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AppSheet is a powerful no-code application development platform. AppSheet enables citizen developers, from IT to line-of-business users, to create and customize applications using its easy-to-use, interactive UI. Watch a demo See how easy it is to build and customize an AppSheet app from a Google Sheet. Integrating AppSheet with Google Workspace Create apps with AppSheet Create apps with AppSheet. If you don't have an AppSheet account, start your free trial. Start with an idea, your own data, or an app template. AI-Assisted App Creation: Gemini in AppSheet allows you to build apps by simply describing a business process or idea in natural language. Get started with AppSheet by using the quick start tutorials. Get started with AppSheet by using the sample apps that demonstrate common use cases. View a roadmap for using AppSheet or access the topic site map. Quickly walk through the process to create an AppSheet app directly from your existing data. More learning resources Access more learning resources. Understand the fundamentals of no-code app development and recognize use cases for no-code apps. Learn how to create an app with data from spreadsheets, create the app's user experience using AppSheet views, and publish the app to end users. Implement data organization and management, application security, actions and integrations in your app using AppSheet. Also learn how to manage and upgrade your app, improve performance, and troubleshoot issues with your app. Recognize the need to implement business process automation in your organization. Learn about automation patterns and use cases, and how to use AppSheet constructs to implement automation in your app. Watch videos on the AppSheet YouTube channel to learn how to build, customize, and deploy AppSheet apps. Get help Get help from the AppSheet Community or by contacting AppSheet Support. Find answers, ask questions, suggest features, and connect with other app creators. Contact AppSheet Support for further assistance.

Contact us Tell us more and we'll help you get there Next: Add narration, music & multimedia On this page Create a video using help me create You can use help me create to generate a first-draft video with Gemini in Google Vids. All you need to do is enter a description. Gemini then generates a draft—including a script, AI voiceover, scenes, and content—for the video. You can then edit the draft as needed. On your computer, open Google Vids. At the bottom of the screen, click Start a new video . In the pop-up window, click Plan your video story. Describe the video you want to create. Include information such as the audience, purpose, and tone of the video. Optional: To generate examples, click the suggested prompts above the description box. To add related files, enter @, then enter a filename or select a file from the drop-down list. You can add Google Workspace files, such as Docs, Sheets, or Slides, from Google Drive. To generate new ideas for prompts, click Shuffle below the suggested prompts. When you're satisfied with your description, click Next. Review and edit the proposed outline, or rewrite your prompt to generate a new outline, then click Next. Select a design, then click Create the draft video. When your video is created, you can add and customize content as needed. Learn more in the Google Docs Editors Help Center Edit or customize your AI-generated video After you create your video, you can review or edit the generated scripts of voiceovers and customize media placeholders. To open the scripts panel and view or edit your generated scripts, click Scripts. When you use "Help me create," it generates a script and voiceover for every scene. To edit them, you need to replace each audio object. To add your own audio to specific scenes: In your video, you may find media placeholders. Circular media placeholders contain stock voiceovers. You can replace this with live voiceovers. Larger media placeholders include an "Add your media" tag. You can replace this with your own media. Optional: To replace the media in these placeholders, click Select a video to open a drop-down menu which includes: Upload Generate an image My media Stock media To add media from the recording studio and add a recording, click Recording . To keep the media originally added to the placeholder, click Keep video . A template is a pre-built set of scenes with media and transitions. Use a template to outline your video, then customize it as needed. On your computer, open Google Vids. At the bottom of the screen, click Start a new video . In the pop-up window, click Start with a template. Select a template from the gallery. Choose whether to insert all scenes, or only the current scene. When your video is created, you can add and customize content as needed. Learn more about using templates Generate a video clip With Google Vids, you can create a single video clip by describing your shot in detail, including the subject and scene. You can generate up to 20 videos per day. Limits are subject to change. Generated videos are 8 seconds long with: 24fps frame rate 720p resolution 16:9 landscape orientation Generate a video clip with AI On your computer, open Google Vids. On the right, in the sidebar, click Generate video . In the "Generate video" panel: Enter a prompt that describes the video you want Gemini to create, which includes the subject and tone. For example: "A cat walking down a fashion week catwalk." "A dog driving an F1 racecar." Click Create. When your video clip is ready, it shows up in the "Generate video" panel. Optional: To make changes to your video clip, click Edit prompt . To add the video clip to your Vid: Hover over the generated video. Click Insert . This adds the video clip to your canvas. At the bottom of the Vids window, in the timeline, the video clip has its own object track. Learn more about generating video clips Start by recording a video Build your video by recording yourself (audio narration or full video recording), your computer screen, or your surroundings using the Vids recording studio. You can preview the recording and re-record it until you like it. You can then insert it into your Vids file, and customize it as needed. Note: Recordings you create in Vids can be up to 10 minutes long. On your computer, open Google Vids. At the bottom of the screen, click Start a new video . In the pop-up window, click Record and Share. When you're ready, click Record now, then click Start. When you're done, click Pause, then click Preview in the corner of the recording window. When you're ready to add your recording to a scene, click Insert, or click Restart to record again. When your recording is added, you can customize it as needed. Learn more about recording in Vids Start by uploading your own content You can start by uploading your own content. You can still generate images using Gemini, add clips using the recording studio, and add template content later. On your computer, open Google Vids. At the bottom of the screen, click Start a new video . In the pop-up window, click Upload and create. Click Browse computer, then select the file you want to start with. You can add more content later. When your video is created, you can add and customize content as needed. Learn more about uploading content to your videos Build a video from scratch You can go directly to the Vids timeline and start creating your video from scratch. You can still use the recording studio and add template content later. Back to top Google, Google Workspace, and related marks and logos are trademarks of Google LLC. All other company and product names are trademarks of the companies with which they are associated. With the Google Home app, you can automate your home using Routines. To create advanced Household Routines, the script editor allows you to program scripted automations with additional starters, conditions, actions, and advanced logic. The script editor is currently available in Public Preview. You can access the script editor with Google Home for web or in the mobile Google Home app after you've joined Public Preview. Learn how to write scripted automations: Visit codelab Get started The script editor allows you to write and edit your own Household Routines with Google Home for web or in the Google Home app. To create scripted automations, you'll need to: Understand the basics of YAML, a human-readable scripting language that allows you to enter line-by-line instructions to create home automations. Understand how Routines work, including terminology like starters and actions. Understand how to use the script editor to write scripted automations. For more detailed info on how to write a script, follow Write scripted automations with the script editor. Note: On an iPhone or iPad, you can view, edit, deactivate, and run automations in the Google Home app, but you can't currently create new scripted automations. If you have an iPhone or iPad, we recommend using Google Home for web to create new automations. Script editor basics The script editor uses YAML, a scripting language that allows you to enter line-by-line instructions to create home automations. Learn more at Write scripted automations with the script editor. YAML Concepts Example Key-value pairs YAML is written as a collection of key-value pairs separated by a : and a space. Each key-value pair starts on a new line. A key is a literal keyword. The value associated with a key can be as simple as a string, number, or date, or as complex as another collection of key-value pairs. In the example, the Key = name and the Value = TV on lights off. name: TV on lights off Indentation and nested key-value pairs You can "nest" multiple key-value pairs under a single parent key. YAML uses indentation (2 spaces) to indicate structure and hierarchy, and to define nested elements. Each level of nesting is indented by the same number of spaces. In the example, the parent key is metadata. The value for metadata is two nested key-value pairs: Pair 1: Key = name; Value = TV on lights off Pair 2: Key = description; Value = Turn off lights when TV turns on Each pair is indented by 2 spaces to show it's a child of the key metadata. metadata: name: TV on lights off description: Turn off lights when TV turns on Multiple values To include multiple values with a single key, create a list. Use a hyphen before each list item. In the example, the key = weekday, and the value is a list that includes Monday and Thursday. weekday: - MONDAY - THURSDAY Comments Lines that start with # are comments and are ignored by the automation engine. # This is a comment. It will be ignored. You'll define your automation behaviors using keys called starters, conditions, and actions: Starters tell your automation when to begin. Starters can include specific times or device states. An automation can include more than one starter. Conditions are restrictions on when your automation should run. Conditions are checked each time an automation begins. For example, you could specify that your automation only runs if you're away from home or if it's after sunset. Actions are what your automation will do, like adjust the speaker volume or turn a light on or off. For a complete list of starters, conditions, and actions, visit the Google Home Developer Center. Each of these components have their own set of instructions and formatting. Click on an entry in the supported starters, conditions, and actions table to find specific instructions, how to format, and example code. You can also check which of your devices are supported and which actions and commands they can use. Create, edit, and delete scripted automations Use the script editor in Google Home for web or the Google Home app to write and edit custom scripted automations. Important: All household members can check when these Routines run. Routines are for convenience only, not safety- or security-critical use cases. Don't create Routines that could result in injury or harm if they fail to start or stop. Routines can depend on working internet, Wi-Fi, and service availability from both Google and the third parties who manufacture the devices included in Routines. Routines may not always work, and Google isn't responsible for any harm or losses incurred due to failed Routines. Create a scripted automation Open the Google Home app . Tap Automations . Tap Add Household More options Script editor. Draft your new scripted automation. Refer to Write scripted automations with the script editor for help structuring your script. Tap Validate to verify your script runs. You can't activate an automation with errors. Tap Save to add your automation to your home or save in-progress work. If your script is valid when you save it, your automation automatically activates. If you don't want it to run yet, turn Activate off. Open home.google.com/automations and sign in to your account. Draft your new scripted automation. Refer to Write scripted automations with the script editor for help structuring your script. Click Validate to verify your script is able to run. You can't activate an automation with errors. Click Save to add your automation to your home or save in-progress work. If your script is valid when you save it, your automation automatically activates. If you don't want it to run yet, turn Activate off. Edit a scripted automation You can view and edit most automations you created with the script editor. Non-scripted automations and automations that are actively running can't be edited in the script editor. Once you've stopped an automation, you'll be able to edit it. Open the Google Home app . Tap Automations the name of your scripted automation Edit. Edit your scripted automation. Tap Validate to verify your script is able to run. You can't activate an automation with errors. Tap Save. If your script is valid when you save it, your automation automatically activates. If you don't want it to run yet, turn Activate off. For quick and easy access, pin your most-used devices, rooms, automations, and actions to your Favorites in the Google Home app. Learn more about creating and customizing Favorites. Open home.google.com/automations and sign in to your account. Select your scripted automation. Edit your script. Click Validate to verify your script is able to run. You can't activate an automation with errors. Click Save to add your automation to your home or save in-progress work. If your script is valid when you save it, your automation automatically activates. If you don't want it to run yet, turn Activate off. Delete a scripted automation Important: Deleting a Routine or automation is permanent. To stop a Routine or automation temporarily, pause it instead. Open the Google Home app . Tap Automations . Select the Routine you want to delete. Tap Delete Delete routine. Help with scripted automations Find help with scripts and learn what others are working on in the Google Home Automation community. For automations to work, scripts must use valid code. If an error exists, a message appears. Learn more about validation errors and warnings. To validate your code, click or tap Validate in the script editor. Here are some common errors to look out for: Make sure you use the correct device name in the format Device name - Room name. If you're not sure, check the name of your device in the Google Home app. Make sure your device supports the function you want it to perform. You can also use auto-complete to find available options. Make sure you include an action. Actions are required for an automation to run. If the script saves, but the automation doesn't behave as expected or stops working, manually confirm that each component in your script works. For example, if you wrote a script to turn on the light and change the brightness at sunset, try completing these tasks with an assistant command to confirm that each individual function works. You can also check that: Your device is added or linked in the Google Home app. Your device is connected and online. The device name, starters, conditions, and actions are written correctly. Note: Manufacturers may change device traits when they perform updates and this can cause scripts to stop working. You can use auto-complete to help update affected scripts. Your script has proper indentation and formatting. With Google Home for web, you can access Automations logs below your script to view your automation's history and to identify potential problems. Learn more about the types of messages you see in the Automation logs. Try using the script editor's experimental generative AI feature to describe the automation you want and it will draft a script for you to review and edit. Learn more about the basics of Routines and how to troubleshoot them. Refer to Practice writing a first script. Your first step is to set up an Analytics account, unless you already have one. Skip to creating a property unless you want to create a separate account for this website and/or app. For example, you might want to create another account if this website and/or app belong(s) to a separate business. Go to . If this is your first time using Google Analytics, click Start Measuring. If you already have an account set up, go to step 2. In Admin, click Create, then select Account. Note: The previous link opens to the last Analytics property you accessed. You can change the property using the property selector. You must be a Viewer or above at the account level to create an Analytics account. Provide an account name. Configure the data-sharing settings to control which data you share with Google. Click Next to add the first property to the account. Use Google Analytics to understand the full customer journey, from first visit to purchase. You need the Editor role to add properties to a Google Analytics account. If you created this account, you automatically have the Editor role. You can add up to 2,000 properties (any combination of Universal Analytics and Google Analytics 4 properties) to an Analytics account. To raise this limit, contact your support representative. To create a property: Are you continuing from "Create an Analytics account", above? If so, skip to step 2. Otherwise, in Admin, click Create, then select Property. Enter a name for the property (e.g. "My Business, Inc website") and select the reporting time zone and currency. If a visitor comes to your website on a Tuesday in their time zone, but it's Monday in your time zone, the visit is recorded as having occurred on Monday. If you choose a time zone that honors Daylight Savings Time, Analytics automatically adjusts for time changes. Use Greenwich Mean Time if you don't want to adjust for Daylight Savings Time. Changing the time zone only affects data going forward. If you change the time zone for an existing property, you may see a flat spot or a spike in your data, caused by the time shift forwards or backwards, respectively. Report data may refer to the old time zone for a short period after you update your settings, until Analytics servers have processed the change. We recommend that you change the time zone for a property no more than once per day so Analytics can process the change. Click Next. Select your industry category and business size. Click Next. Select how you intend to use Google Analytics. Google Analytics tailors the set of default reports based on the information you provide about how you intend to use Analytics. For example, if you choose "Generate more leads," you will see a collection of reports to help you measure lead generation. Learn more about the business objectives reports collection. Click Create and (if you are setting up a new account) accept the Analytics Terms of Service and the Data Processing Amendment. Continue to Add a data stream to start collecting data. Add a data stream Are you continuing from "Create a property", above? If so, skip to step 2. Otherwise, In Admin, under Data collection and modification, click Data Streams. Note: The previous link opens to the last Analytics property you accessed. You can change the property using the property selector. You must be an Editor or above at the property level to add a data stream. Click Add stream. Click iOS app, Android app, or Web. iOS app or Android app When you add an app data stream, Analytics creates a corresponding Firebase project and app data stream, and automatically links the Firebase project to your property if your project and property are not already linked. You can link to an existing Firebase project, however you have to do this from Firebase (and for a GA4 property that is not yet linked with Firebase.) Learn how. Enter the iOS bundle ID or Android package name, the app name, and for iOS, the App Store ID, then click Register app. Click Next and follow the instructions to download the config file for your app. Click Next and follow the instructions to add the Google Analytics for Firebase SDK to your app. Click Next. Run your app to verify installation of the SDK and that the app is communicating with Google servers. Click Finish. (Alternatively, click Skip this step if you want to complete app setup at a later time.) Web Watch a step-by-step video to see how to set up Google Analytics on your website using Google Tag Manager. Set up data collection To begin seeing data in your new Google Analytics 4 property, you'll need to do one of the following: Add the tag to a website builder or CMS-hosted website (e.g., HubSpot, Shopify, etc.) Many CMSs have native integrations with Google Analytics 4. If you're using one of the CMSs listed below, follow the instructions to find your Google tag ID and paste it into the Google Analytics field that your CMS provides. To find your Google tag ("G-") ID: In Admin, under Data collection and modification, click Data streams. Note: The previous link opens to the last Analytics property you accessed. You can change the property using the property selector.You must be an Editor or above at the property level to create. Click the data stream for which you need the ID. Under Stream Details, copy the Measurement ID (starts with "G-" or "AW-") Enter your Google tag ID into the field that your CMS provides: All other website builders If you are using a CMS or website builder that doesn't provide a field to enter your Google tag ID, you'll need to paste your Google tag into your website using your CMS's custom HTML feature. In Admin, under Data collection and modification, click Data streams. Note: The previous link opens to the last Analytics property you accessed. You can change the property using the property selector.You must be an Editor or above at the property level to create. Click Web. Click the data stream for your website. Under Google tag, click View tag instructions. On the Installation instructions page, select Install manually: On the screen, you'll see the JavaScript snippet for your account's Google tag. Your Google tag is the entire section of code that appears, beginning with: and ending with Paste your Google tag to your website using your CMS's custom HTML feature. Follow your CMS's instructions on how to do this below: Cart.com: Contact Cart.com support for instructions. PrestaShop: Contact PrestaShop support for instructions. Salesforce (Demandware): Contact Salesforce support for instructions. VTEX: Contact VTEX support for instructions. Weebly instructions Data collection may take up to 30 minutes to begin. You can then use the Realtime report to verify that you're receiving data. Add the Google tag directly to your web pages You need access to the HTML for your web pages. Ask your web developer to perform these steps if you're unable to complete the steps yourself. In Admin, under Data collection and modification, click Data streams. Note: The previous link opens to the last Analytics property you accessed. You can change the property using the property selector.You must be an Editor or above at the property level to create. Click Web. Click the data stream for your website. Under Google tag, click View tag instructions. On the Installation instructions page, select Install manually: On the screen, you'll see the JavaScript snippet for your account's Google tag. Your Google tag is the entire section of code that appears, beginning with: and ending with Paste your Google tag immediately after the on each page of your website. Data collection may take up to 30 minutes to begin. You can then use the Realtime report to verify that you're receiving data. Don't see a Data Streams option in the Property column? You are in a Universal Analytics property instead of the GA4 property that you just created. Use the property selector or Admin to navigate to your new GA4 property. Add your tag using Google Tag Manager To set up data collection for an app, read these instructions. Next steps After you have set up data collection, complete additional configurations to get more useful data out of Analytics. Review the checklist to learn which configurations are right for you to collect more data, filter unwanted data, and power advertising. Call Apps Script from an automation as described in the following sections: Apps Script is a cloud-based JavaScript platform that lets you integrate with and automate tasks across Google products. With Apps Script, you write code in modern JavaScript and have access to built-in libraries for Google Workspace applications. You can use custom logic from within your AppSheet app by calling Apps Script from an AppSheet automation bot. Examples of custom logic that you can implement include: Create a calendar appointment when a button is clicked Add a slide to a presentation when a new row is added Save photos to Drive and share with specific individuals when uploaded using a form Create an audit log by generating a Google Docs file with data from a table Call an external service for machine learning prediction using data from a newly added row and write back model prediction Notes: The Apps Script service must be enabled in your organization to call Apps Script from an automation. See Turn Apps Script on or off for users. Otherwise, you'll receive a message similar to the following: We are sorry, but you do not have access to Google Apps Script. Please contact your Organization Administrator for access Apps Script always executes the head deployment regardless of the deployed versions. You can't designate a different version to be called by the task. AppSheet supports only standalone scripts. It does not support container-bound scripts at this time. New to Apps Script? See Google Apps Script overview. New to AppSheet Automation? See AppSheet Automation: The Essentials. Get started calling Apps Script from an automation Get started calling Apps Script from an automation. Create an Apps Script project First, you must create an Apps Script project for your script files and related resources. An Apps Script project includes: One or more script files (.gs) to define your custom integrations Optionally, HTML files, that might include JavaScript and CSS, to create custom templates and layouts To create an Apps Script project: Add and configure the "Call a script" task in a bot Add and configure the Call a script task in a bot by performing the following steps. For more information about adding and configuring tasks in an automation bot, see Tasks: The Essentials. Add the Call a script task to a bot, as described in Add a task to a bot. Configure the "Call a script" task. Click Authorize to authorize the Apps Script project to run. Note: You'll need to authorize the first time you access the project and anytime authentication scopes are added. As indicated, the script will always run as the app owner regardless of the account used to authorize the project. Select the Apps Script function that you want to call in the Function Name drop-down. The list is populated using the functions defined by the Apps Script project selected in the previous step. After you select the function, the list of associated arguments is displayed. Enter an expression that defines each argument that will be passed to the function in the Function Parameters field. For example: Optionally, enable the Return Value option to use the return value from the Apps Script function. See Use return values from Apps Script tasks for more information. Optionally, enable the Run asynchronously? option to run the Apps Script task asynchronously as a background task. Enabling this option can improve client response time. Before setting this option, consider whether your application requires the Apps Script to complete synchronously to execute correctly. For example, if your Apps Script is changing data and your application relies on that data being updated before the sync completes, then using an asynchronous call may yield incorrect results. When you are done, save the task by selecting one of the following: Save - Save the app. Save & verify data - Save the app and verify that it is runnable based on external dependencies. Configure the "Call a script" task Configure the Call a script task by using the settings in the following table. Setting Description Linking Enable or disable reuse of this component by expanding the Linking panel and toggling the Linking setting. See Reuse automation components. Task name Name of the task that appears in the automation process flow. It must be unique within your app. Table name Table defined in the event and used by the task. To view or edit the structure of the selected table, position your cursor in the field and click . See Tables: The Essentials for more information. Note: To use a table that is different from the table defined in the event, add a Call a process step. Apps Script Project Apps Script project that contains the function you want to call. To populate the field: Click Browse (File icon). Click Files on Google Drive. Navigate to the Apps Script project in your Drive. See Create an Apps Script project. Click Select. Click Open Project to open the project, if desired. Expand and customize the Advanced settings, as described below. Setting Description Inputs Add inputs to dynamically configure a task. For details, see Set input values dynamically in tasks. Expand the Advanced section. Click Add under Inputs. Enter the name of the input value in the Name field. Select the data type from the Type drop-down. Only a subset of data types are supported for inputs. To add an initial value or edit any fields: Click to open the Input dialog. Add a value or expression in the Initial value field. If you don't specify an initial value, then the input value will be required. If an initial value is specified, then the input value is optional. Use of [_THIS] or [_INPUT] are not supported in the Initial value field. Edit other fields, as required. Click Done. Repeat to add additional input values. Then, use the following expressions to access the input values from the current step: [_INPUT]. [inputname] Share an Apps Script project Share your Apps Script project by sharing it directly or using a shared drive. For details, see Collaborating with other developers. Manage Apps Script projects in your AppSheet account The following sections describe how to manage Apps Script projects in your AppSheet account: View Apps Script projects in your AppSheet account To view Apps Script projects in your AppSheet account: Sign in to AppSheet. Go to the My account page. Select Integrations > Apps Scripts. The Apps Script projects are displayed, as follows: Add an Apps Script project to your AppSheet account When you add and configure a Call a script task, the Apps Script project is added to your account automatically. Remove an Apps Script project from your AppSheet account Remove access to an Apps Script project from your AppSheet user or team account so that it is no longer available for use by other apps. Note: Before removing an Apps Script project from your AppSheet account, you should delete all references to the Apps Script project in your apps to avoid errors. If you removed a project from the My Account page, and want to add the project back to your account, select the script again from within the "Call a script" flow. To remove an App Script to your user or team account: Sign in to AppSheet. Go to the My account page. Select Integrations > Apps Scripts. Click Delete (Trash icon) to delete access to a particular script. Quotas and limitations Contact us Tell us more and we'll help you get there