

# Локализация

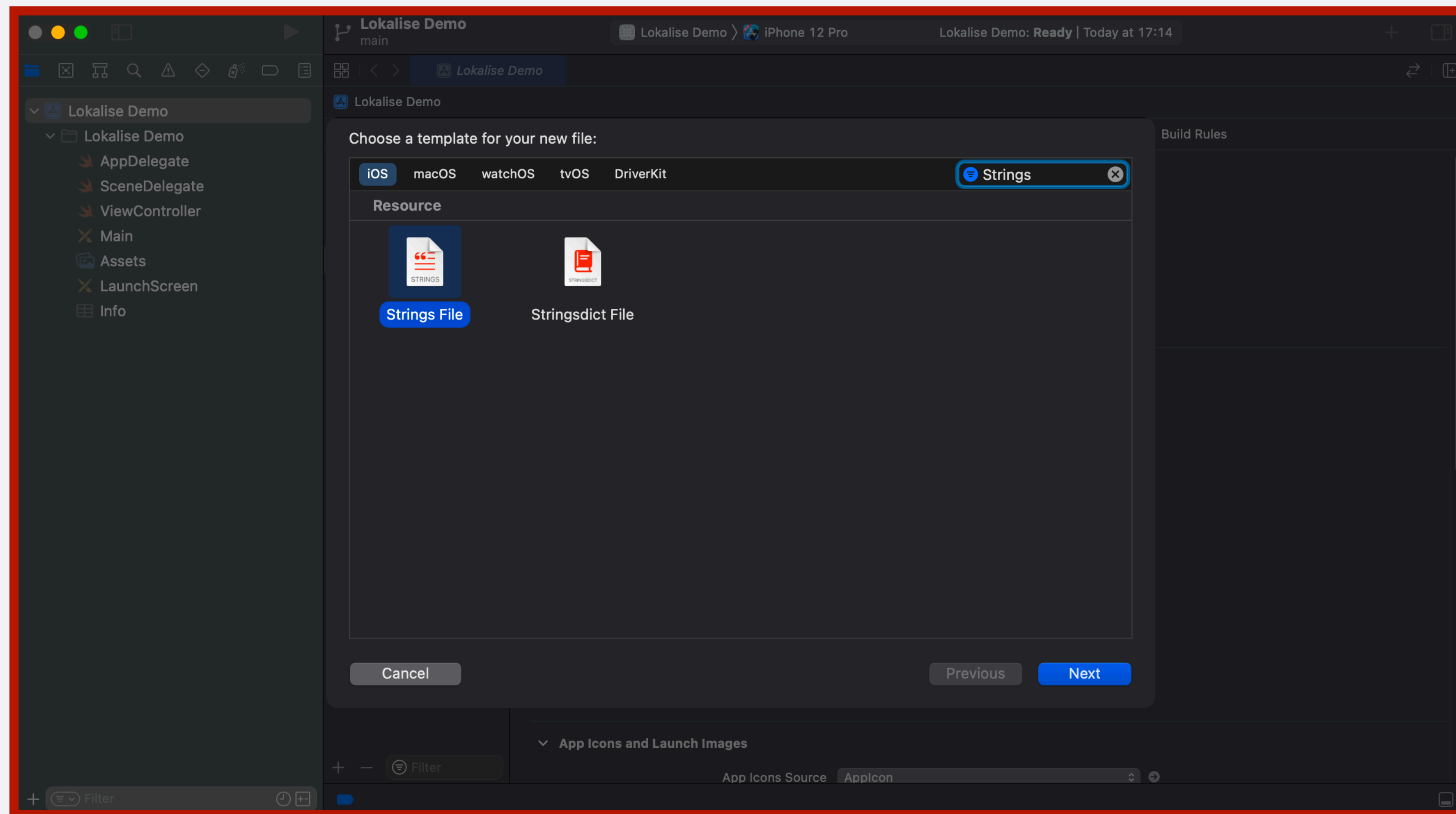
**Я ТВОЙ  
ПРИЛОЖЕНИЕ**



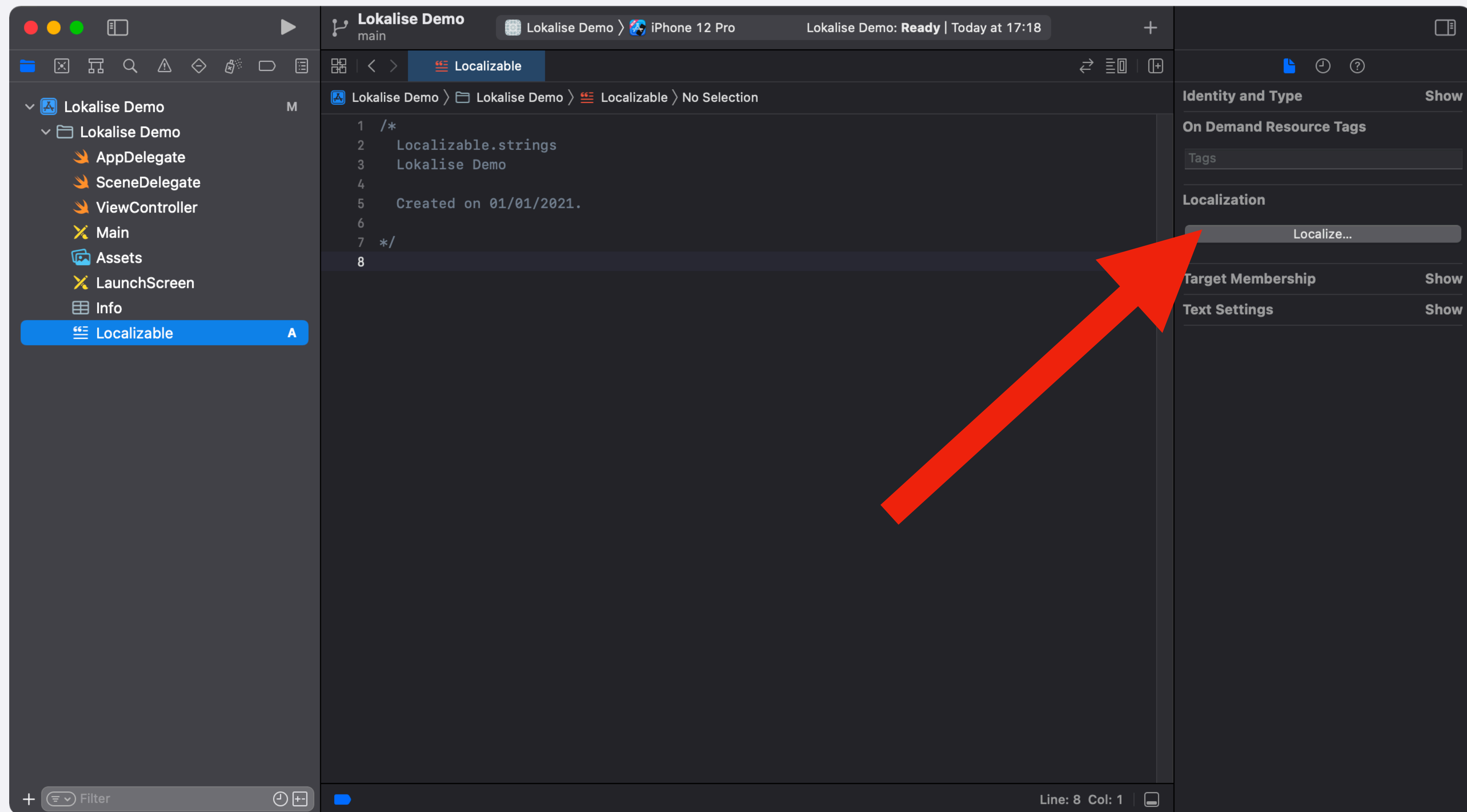
**МНОГО ЗВЕЗДА  
СТАВИТЬ**

risovach.ru

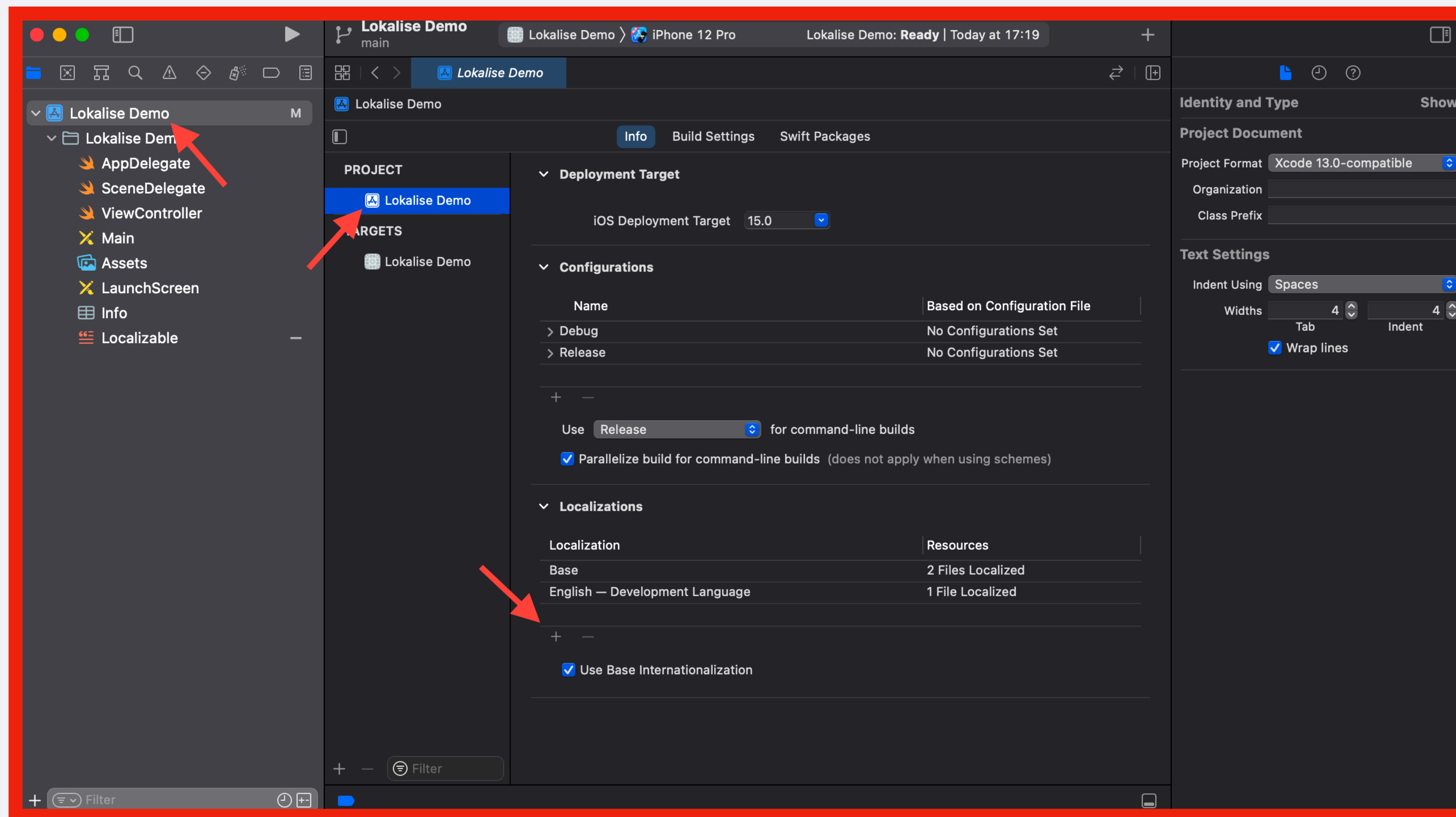
# Localisation. Localizable.strings



# Localisation. Localizable.strings

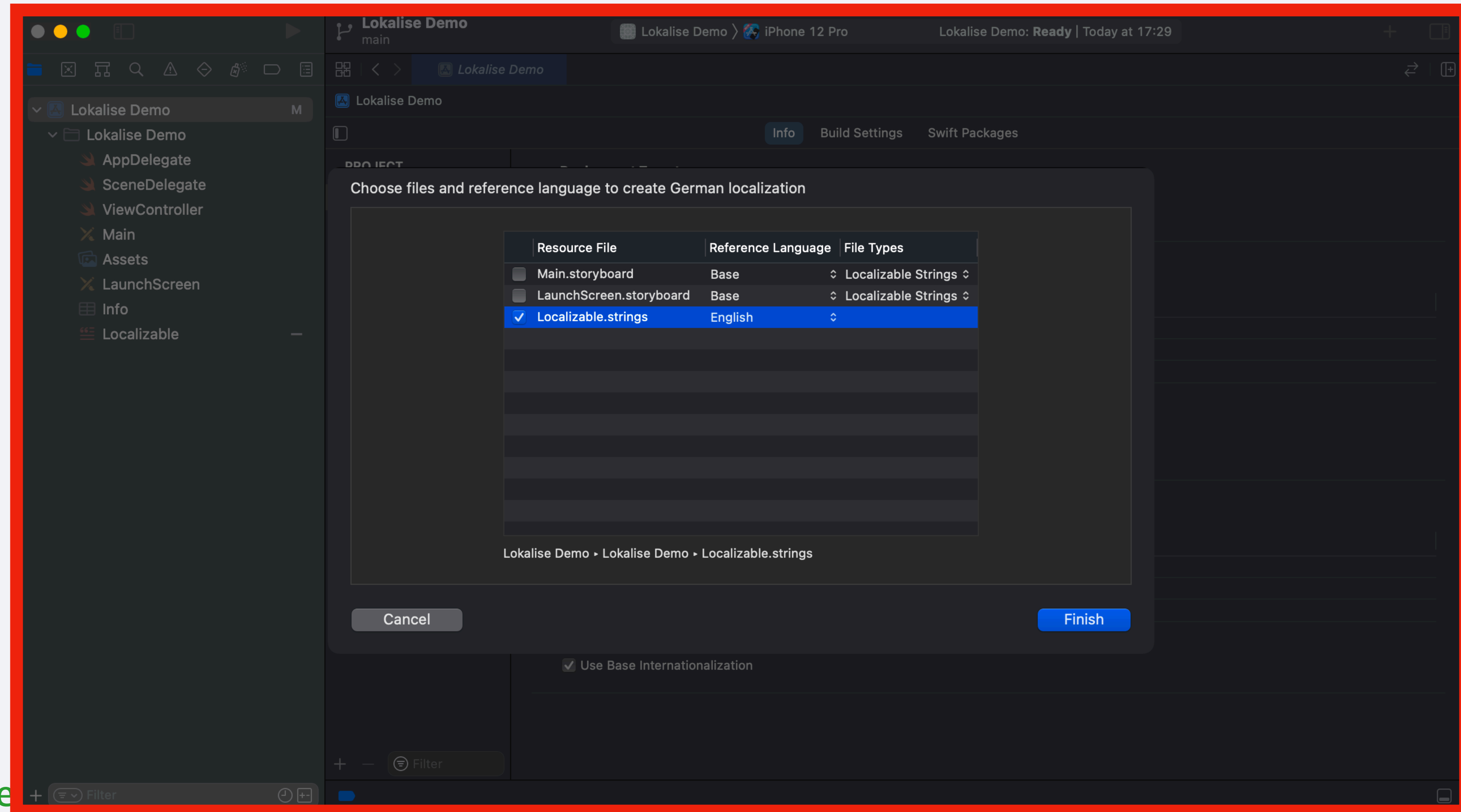


# Localisation. Languages

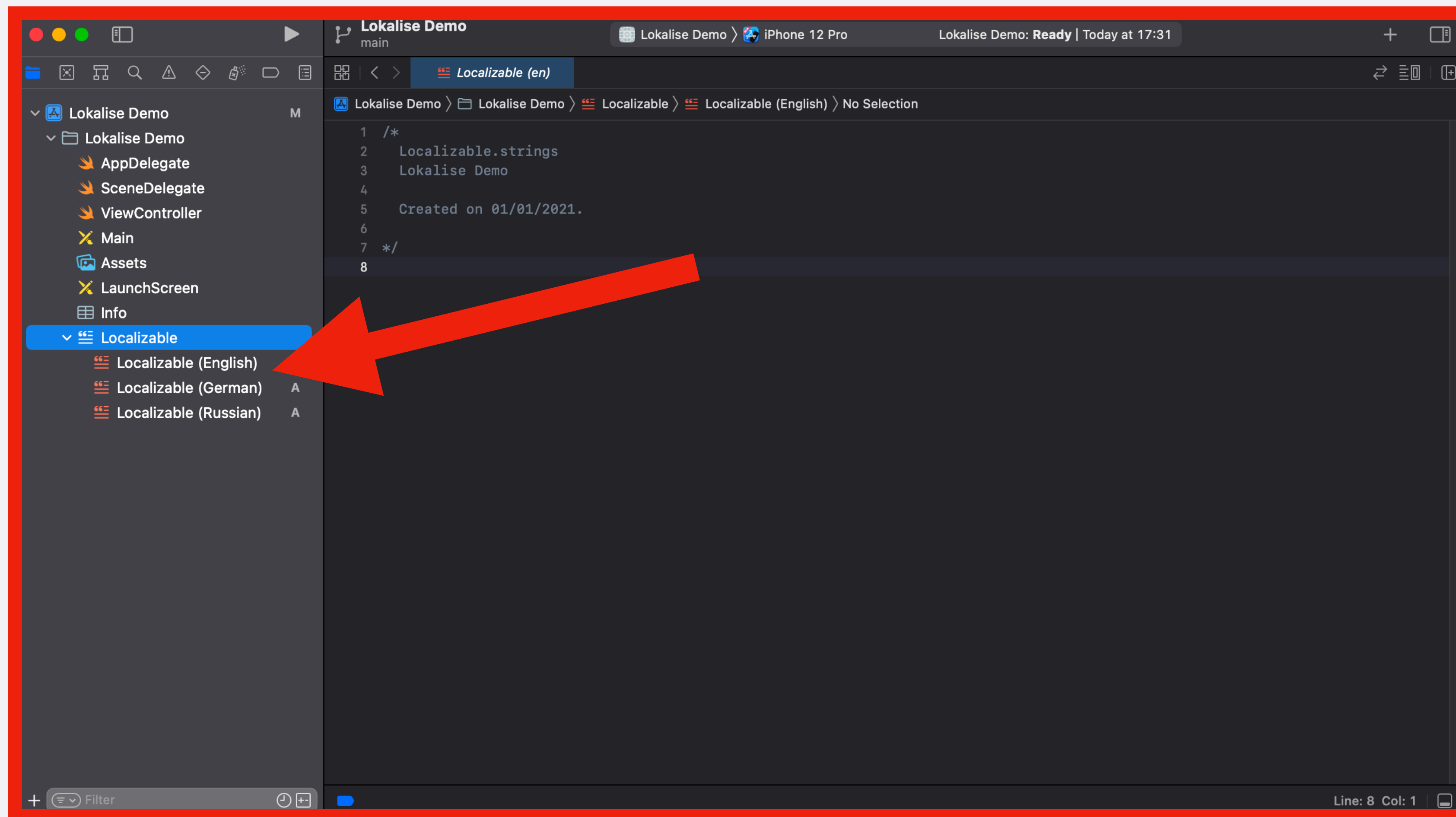




# Localisation. Languages



# Localisation. Languages



# Localisation. Translations

`Localizable.strings` (English):

```
"welcome_screen_title" = "Welcome";  
"login_button" = "Log in";
```

`Localizable.strings` (German):

```
"welcome_screen_title" = "Willkommen";  
"login_button" = "Einloggen";
```

`Localizable.strings` (Russian):

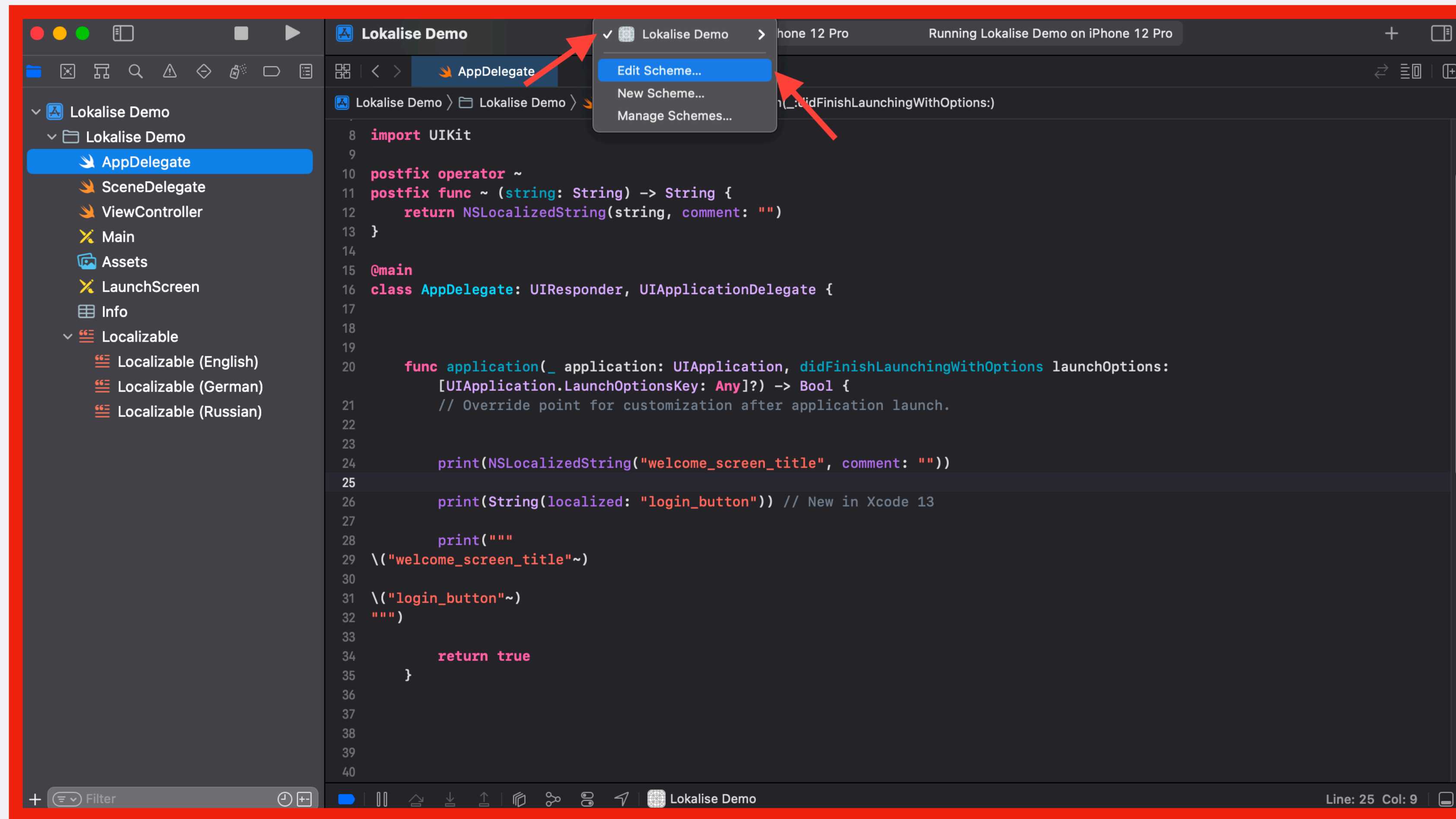
```
"welcome_screen_title" = "Добро пожаловать";  
"login_button" = "Вход";
```



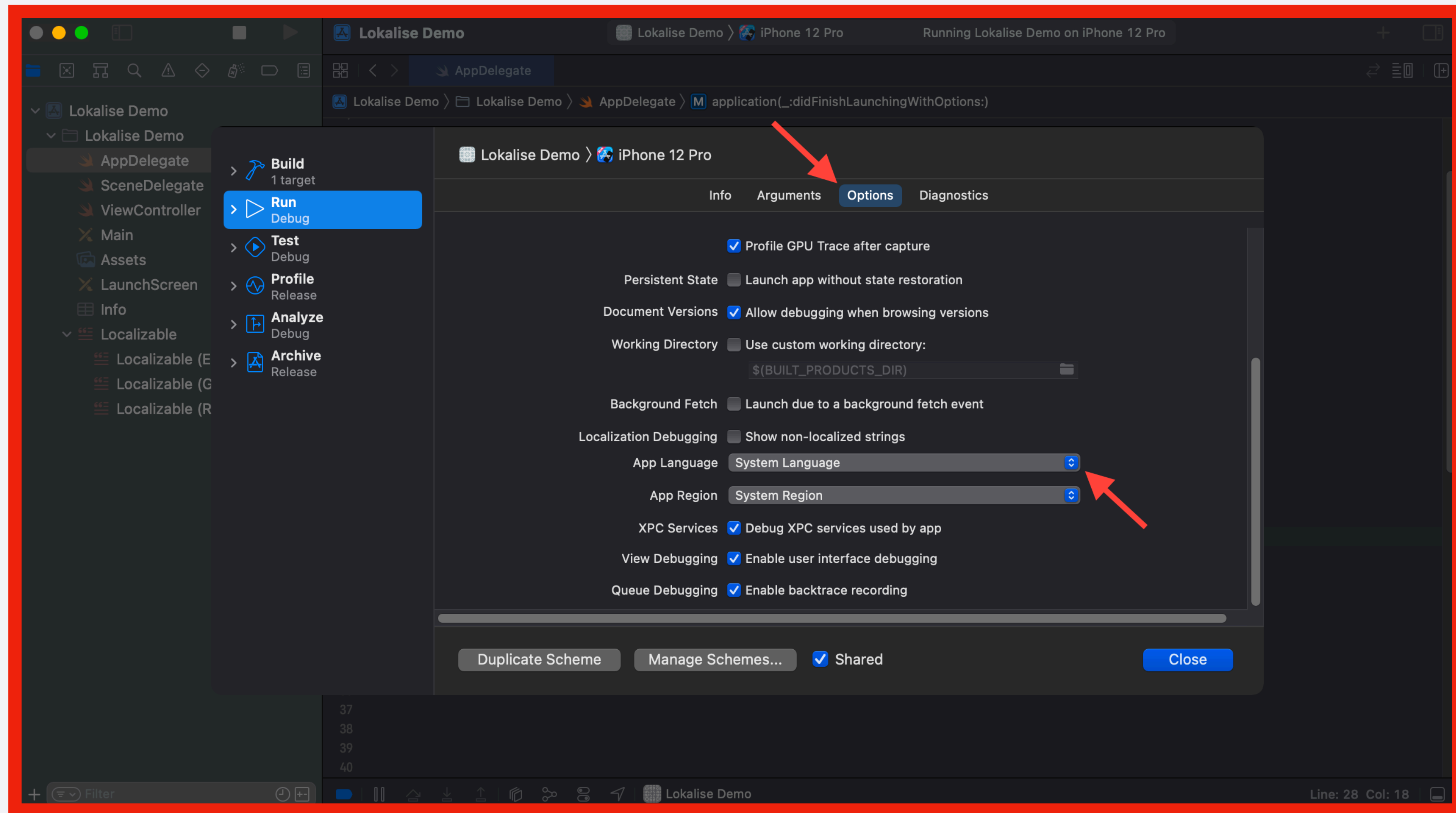
# Localisation. Using

```
print(NSLocalizedString("welcome_screen_title", comment: ""))  
print(String(localized: "login_button")) // New in Xcode 13
```

# Localisation. Testing



# Localisation. Testing



# Localisation. Plural



CLDR

Unicode Common Locale Data Repository

<http://cldr.unicode.org/>



# Localisation. Plural

- zero
- one
- two
- few
- many
- other

# Localisation. Plural

Name	Code	Type	Category	Examples	Minimal Pairs	Rules
Russian	ru	cardinal	one	1, 21, 31, 41, 51, 61, 71, 81, 101, 1001, ...	из 1 книги за 1 день	$v = 0$ and $i \% 10 = 1$ and $i \% 100 \neq 11$
			few	2~4, 22~24, 32~34, 42~44, 52~54, 62, 102, 1002, ...	из 2 книг за 2 дня	$v = 0$ and $i \% 10 = 2..4$ and $i \% 100 \neq 12..14$
			many	0, 5~19, 100, 1000, 10000, 100000, 1000000, ...	из 5 книг за 5 дней	$v = 0$ and $i \% 10 = 0$ or $v = 0$ and $i \% 10 = 5..9$ or $v = 0$ and $i \% 100 = 11..14$
			other	0.0~1.5, 10.0, 100.0, 1000.0, 10000.0, 100000.0, 1000000.0, ...	из 1,5 книги за 1,5 дня	
		ordinal	other	0~15, 100, 1000, 10000, 100000, 1000000, ...	Сверните направо на 15-м перекрестке.	
		range	one+one	1–21	из 1-21 книги за 1-21 день	$one + one \rightarrow one$
			one+few	1–2	из 1-2 книг за 1-2 дня	$one + few \rightarrow few$
			one+many	1–5	из 1-5 книг за 1-5 дней	$one + many \rightarrow many$
			one+other	1–10.0	из 1-10,0 книги за 1-10,0 дня	$one + other \rightarrow other$
			few+one	2–21	из 2-21 книги за 2-21 день	$few + one \rightarrow one$
			few+few	2–22	из 2-22 книг за 2-22 дня	$few + few \rightarrow few$
			few+many	2–5	из 2-5 книг за 2-5 дней	$few + many \rightarrow many$
			few+other	2–10.0	из 2-10,0 книги за 2-10,0 дня	$few + other \rightarrow other$
			many+one	0–1	из 0-1 книги за 0-1 день	$many + one \rightarrow one$
			many+few	0–2	из 0-2 книг за 0-2 дня	$many + few \rightarrow few$
			many+many	0–5	из 0-5 книг за 0-5 дней	$many + many \rightarrow many$
			many+other	0–10.0	из 0-10,0 книги за 0-10,0 дня	$many + other \rightarrow other$
			other+one	0.0–1	из 0,0-1 книги за 0,0-1 день	$other + one \rightarrow one$
			other+few	0.0–2	из 0,0-2 книг за 0,0-2 дня	$other + few \rightarrow few$
			other+many	0.0–5	из 0,0-5 книг за 0,0-5 дней	$other + many \rightarrow many$
			other+other	0.0–10.0	из 0,0-10,0 книги за 0,0-10,0 дня	$other + other \rightarrow other$



# Localisation. Plurals vs Localisation

- набор правил
- `.stringDict`

- строка
- `.string`

# Localisation. stringDict

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//
EN" "http://www.apple.com/DTDs/PropertyList-1.0.dtd">
<plist version="1.0">
  <dict>
    <key><КЛЮЧ_СТРОКОВОГО_РЕСУРСА></key>
    <dict>
      ...
    </dict>
  </dict>
</plist>
```

# Localisation. stringDict

```
<dict>
  <key>NSStringLocalizedFormatKey</key>
  <string>Показать %@answers@</string>
  <key>answers</key>
  <dict>
    <key>NSStringFormatSpecTypeKey</key>
    <string>NSStringPluralRuleType</string>
    <key>NSStringFormatValueTypeKey</key>
    <string>ld</string>
    <key>zero</key>
    <string></string>
    <key>one</key>
    <string>%ld ответ</string>
    <key>few</key>
    <string>%ld ответа</string>
    <key>many</key>
    <string>%ld ответов</string>
    <key>other</key>
    <string>ответы</string>
  </dict>
</dict>
```

# Localisation. stringDict

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<string>Показать %@answers@</string>

<key>answers</key>

<dict>

<key>NSStringFormatSpecTypeKey</key>

<string>NSStringPluralRuleType</string>

<key>NSStringFormatValueTypeKey</key>

<string>ld</string>

<key>zero</key>

<string></string>

<key>one</key>

<string>%ld ответ</string>

<key>few</key>

<string>%ld ответа</string>

<key>many</key>

<string>%ld ответов</string>

<key>other</key>

<string>ответы</string>

</dict>

</dict>

NSStringLocalizedFormatKey

%#@ <имя\_переменной> @



Сбербанк  
Онлайн

Devteam

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```
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  <key>answers</key>
  <dict>
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    <string>NSStringPluralRuleType</string>
    <key>NSStringFormatValueTypeKey</key>
    <string>%ld</string>
    <key>zero</key>
    <string></string>
    <key>one</key>
    <string>%ld ответ</string>
    <key>few</key>
    <string>%ld ответа</string>
    <key>many</key>
    <string>%ld ответов</string>
    <key>other</key>
    <string>ответы</string>
  </dict>
</dict>
```

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    <key>NSStringFormatValueTypeKey</key>
    <string>ld</string>
    <key>zero</key>
    <string></string>
    <key>one</key>
    <string>%ld ответ</string>
    <key>few</key>
    <string>%ld ответа</string>
    <key>many</key>
    <string>%ld ответов</string>
    <key>other</key>
    <string>ответы</string>
  </dict>
</dict>
```



# Почитать

1. <https://developer.apple.com/localization>
2. <https://help.apple.com/xcode/mac/current/#/deve2bc11fab>
3. <https://www.raywenderlich.com/250-internationalizing-your-ios-app-getting-started>
4. <https://phrase.com/blog/posts/ios-tutorial-internationalization-localization/>
5. <https://lokalise.com/blog/getting-started-with-ios-localization/>