

# **BCS 371 Lab – Internationalization**

## ***Overview***

In this lab you will create an app that will display different languages depending on the locale.

## ***Create a project***

Create a new Android application in Android Studio. Choose the **Empty Activity** type to create an empty activity that uses Jetpack Compose.

## ***Add/Update String Resources***

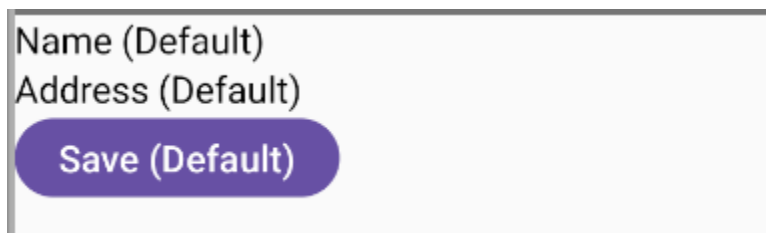
Update the string resources in the default strings.xml. The default file is res/values/strings.xml.

1. Change the value of the app\_name string resource to “Information (Default)”.
2. Add new string resources:
  - a. Add a string resource named “name\_prompt”. The value in this resource should be “Name (Default)”.
  - b. Add a string resource named “address\_prompt”. The value in this resource should be “Address (Default)”.
  - c. Add a string resource named “save\_button\_text”. The value in this resource should be “Save (Default)”.

## ***Setup the UI***

The UI should use string resources for the text that is displayed (do not hardcode strings into the composable functions).

Here is a screenshot:

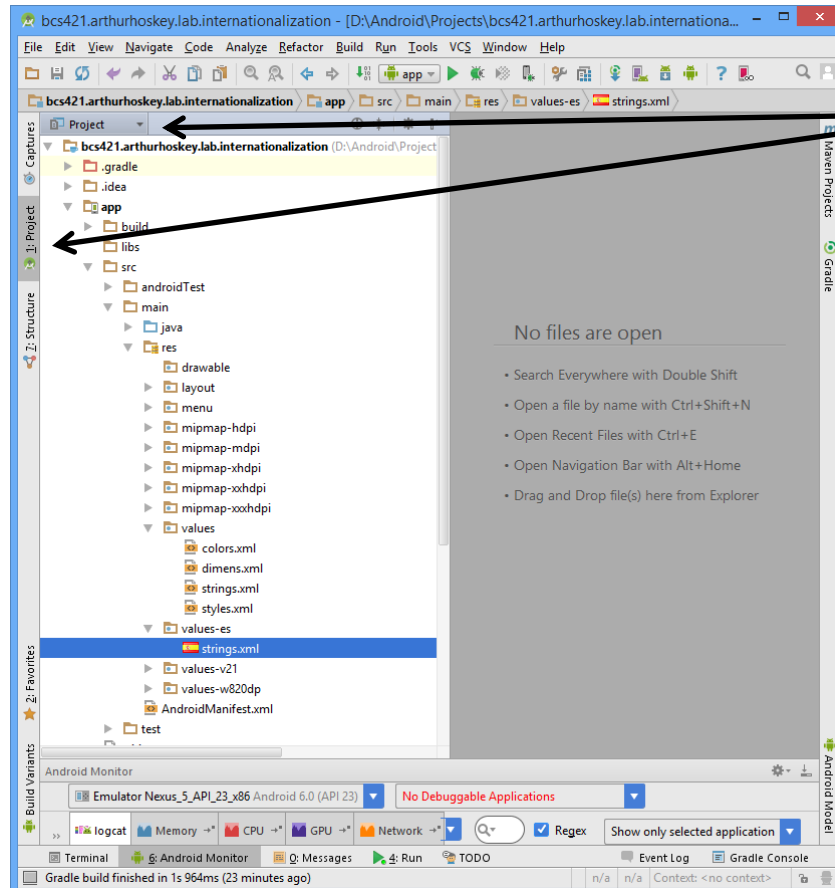


## ***Create Spanish language string resources***

Add new string values for the Spanish language.

1. Go to Project View in Android Studio. Add subdirectories and files to the res folder as necessary to create Spanish language string resources (values-es is the name for the Spanish language directory).

Project View: Make sure you are in Project view, or you may not see the new directory you created. Select Project on the left and select Project from the drop-down above the tree.



**Project View.**  
Select Project on  
left and select  
Project from the  
drop-down.

2. You should copy the strings.xml file from the default values directory to the Spanish language directory and use that as a starting point.
3. Make changes to the string resources in the Spanish language strings.xml file using the following translations:

<u>English</u>	<u>Spanish</u>
Information	Informacion
Name	Nombre
Address	Direccion
Save	Salvar

4. When you change the values to Spanish you should also append (Espana) to each value.

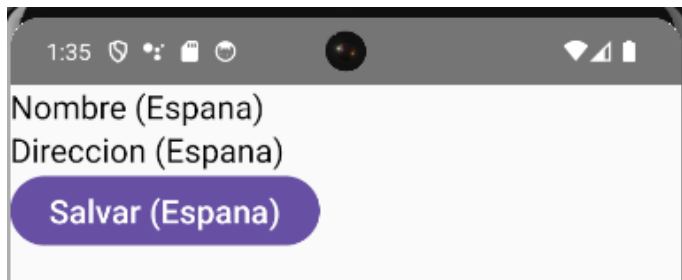
*Note: Appending Espana is being done to make it easier for us to know which language folder the strings are being taken from. In practice we would not do this.*

## ***Run the app and change the language on the device***

1. Run the app.
2. Change the default language to Espanol (Espana) in the emulator. Do the following:
  - a. Go to Home Screen
  - b. Swipe up for apps.
  - c. Select Settings (the picture should be a cog).
  - d. Select System.
  - e. Select Languages.
  - f. Select System Languages.
  - g. If Espanol is not a language option, select Add a language and add Espanol (Estados Unidos).
  - h. Move Espanol (Estados Unidos) to the number 1 position by dragging it using the double lines on the right.
  - i. Now navigate back to our app and check the text to make sure that it has changed to Spanish.

Note: Leave the language setting screen open so you can easily change back to English when you are done.

Here is screenshot of the app with the language set to Espanol on the emulator:



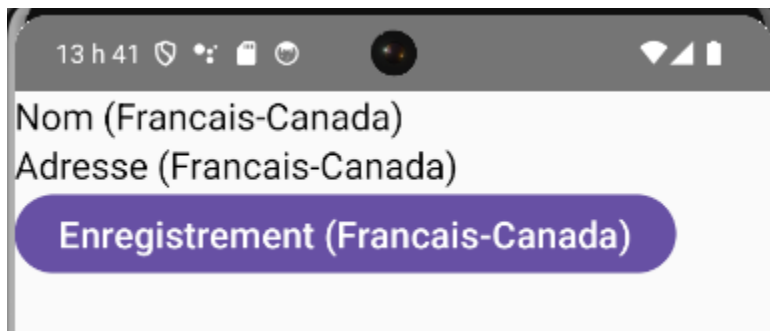
3. Change the default language back to English. You can do this by doing the following:
  - a. Go to Home Screen
  - b. Swipe up for apps.
  - c. Select Confiura... (the picture should be a cog).
  - d. Select Sistema.
  - e. Select Idiomas.
  - f. Select Idiomas del sistema.
  - g. Move English (United States) to the number 1 position by dragging it using the double lines on the right. Press Cambiar in the dialog that appears.

## Create French language string resources

Add new string values for the French language in the region of Canada. Use the same procedure as you used for Spanish. The directory for French Canada is values-fr-rCA. When you change the values to French you should append (Francais-Canada) to each value. Make sure to change the language on the emulator to Francais (Canada). You will need to add the language in settings.

<u>English</u>	<u>French</u>
Information	Informations
Name	Nom
Address	Adresse
Save	Enregistrement

Here is screenshot of the app with the language set to French on the emulator:



Change the default language back to English. You can do this by doing the following:

1. Go to Home Screen
2. Swipe up for apps.
3. Select Parametres (the picture should be a cog).
4. Select Systeme.
5. Select Langues.
6. Select Langues du systeme.
7. Move English (United States) to the number 1 position by dragging it using the double lines on the right. Press Modifier in the dialog that appears.

## Create language string resources for another language

Update the application so that it will display strings in another language of your choice.