



--- Hands on

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Week #2 – Practical Lesson #2

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2. Create App
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Project: Build a Warship App

Last week your boss called you into his cubicle and assigned you to a new task: build a new Warship to defeat a group of troublemakers. Do it right. On time, on budget and with no exposed exhaust ports! Or else!

Your primary goals are to construct the Warship and live longer than your predecessor. You decide to manage your project "in the cloud" with Salesforce. This way everyone on your team can collaborate, be successful and stay alive. The last thing you want is to receive an email from your boss with the subject, "You have failed me for the last time."

Before Start: Is your Developer Org up and running?

Project: Build a Warship App

In this project, you will learn:

- how to build an application on the Salesforce Platform from start to finish;
- management app that allows users to manage the resources and supplies used to build a Warship.


You'll be doing:

- Create the app and a data model for the application;
- Modify the user interface on the browser and on the Salesforce mobile app using page layouts, compact layouts, and global actions.
- Implement business logic using formulas, validation rules and a process builder.
- Build reports and dashboards to track and analyze information.

Create App

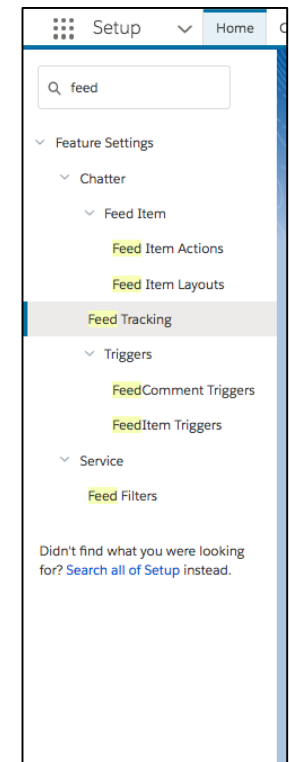


Create the Warship Object


1. From the gear icon (), click **Setup** to launch the setup page.
2. Click **Object Manager** tab next to the Home tab.
2. Click on **Create** dropdown at the right side and then select **Custom Object**.
3. On the Custom Object Definition page, create the object as follows:
 - Label: **Warship**
 - Plural Label: **Warship**
 - Record Name: **Warship Name**
 - Check the **Allow Reports** checkbox
 - Check the **Allow Search** checkbox
 - Click **Save**.

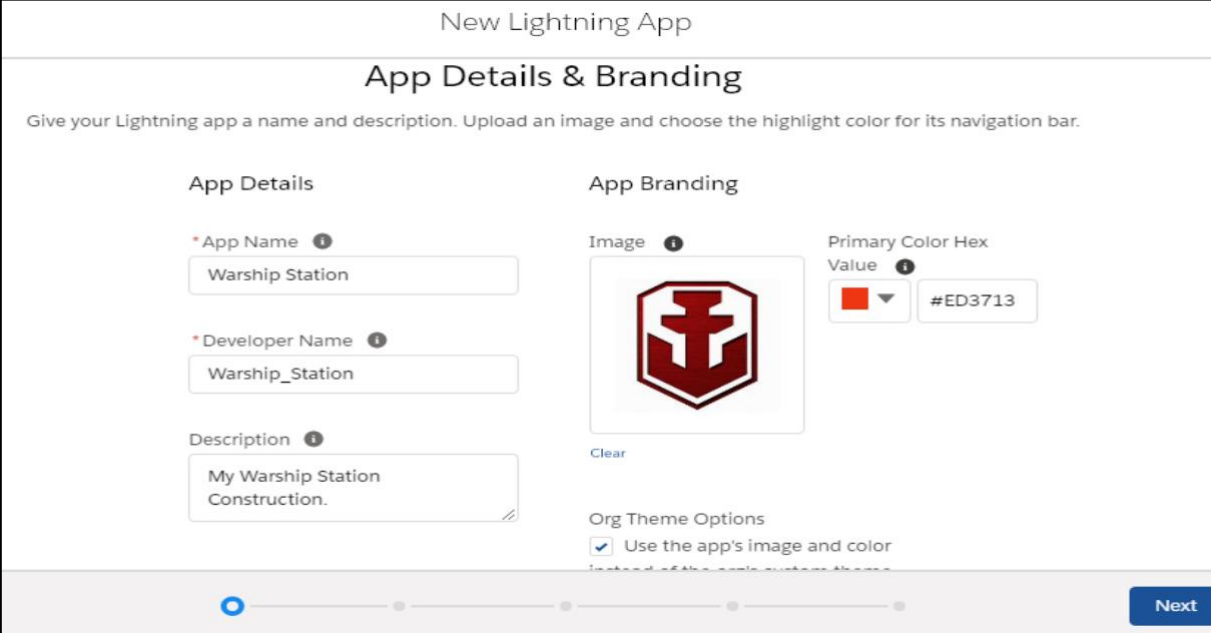
Create the Warship Tab

1. Now create a Custom Tab. Click the **Home** tab, enter **Tabs** in Quick Find and select **Tabs**.
2. Under **Custom Object Tabs**, click **New**.
3. For **Object**, select **Warship**.
4. For **Tab Style**, select any icon.
5. Leave all defaults as is. Click **Next**, **Next**, and **Save**.
6. Now we need to enable Feed Tracking for the Warship object. From **Setup**, enter *Feed* in the Quick Find and select **Feed Tracking**. Click on Warship, and check the *Enable Feed Tracking* checkbox. Check the Warship Name and Owner checkboxes. Click **Save**.




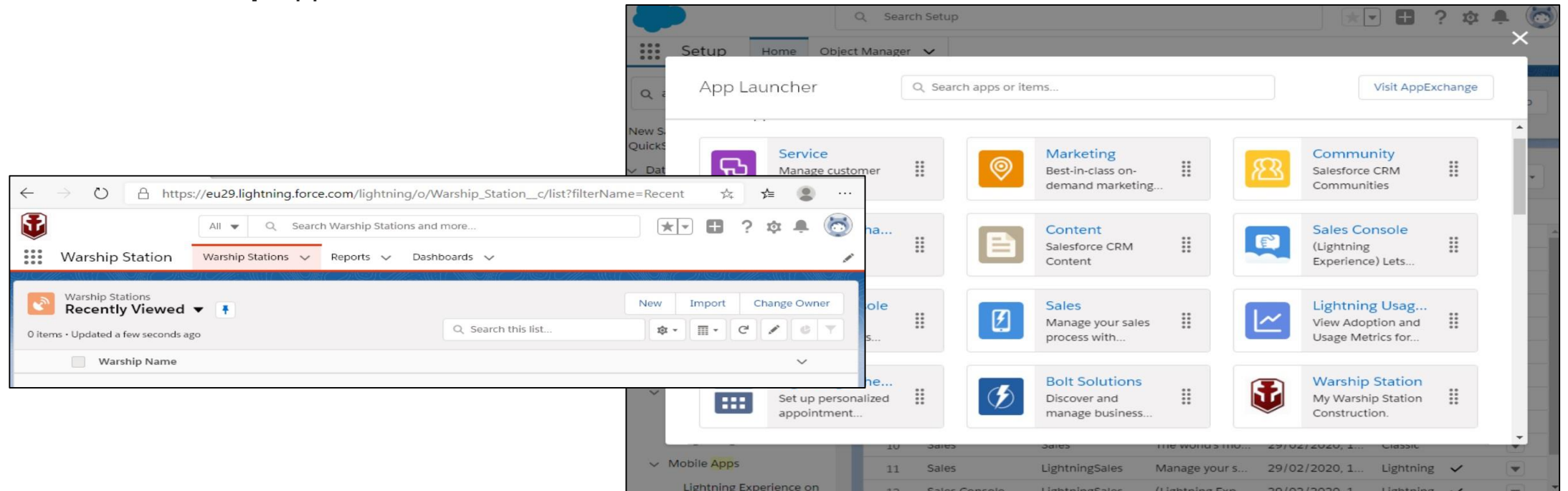
Create the Warship App

1. Now create a Custom App. Click the **Home** tab, enter **App Manager** in Quick Find and select **App Manager**.
2. Click **New Lightning App**. Enter *Warship* as the App Name, then click **Next**.
3. Leave *Standard Navigation* selected, then click **Next** and again **Next**.
4. From *Available Items*, select **Warships**, **Reports**, and **Dashboards** and move them to Selected Items. Click **Next**.
5. From Available Profiles, select *System Administrator* and move it to Selected Profiles. Click **Save & Finish**.
6. To verify your changes, click the  App Launcher icon in the Lightning Experience header App Launcher and select the Warship app.



Create the Warship App

To verify your changes, click the  App Launcher icon in the Lightning Experience header App Launcher and select the **Warship** app.



Object Model

Build the Object Model

Our application will use three custom objects:

Warship — This will be our main object that tracks the status of the project, its supplies and resources.


Resource — Projects are about doing "stuff" and you need resources (that is, people) to do "stuff." We'll use the resources custom object to track the number of people working on the construction project and how much time they are committed to it.

Supply — You also need supplies and equipment to build a Warship. We'll use this object to track our supplies and their costs.

Build the Object Model

Warship: Add Fields

In the previous step, we built our Warship custom object. Now we need to make custom fields for that object.

1. From the gear icon (), click **Setup** to launch the setup page.
2. Click the **Object Manager** tab.
3. Click **Warship**.
4. Under *Fields & Relationships*, click **New**.

Add a Project Status field

1. For this field, pick *Picklist* and click **Next**.
2. The Field Label enter *Project Status* and click **Next**.

Build the Object Model

Warship: Add Fields

3. Check the radio button next to Enter values, with each value **separated by a new line**.
 - Green
 - Yellow
 - Red
 - Complete
4. Display values alphabetically, not in the order entered - **Unchecked**.
5. Use first value as default value - **Checked**.
6. **Uncheck** the *Restrict picklist* to the values defined in the value set box.
7. Leave the defaults for the remaining fields, and click **Next**.
8. Click **Next** again to accept the default field visibility and security settings.
9. Click **Save & New** to add the Project Status field to the page layout, save the Project Status field, and return to the first step of the wizard.

Build the Object Model

Warship: Add fields

Add a Weapons Status field

1. For *Data Type*, select **Picklist**, and click **Next**.
2. Field Label: **Weapons Status**
3. Check the radio button next to Enter values, with each value separated by a new line:
 - **Not Yet Operational**
 - **Fully Operational**
4. Display values alphabetically, not in the order entered - **Unchecked**.
5. Use first value as default value - **Checked**.
6. **Uncheck** the Restrict picklist to the values defined in the value set box.
7. Leave the defaults for the remaining fields, and click **Next**.
8. Click **Next** again to accept the default field visibility and security settings.
9. Click **Save** to add the Weapons Status field to the page layout, save the Weapons Status field, and return to the Warship Custom Object page.

Build the Object Model

Resource: Custom Object

- 1.
- 2.
- 3.

- Label: **Resource**
- Plural Label: **Resources**
- Record Name: **Resource Name**
- Check the **Allow Reports** checkbox
- Click **Save**.

4. Now create a custom tab

- 5.
- 6.

7. For **Tab Style**, select any icon.
8. Leave all defaults as is. Click **Next**, **Next**, and **Save**.




Build the Object Model

Resource: Custom Object

1. Click **Object Manager** tab next to the Home tab.
2. Click on **Create** dropdown at the right side and then select **Custom Object**.
3. On the Custom Object Definition page, create the object as follows:
 - Label: **Resource**
 - Plural Label: **Resources**
 - Record Name: **Resource Name**
 - Check the **Allow Reports** checkbox
 - Click **Save**.
4. Now create a custom tab. Click the **Home** tab, enter **Tabs** in Quick Find and select **Tabs**.
5. Under **Custom Object Tabs**, click **New**.
6. For **Object**, select **Resource**.
7. For **Tab Style**, select any icon. Leave all defaults as is. Click **Next**, **Next**, and **Save**.

Build the Object Model


Resource: Add fields

1. 
2. 
3. 
4. For Data Type, select *Number*, and click **Next**.
5. Field Label: **Quantity**
6. Ensure that there is always a number entered for this field by *checking the Required checkbox*.

7. 
8. 
9. 

Build the Object Model

Resource: Add fields

1. From the gear icon (), click **Setup** to launch the setup page.
2. Click the **Object Manager** tab.
3. Click **Resource**. Under *Fields & Relationships*, click **New**.
4. For Data Type, select *Number*, and click **Next**.
5. Field Label: **Quantity**
6. Ensure that there is always a number entered for this field by *checking the Required checkbox*.
7. Leave the defaults for the remaining fields, and click **Next**.
8. Click **Next** again to accept the default field visibility and security settings.
9. Click **Save & New** to add the Quantity field to the page layout, save the Quantity field, and return to the first step of the wizard.

Build the Object Model

Resource: Add fields

1. For Data Type, select *Percent*, and click **Next**.
2. Field Label: **Utilization**
3. Ensure that there is always a percentage entered for this field by *checking the Required checkbox*.
4. Leave the defaults for the remaining fields, and click **Next**.
5. Click **Next** again to accept the default field visibility and security settings.
6. Click **Save & New** to add the Quantity field to the page layout, save the Quantity field, and return to the first step of the wizard.

Build the Object Model

Resource: Add fields

1. For Data Type, select *Master-Detail Relationship*, and click **Next**.
2. Select **Warship** from the *Related To* picklist, and click **Next**.
3. Field Label: Should default to Warship
4. Field Name: Warship
5. Leave the defaults for the remaining fields, and click **Next**.
6. Click **Next** again to accept the default field visibility and security settings.
7. Click **Next** to add the Warship field to the page layout.
8. Click **Save** to add the Warship field to the page layout, the related list of Warship records to the page layout, save the Warship field, and return to the Resource Custom Object page.

Build the Object Model

Supplies: Custom Object

1.
2.
3.



- Label: **Supply**
- Plural Label: **Supplies**
- Check the **Allow Reports** checkbox
- Click **Save**.

4. Now create a custom tab.



5.



6.

7. For **Tab Style**, select any icon.

8. Leave all defaults as is. Click **Next**, **Next**, and **Save**.




Build the Object Model

Supplies: Custom Object

1. Click **Object Manager** tab next to the Home tab.
2. Click on **Create** dropdown at the right side and then select **Custom Object**.
3. On the Custom Object Definition page, create the object as follows:
 - Label: **Supply**
 - Plural Label: **Supplies**
 - Check the **Allow Reports** checkbox
 - Click **Save**.
4. Now create a custom tab. Click the **Home** tab, enter **Tabs** in Quick Find and select **Tabs**.
5. Under **Custom Object Tabs**, click **New**.
6. For **Object**, select **Supply**.
7. For **Tab Style**, select any icon.
8. Leave all defaults as is. Click **Next**, **Next**, and **Save**.


Build the Object Model

Supplies: Add fields

1. 
2. 
3. 
4. For Data Type, select *Number*, and click **Next**.
5. Field Label: **Quantity**
6. Ensure that there is always a number entered for this field by *checking the Required checkbox*.
7. We want to encourage our users to order at least 2 of any supply (we always like to have a back up), so we'll set the *Default Value* to **2**.
8. Leave the defaults for the remaining fields, and click **Next**.
9. Click **Next** again to accept the default field visibility and security settings.
10. Click **Save & New** to add the Quantity field to the page layout, save the Quantity field, and return to the first step of the wizard.

Build the Object Model

Supplies: Add fields

1. From the gear icon (), click **Setup** to launch the setup page.
2. Click the **Object Manager** tab.
3. Click **Supplies**. Under *Fields & Relationships*, click **New**.
4. For Data Type, select *Number*, and click **Next**.
5. Field Label: **Quantity**
6. Ensure that there is always a number entered for this field by *checking the Required checkbox*.
7. We want to encourage our users to order at least 2 of any supply (we always like to have a back up), so we'll set the *Default Value* to **2**.
8. Leave the defaults for the remaining fields, and click **Next**.
9. Click **Next** again to accept the default field visibility and security settings.
10. Click **Save & New** to add the Quantity field to the page layout, save the Quantity field, and return to the first step of the wizard.

Build the Object Model

Supplies: Add fields

1. For Data Type, select *Currency*, and click **Next**.
2. Field Label: **Unit Cost**
 - **Length: 16**
 - **Decimal Places: 2**
3. Ensure that there is always a number entered for this field by *checking the Required checkbox*.
4. Leave the defaults for the remaining fields, and click **Next**.
5. Click **Next** again to accept the default field visibility and security settings.
6. Click **Save & New** to add the Quantity field to the page layout, save the Quantity field, and return to the first step of the wizard.

Build the Object Model

Supplies: Add fields

1. For Data Type, select *Formula*, and click **Next**.
2. Field Label: **Total Cost**
 - **Decimal Places: 2**
 - **Field Name: Total_Cost**
3. Click Next.
4. Enter the following for the formula: **Quantity__c * Unit_Cost__c**.
5. Click the *Check Syntax* button to make sure the formula has the correct syntax, and click **Next**.
6. Ensure that there is always a number entered for this field by *checking the Required checkbox*.
7. Leave the defaults for the remaining fields, and click **Next**.
8. Click **Next** again to accept the default field visibility and security settings.
9. Click **Save & New** to add the Quantity field to the page layout, save the Quantity field, and return to the first step of the wizard.

Build the Object Model

Supplies: Add fields

1. For Data Type, select *Master-Detail Relationship*, and click **Next**.
2. Select **Warship** from the *Related To* picklist, and click **Next**.
3. Field Label: Should default to Warship
4. Field Name: Warship
5. Leave the defaults for the remaining fields, and click **Next**.
6. Click **Next** again to accept the default field visibility and security settings.
7. Click **Next** to add the Warship field to the page layout.
8. Click **Save** to add the Warship field to the page layout, the related list of Warship records to the page layout and save the Warship field, and return to the Supply Custom Object page..

Modify User Experience



Modify User Experience

Modify the Warship Page Layout

1. From the gear icon (⚙️), click **Setup** to launch the setup page.
2. Click the **Object Manager** tab.
3. Click **Warship**.
4. Select the **Page Layouts** and select the **Warship Layout**.
5. Scroll down to the Warship Detail section and *drag* the **Project Status** field to the right column (below Owner field).
6. Drag the Weapons Status field to the right column (below Project Status field).

The screenshot shows the Salesforce 'Warship Station' page layout editor. The left sidebar has a 'Page Layouts' tab selected. The main area displays the 'Warship Station' layout with fields like 'Battle Station Name', 'Owner', 'Project Status', and 'Weapons Status'. A 'Fields' dialog box is open, showing a list of fields to be added to the layout.

Field Name	Last Modified By
Blank Space	Owner
Battle Station Name	Project Status
Created By	Weapons Status

Battle Station Detail

Information (header visible on edit only)

Sample Battle Station Name

Owner: Sample User

Project Status: Sample Project Status

Weapons Status: Sample Weapons Status

System Information (header visible on edit only)

Created By: Sample User

Last Modified By: Sample User

Custom Links (header visible on edit only)

Mobile Cards (Salesforce mobile only)

Drag expanded lookups and mobile-enabled Visualforce pages here to display them as mobile cards.

Related Lists

Resources

Resource Name	Quantity	Utilization
Sample Resource Name	50,267	60.311%

Supplies

Supply Name	Quantity	Unit Cost	Total Cost
Sample Supply Name	31,696	\$123.45	\$123.45

Modify User Experience

Modify the Warship Page Layout


Edit the layout for the related lists to include more info on the page.

1. Click the wrench icon next to the **Resources** *label* in the related list to bring up the properties editor modal.
2. Add the **Quantity** and **Utilization** field to the right side by selecting them and clicking the Add arrow in the middle.
3. Click **OK** to close the modal.
4. Do the same thing for the **Supplies** related list and add the **Quantity**, **Unit Cost**, and **Total Cost** fields, in that order..


Mobile Cards (Salesforce mobile only) ⓘ

Drag expanded lookups and mobile-enabled Visualforce pages here to display them as mobile cards.

Related Lists

Resources  [New](#)

Resource Name	Quantity	Utilization
Sample Resource Name	50,267	60,311%


Supplies  [New](#)

Supply Name	Quantity	Unit Cost	Total Cost
Sample Supply Name	31,698	\$123.45	\$123.45

Add data



Add Some Warship Data

1. From the App Launcher , select **Warship** app.
2. Click the **Warships** tab.
3. Create a New record – **F-330 Vasco da Gama**.
4. Under the Related tab, click **New** on the **Resources** list.
5. Enter the following Resource Name options one at a time (click Save & New after entering each record). Choose the Quantity and Utilization of your choice (see image for reference).
 - Admiral
 - Construction worker
 - Left-handed monkey wrench adjuster
 - Robert the foreman
 - Sandwich maker
 - Massage therapist

Add Some Warship Data

For the *Obliteration Station* record, you need to add the Supplies. Under the *Related tab*, click **New** on the **Supplies** list.

1. Enter the following Supply Name options one at a time (click Save & New after entering each record).

Choose the Quantity and Unit Cost of your choice:

- Light bulbs
- Really big gun
- Donuts
- Hot glue gun
- Cantina band instruments
- UV protecting eyewear (that is, sunglasses)
- Steel
- Toilet paper



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