. At the top, there are tabs for '01_Esports_Earnings', 'Settings', and 'JavaScript and CSS Customization'. Below the tabs are 'Save' and 'Cancel' buttons. The main area is titled 'JavaScript and CSS Customization' with a sub-instruction: 'You can customize this app with JavaScript and CSS. Please make sure you read through the [JavaScript Coding Guidelines](#) prior to the development.' There are three radio buttons for 'Scope of Customization': 'Affect all users' (selected), 'Affect only app administrators', and 'Disable'. The 'Upload JavaScript for PC' section contains four 'Add Link' buttons, with the second one being green ('Add File'). The 'Upload JavaScript for Mobile Devices' section also has four 'Add Link' buttons, with the second one being green ('Add File'). The 'Add the 4 links here' text is enclosed in a red box and points to the 'Add File' button in the 'Upload JavaScript for PC' section.

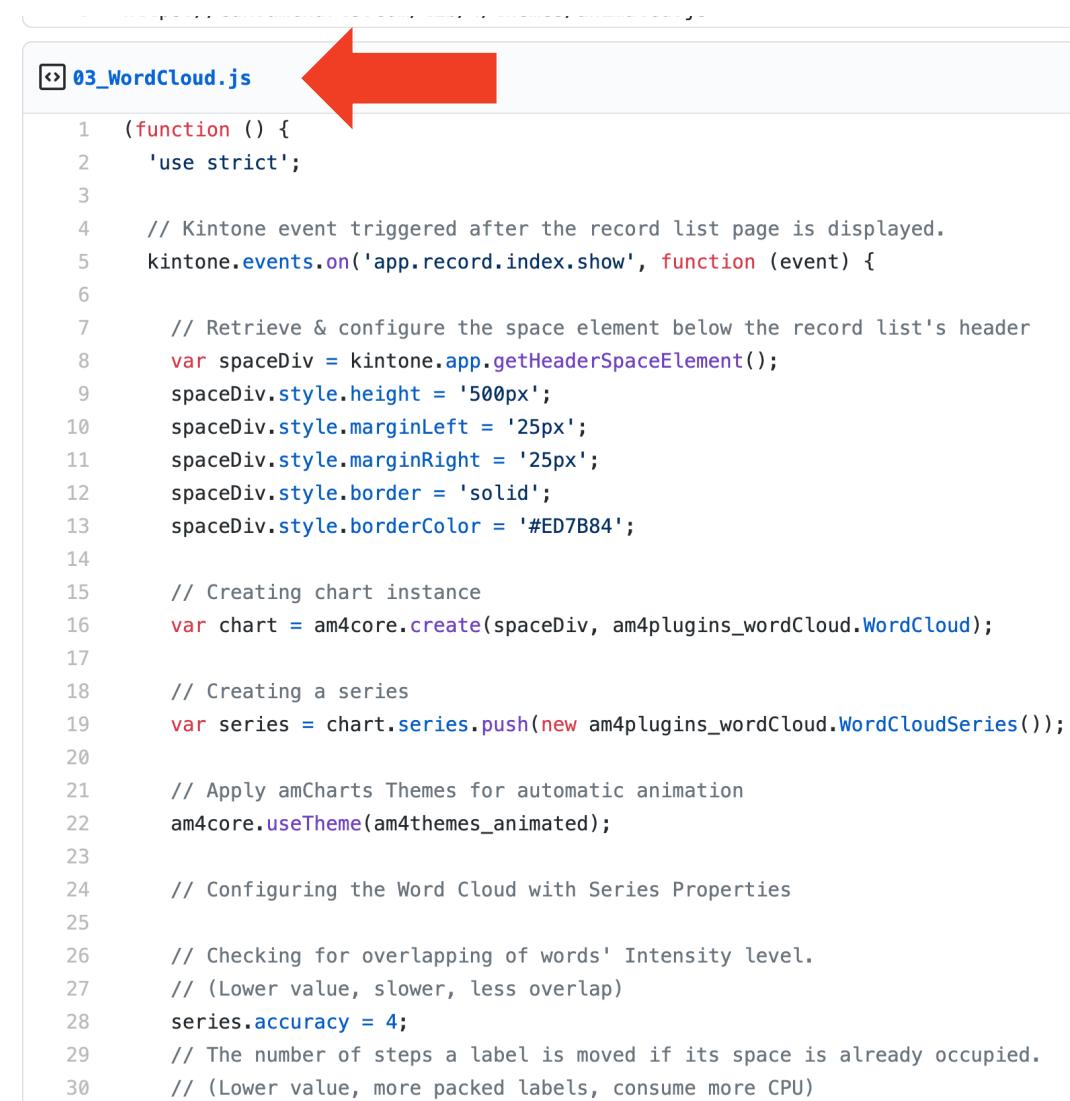
amCharts Customization for Kintone

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. Download the JS file:
03_WordCloud.js
bit.ly/KDP_WordCloud
2. Click on Add File button & upload the JS file
3. Click on Save button
4. Click on Update App button



```
03_WordCloud.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         // Retrieve & configure the space element below the record list's header
8         var spaceDiv = kintone.app.getHeaderSpaceElement();
9         spaceDiv.style.height = '500px';
10        spaceDiv.style.marginLeft = '25px';
11        spaceDiv.style.marginRight = '25px';
12        spaceDiv.style.border = 'solid';
13        spaceDiv.style.borderColor = '#ED7B84';
14
15        // Creating chart instance
16        var chart = am4core.create(spaceDiv, am4plugins_wordCloud.WordCloud);
17
18        // Creating a series
19        var series = chart.series.push(new am4plugins_wordCloud.WordCloudSeries());
20
21        // Apply amCharts Themes for automatic animation
22        am4core.useTheme(am4themes_animated);
23
24        // Configuring the Word Cloud with Series Properties
25
26        // Checking for overlapping of words' Intensity level.
27        // (Lower value, slower, less overlap)
28        series.accuracy = 4;
29
30        // The number of steps a label is moved if its space is already occupied.
31        // (Lower value, more packed labels, consume more CPU)
```



Add a Custom JavaScript File to the App

1. Download the 03_WordCloud.js file
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 of a Kintone application. At the top, there are navigation icons (three horizontal bars, home, bell with a '1', star), settings gear, and a search bar. The page title is '01_Esports_Earnings > Settings > JavaScript and CSS Customization'. Below the title, there are two buttons: 'Save' and 'Cancel'. The main content area is titled 'JavaScript and CSS Customization' and contains 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' (a list of four URLs with remove buttons), and 'Upload JavaScript File for Mobile Device' (two buttons: 'Add Link' and 'Add File' with a maximum size of 20 MB). A red box highlights the 'Add File' button for mobile devices. A red arrow points from a callout bubble containing the text 'Add 03_WordCloud.js file here' to this button. To the right, there are sections for 'Customization samples' (link to 'Kintone Customization Gallery') and 'Community support' (link to 'Kintone Developer Program').



Add a Custom JavaScript File to the App

1. Download the 03_WordCloud.js file
2. Click on Add File button & upload the JS file
3. Click on Save button
4. Click on Update App button

01_Article_Data > Settings > JavaScript and CSS Customization

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

Add 03_WordCloud.js file here

(Maximum file size: 10 MB)

Add Link Add File

Copyright (C) 2020 Cybozu



Add a Custom JavaScript File to the App

1. Download the 03_WordCloud.js file
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 the amCharts app. At the top, there are navigation icons (three horizontal lines, home, notifications with 1, star) and a search bar. Below the header, the path '01_Article_Data > Settings > JavaScript and CSS Customization' is visible. A red box highlights the 'Save' button in the top right corner of the main content area. A red arrow points from the bottom left towards this 'Save' button. The main content area contains sections for 'JavaScript and CSS Customization', 'Scope of Customization' (radio buttons for 'Affect all users', 'Affect only app administrators', and 'Disable'), and 'Upload JavaScript for PC'. It lists five URLs: 'https://cdn.amcharts.com/lib/4/core.js', 'https://cdn.amcharts.com/lib/4/charts.js', 'https://cdn.amcharts.com/lib/4/plugins/wordCloud.js', 'https://cdn.amcharts.com/lib/4/themes/animated.js', and '03_WordCloud.js' (size: 9 KB). At the bottom, there are 'Add Link' and 'Add File' buttons with a note '(Maximum: 20 MB)'.

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. Download the 03_WordCloud.js file
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_Article_Data' app. At the top right, there are buttons for 'Discard Changes' and 'Update App'. The 'Update App' button is highlighted with a red box and an arrow pointing to it. The main area contains tabs for 'Form', 'Views', 'Graphs', and 'App Settings'. The 'App Settings' tab is selected and displays various configuration options: General Settings, Appearance, Color Theme, Process Management, Notifications, General Notifications, Customization and Integration, Plug-ins, JavaScript and CSS Customization, API Token, Webhooks, Permissions, Advanced Settings, Categories, Localization, Title Field, Misc Settings, and Actions.



Results

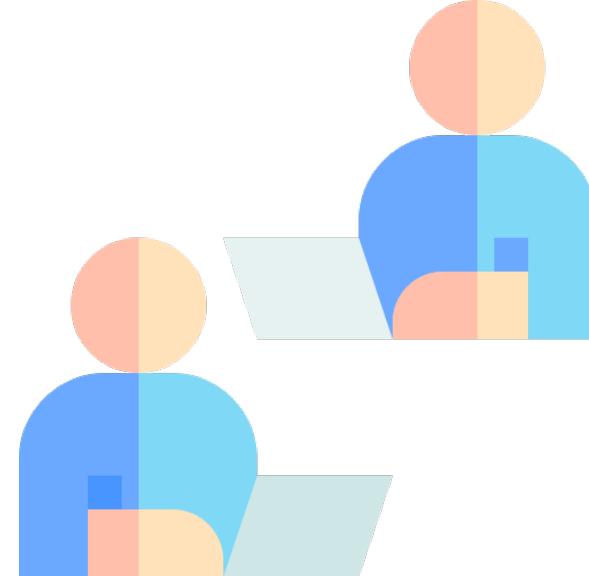
The screenshot shows a user interface for a data visualization application. At the top, there is a dark header bar with icons for navigation, settings, and help, along with a search bar labeled "Search in App". A blue notification bar at the top displays the message "File imported successfully!". Below the header, the main area has a title "01_Article_Data" with a table icon. Underneath it, a breadcrumb trail shows "App: 01_Article_Data". The main workspace contains a table view with a blue header row labeled "(All records)". To the right of the table are filter and sort icons. In the bottom right corner of the workspace, the text "Records 1 - 10 of 10" is visible. The entire workspace is enclosed in a red rectangular border.

function

Time To Get Started!

1. Create a Kintone App from a CSV file
 - [Create from CSV](#) option
 - Import the Esports Earnings CSV file
2. Add JavaScript libraries to the App
 - amCharts CDN links
3. Add a custom JavaScript file to the App
 - Download and upload [03_WordCloud.js](#)
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_WordCloud



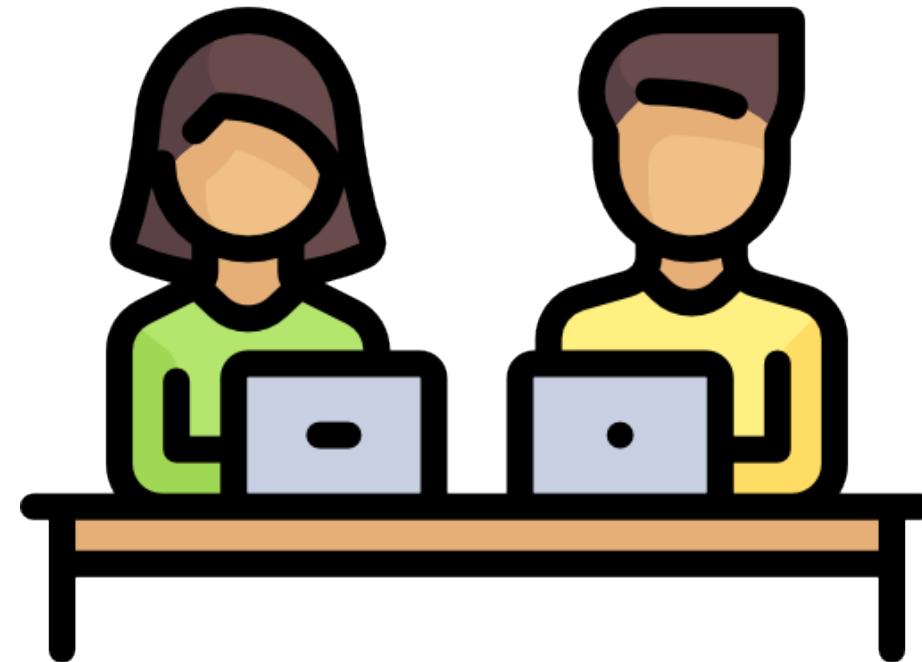
**Want to Win a
\$25 Amazon
Gift Card?**

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



**Short Break
10 min break**

Let's look through the code!



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 d

Scope of Customization

Affect all users Affect only app administrators Disable

Upload JavaScript for PC

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

17 KB

Core library needed for amCharts

amCharts library for creating charts

Word Cloud plug-in for amCharts

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

The screenshot shows the 'amCharts Libraries' configuration interface. At the top, there are 'Save' and 'Cancel' buttons. Below them is a section titled 'JavaScript and CSS Customization' with a note about reading coding guidelines. Under 'Scope of Customization', the 'Affect all users' option is selected. In the 'Upload JavaScript for PC' section, five files are listed: 'core.js', 'charts.js', 'wordCloud.js', 'animated.js', and 'sample.js'. 'core.js' is highlighted with a green box and an arrow pointing to a callout box labeled 'Core library needed for amCharts'. 'charts.js' is highlighted with an orange box and an arrow pointing to a callout box labeled 'amCharts library for creating charts'. 'wordCloud.js' is highlighted with a green box and an arrow pointing to a callout box labeled 'Word Cloud plug-in for amCharts'. 'animated.js' is highlighted with an orange box and an arrow pointing to a callout box labeled 'contains the amCharts "Animated" theme which is automatically provides smooth transitions'.

Code - 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

Code - Create the Chart Instance

Create a Chart instance.

The first parameter is the target HTML element to create the map in.

The second parameter references an amChart's chart type class.

```
var chart = am4core.create(spaceDiv, am4plugins_wordCloud.WordCloud);
```

```
var series = chart.series.push(new am4plugins_wordCloud.WordCloudSeries());
```

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

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

Create a series for the chart to display

Code - Edit the Word Cloud Series Properties (part 1)

Parameters and rules for how and what words will be displayed

```
series.accuracy = 4;  
series.step = 15;  
series.rotationThreshold = 0.7;  
series.maxCount = 200;  
series.minWordLength = 2;  
series.maxFontSize = am4core.percent(30);
```

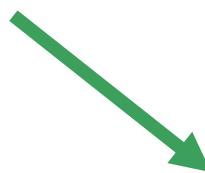
Auto assign theme colors from amCharts to the displayed words

```
series.colors = new am4core.ColorSet();  
series.colors.passOptions = {};  
series.angles = [0, -90];  
series.fontWeight = '700';  
series.labels.template.margin(4, 4, 4, 4);  
series.labels.template.tooltipText = '{word}: [bold]{value}[/]';
```

Code - Edit the Word Cloud Series Properties (part 2)

```
series.accuracy = 4;  
series.step = 15;  
series.rotationThreshold = 0.7;  
series.maxCount = 200;  
series.minWordLength = 2;  
series.maxFontSize = am4core.percent(30);  
series.colors = new am4core.ColorSet();  
series.colors.passOptions = {};  
series.angles = [0, -90];  
series.fontWeight = '700';  
series.labels.template.margin(4, 4, 4, 4);  
series.labels.template.tooltipText = '{word}: [bold]{value}[/]';
```

An array of display angles for the words



Settings for tooltips that are displayed on words upon mouse hovers



Code - Configure Words to Filter Out

Define which words to filter out from the word cloud

Define lowercase and uppercase versions of the filtered words

Set the defined words to be excluded from the series

```
var stopWords = ['A', 'A\'s', 'Able' . . . 'Zero'];

var excludeArray = stopWords.concat(
    stopWords.map(function (lower) {
        return lower.toLowerCase();
    }), stopWords.map(function (upper) {
        return upper.toUpperCase();
    })
);

series.excludeWords = excludeArray;
```

Code - Define the String to Show in the Word Cloud

Feed the string into the series so that a Word Cloud is formed out from it

Retrieve strings from the Text Area field of each record in Kintone

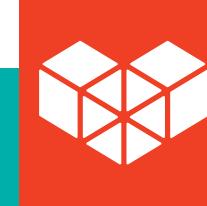
```
var words;  
  
words = event.records.reduce(  
  
    function (accumulator, current) {  
  
        function accumulator += current.Text_area.value;  
    });  
  
series.text = words;
```

Code - Extra functionality: Set Export Options

Enable an exporting feature on the Word Cloud so that it can be downloaded as an image

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

} );
} )();
```



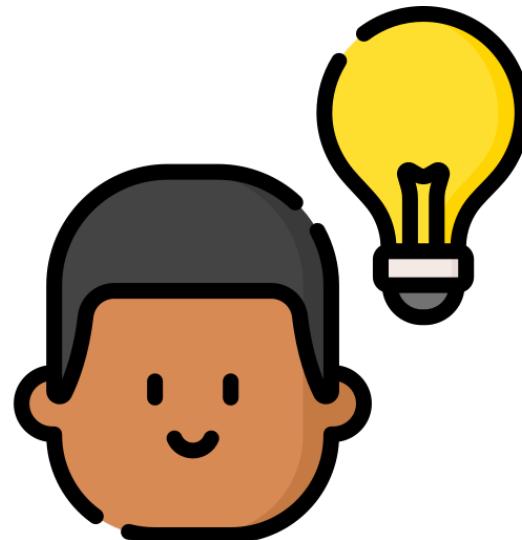
Any
Questions?

developer.kintone.io

Today's Agenda

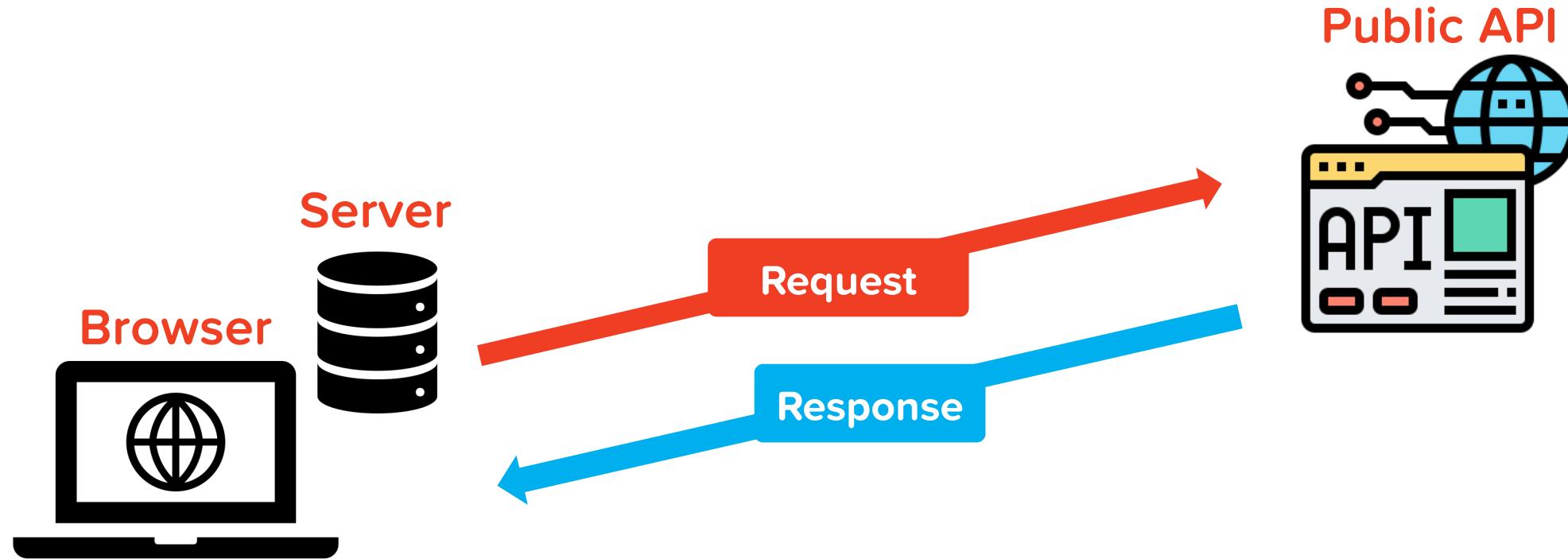
- 1 Get the Big Picture
- 2 Create a Kintone App
- 3 Display amCharts on Kintone
- 4 Call REST APIs from Kintone

Since We Are Talking About Data



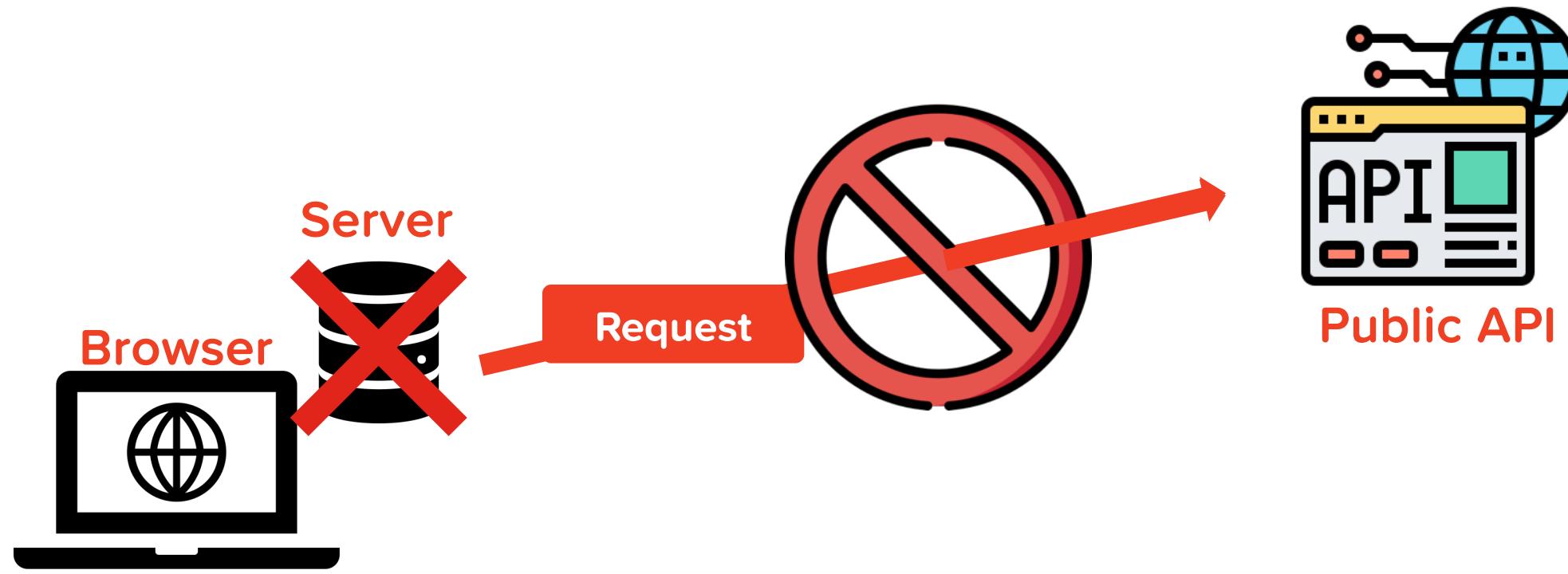
Wouldn't it be great, if we could get data from public APIs?

REST API Calls From the Server



REST API calls are usually called through a server

REST API Calls From the Browser

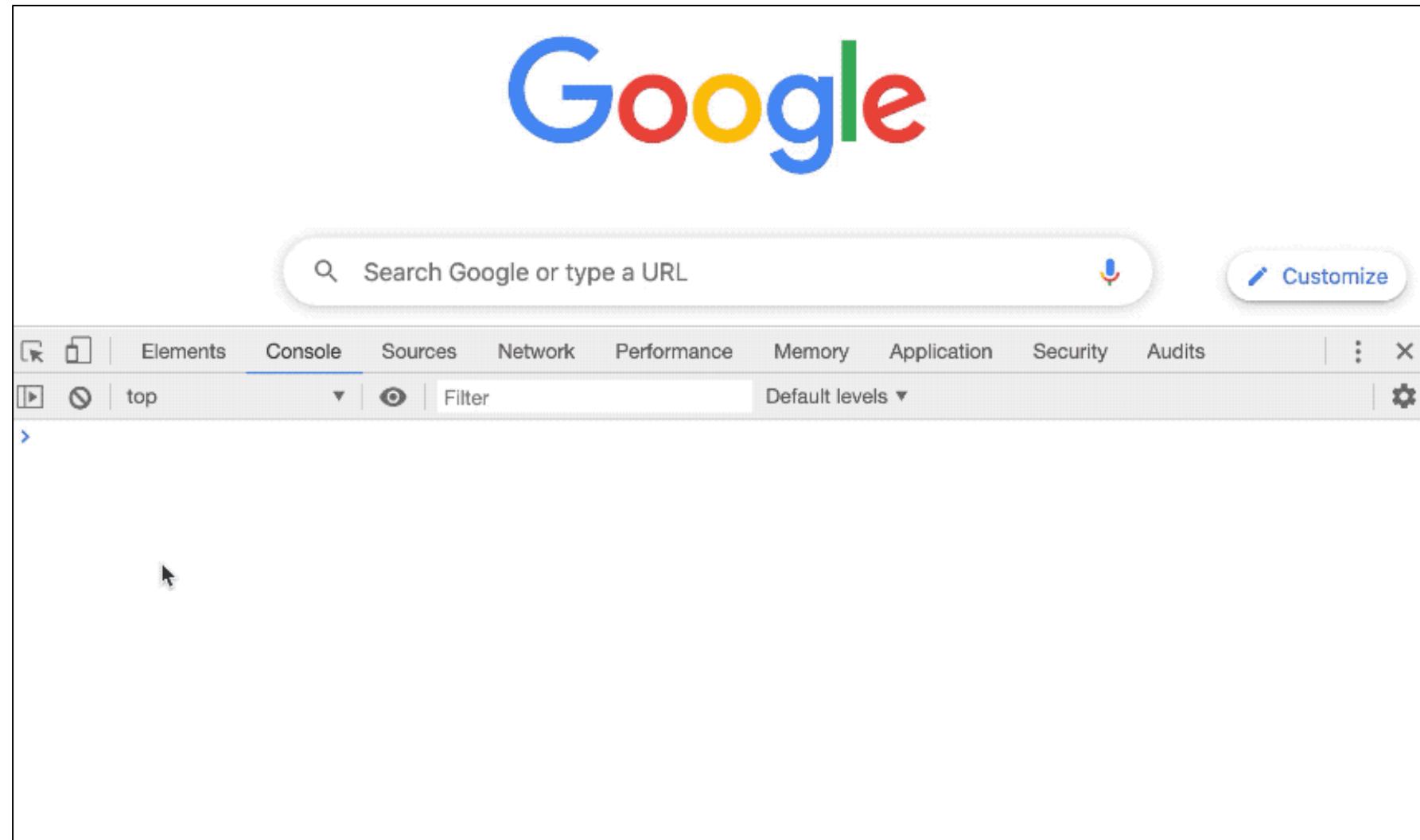


Calling REST APIs directly from the browser can often result in CORS errors

CORS Error Example

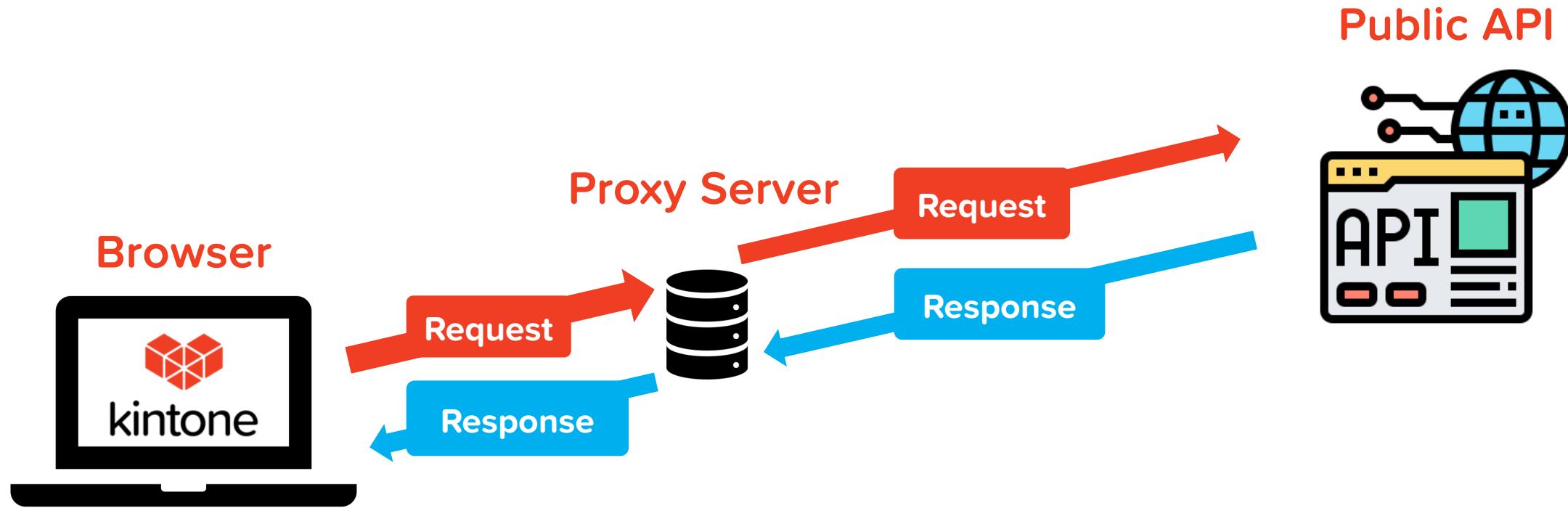


Yes, xkcd has an API for retrieving comic images.



A screenshot of the Google Chrome DevTools interface. The title bar shows "Google". Below it is a search bar with the placeholder "Search Google or type a URL". To the right of the search bar are icons for microphone and "Customize". The main menu bar includes "Elements", "Console" (which is underlined to indicate it's active), "Sources", "Network", "Performance", "Memory", "Application", "Security", and "Audits". Below the main menu is a toolbar with icons for refresh, stop, and reload, followed by "top", a dropdown arrow, and "Filter". A "Default levels" dropdown is also present. The bottom portion of the screen is a large, mostly empty white area where developer tools output would appear.

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)
```

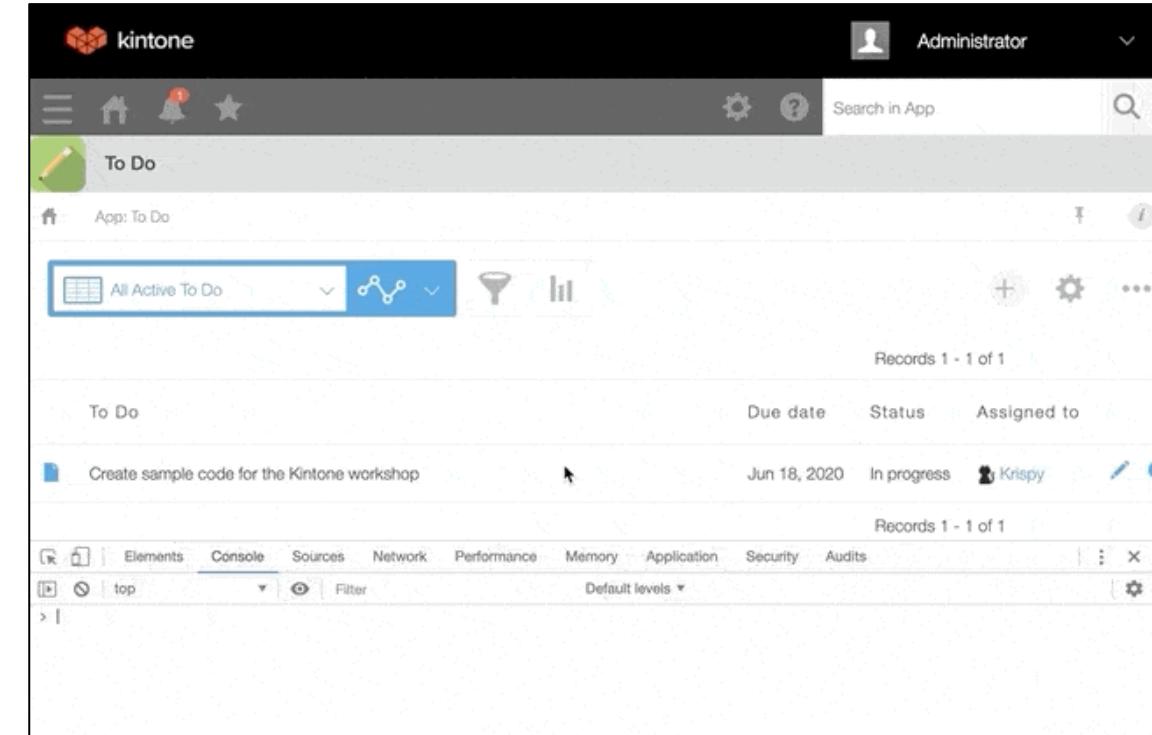
the request header

the request body

Callback functions – ignoring this
will return a Promise object

Example Call Result

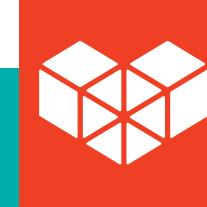
```
1 (function () {
2   'use strict';
3   var url = "https://xkcd.com/327/info.0.json";
4
5   kintone.events.on('app.record.index.show', function (event) {
6     kintone.proxy(url, 'GET', {}, {}, function (success) {
7       var jsonResponse = JSON.parse(success);
8       console.log(jsonResponse);
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 100,000

Recovered 100,000

Deaths 100,000

Active 100,000

Chart design inspired by Bojan Stoev

Coronavirus animated dashboard

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

Chart design inspired by Bojan Stoev

Radar Chart visualizing yearly activities

COVID-19 U.S. Spread Data

United States (Total), Apr 03, 2020

Confirmed 100,000

Recovered 100,000

Deaths 100,000

Active 100,000

Chart design inspired by Bojan Stoev

Coronavirus animated dashboard

Chart design inspired by Bojan Stoev

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

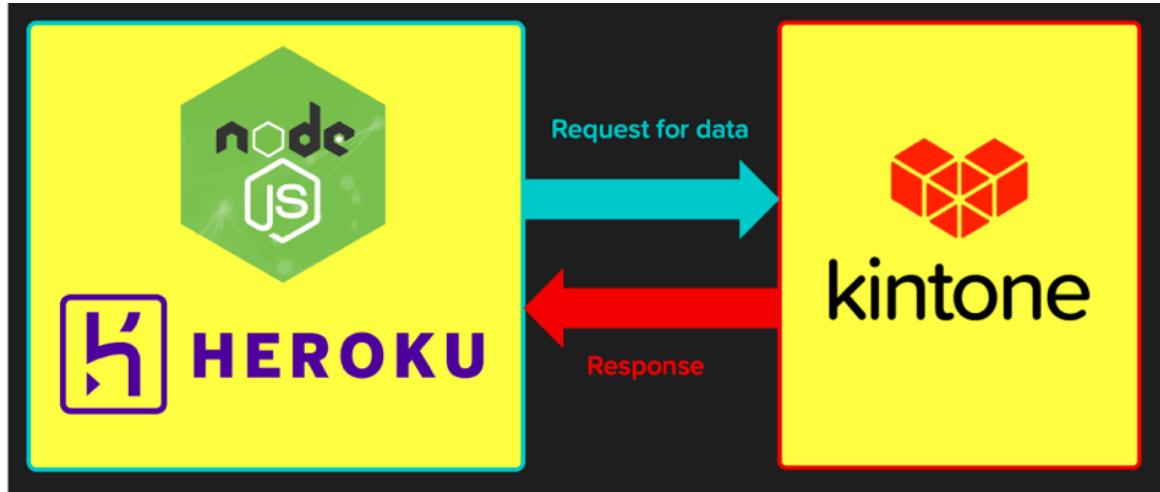
Health					
API	Description	Auth	HTTPS	CORS	
BetterDoctor	Detailed information about doctors in your area	apiKey	Yes	Unknown	
Covid-19	Covid 19 spread, infection and recovery	No	Yes	Yes	
Diabetes	Logging and retrieving diabetes information	No	No	Unknown	
Flutrack	Influenza-like symptoms with geotracking	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



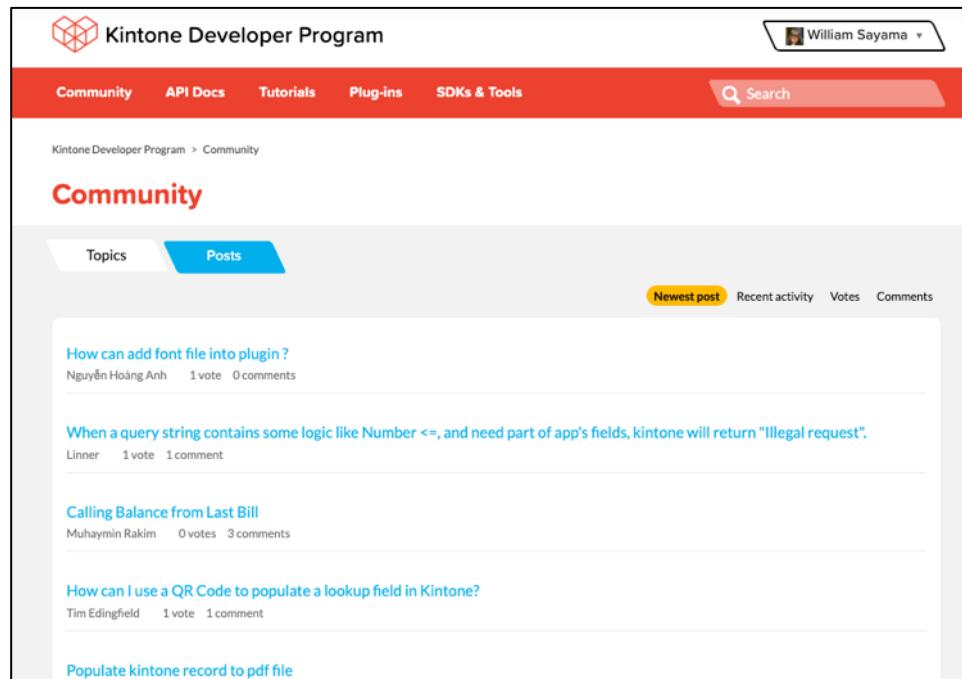
You can follow a tutorial where Node.js is used to call Kintone's REST APIs from the link below:

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

Finally

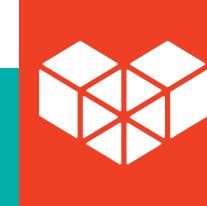
Where Can I Get Help?

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. At the top, there's a navigation bar with links for Community, API Docs, Tutorials, Plug-ins, and SDKs & Tools. A search bar is also present. 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 partially visible at the bottom.





Any
Questions?

developer.kintone.io

Thank You to Our Community Partners!



**GENERAL
ASSEMBLY**



Long Island JavaScript

Our Upcoming Workshops!

Join us at the next No Server Data Visualization workshop!

- Thu | Sept 10th - Build a **Pictorial Stacked Chart** Data Project
- Wed | Sept 30th - Build a **Bar Chart Race** Data Project

bit.ly/KDP_Events

Workshop Recording on YouTube

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

We have recordings of our
other workshops for you to
watch as well:

- Bubble Cloud
- Color-Coded Map



Check it out at
bit.ly/KDP_Video

Thank You for Your Participation!

**Fill out our quick survey for a
chance to win a
\$25 Amazon gift card!**



bit.ly/KDP_Q

