



.NET Conf

2022

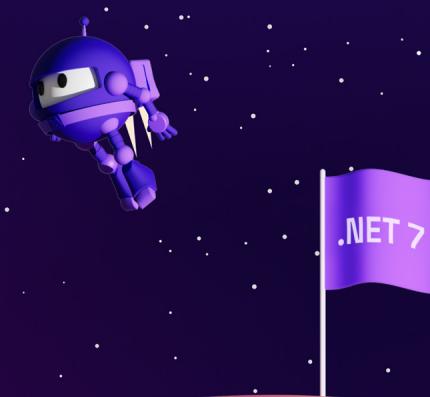
.NET MAUI focus on Desktop App



Sponsors



With the support of:
packt

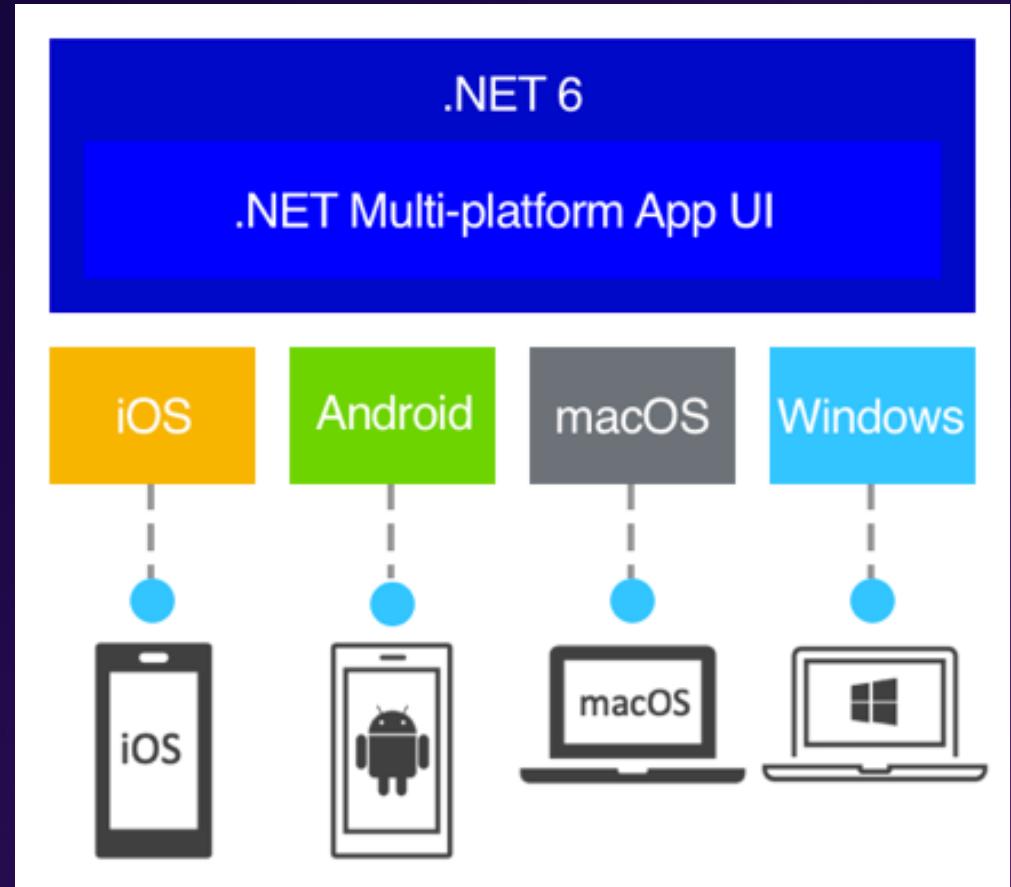


.Net MAUI (Multi-platform Application User Interface)

.NET MAUI è un framework multi piattaforma per la creazione di app **desktop** e mobile native con C# e XAML.

.NET MAUI è open source ed è l'evoluzione di Xamarin.Forms basata su .NET 7.

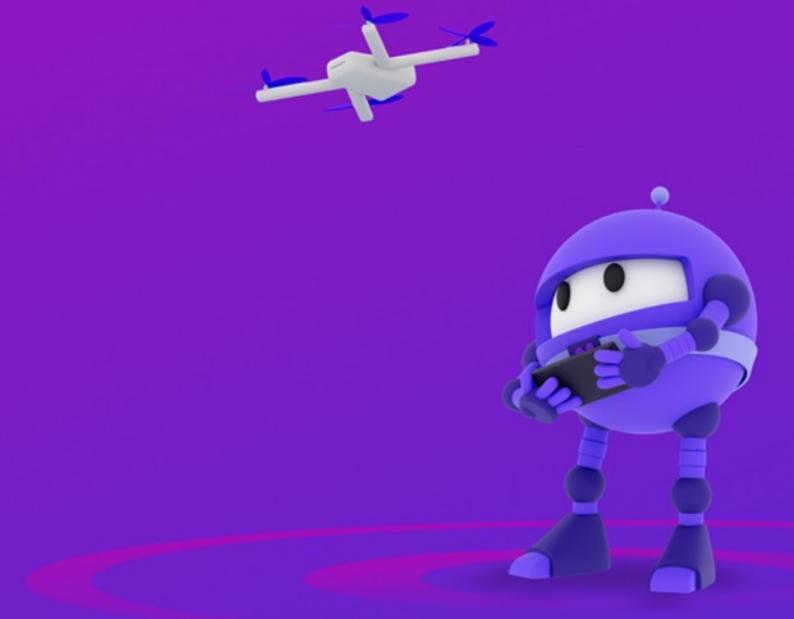
Utilizzando .NET MAUI, puoi costruire app mobile che possono essere eseguite su **Windows**, Android, iOS, iPadOS, **macOS (Mac Catalyst)**



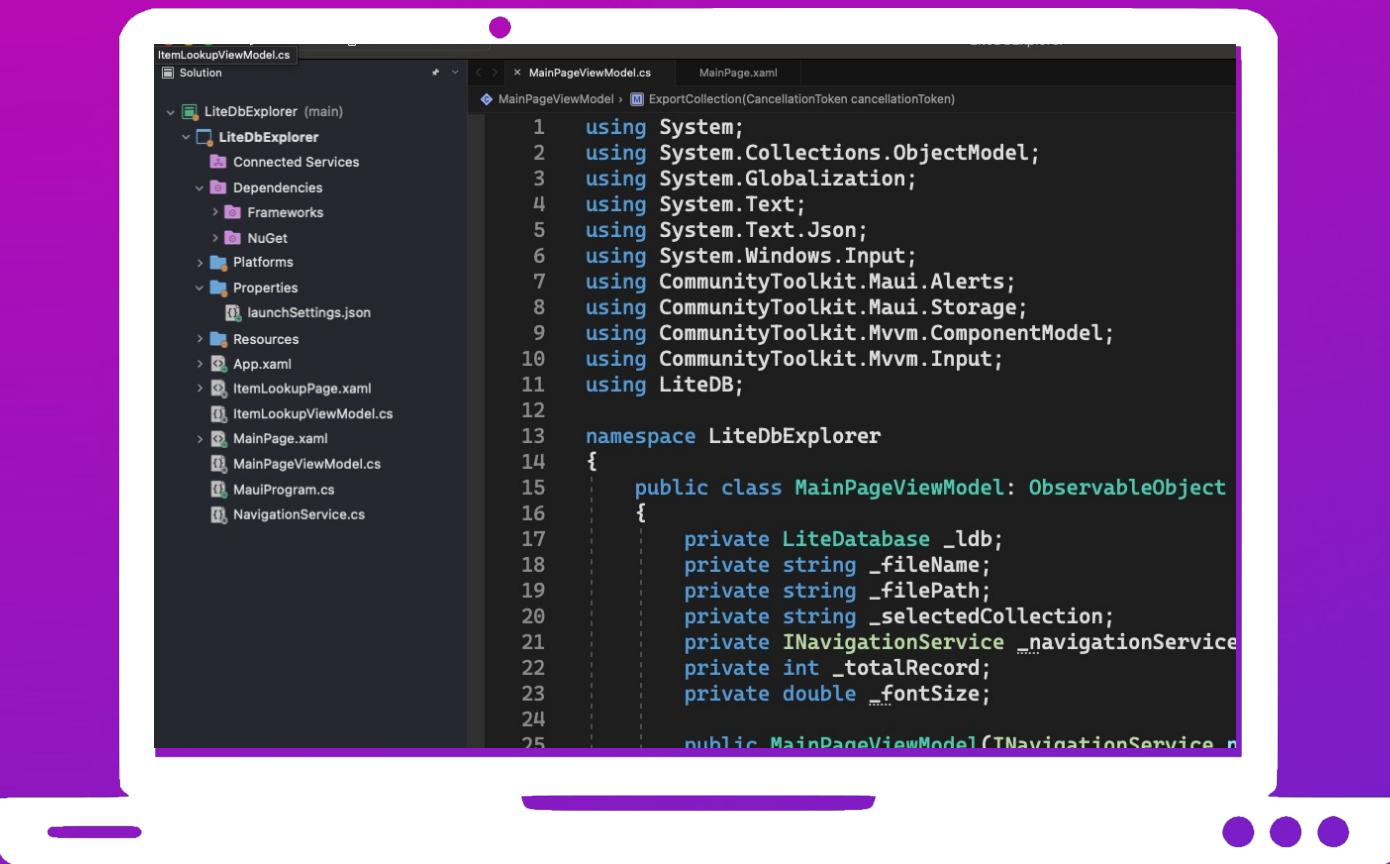
Off Topic



<https://www.litedb.org/>



Demo



```
1  using System;
2  using System.Collections.ObjectModel;
3  using System.Globalization;
4  using System.Text;
5  using System.Text.Json;
6  using System.Windows.Input;
7  using CommunityToolkit.Maui.Alerts;
8  using CommunityToolkit.Maui.Storage;
9  using CommunityToolkit.Mvvm.ComponentModel;
10 using CommunityToolkit.Mvvm.Input;
11 using LiteDB;
12
13 namespace LiteDbExplorer
14 {
15     public class MainPageViewModel : ObservableObject
16     {
17         private LiteDatabase _ldb;
18         private string _fileName;
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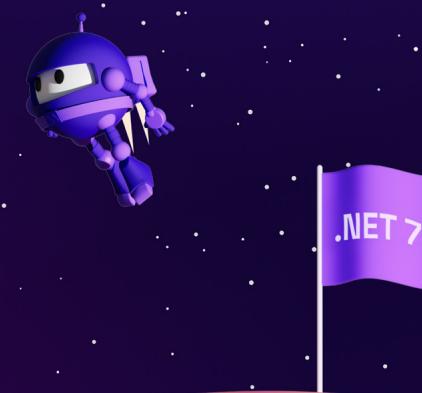
LiteDbExplorer



.NET MAUI for .NET 7

New .NET MAUI Features for Building Desktop Apps

Con .NET MAUI, puoi creare app mobili e desktop per Windows e Mac, offrendo la migliore esperienza agli utenti indipendentemente dal dispositivo. Vediamo le 5 migliori funzionalità per migliorare l'esperienza su desktop.



Multi-window

.NET MAUI introduce l'oggetto window come base, con una finestra predefinita creata automaticamente dall'applicazione.

La classe Application ha un nuovo metodo CreateWindow per creare nuove finestre.



```
var weatherDetails = new Window(new WeatherDetailsPage());
Application.Current.OpenWindow(weatherDetails);

// Close a specific window
Application.Current.CloseWindow(weatherDetails);

// Close the active window
Application.Current.CloseWindow(GetParentWindow());
```

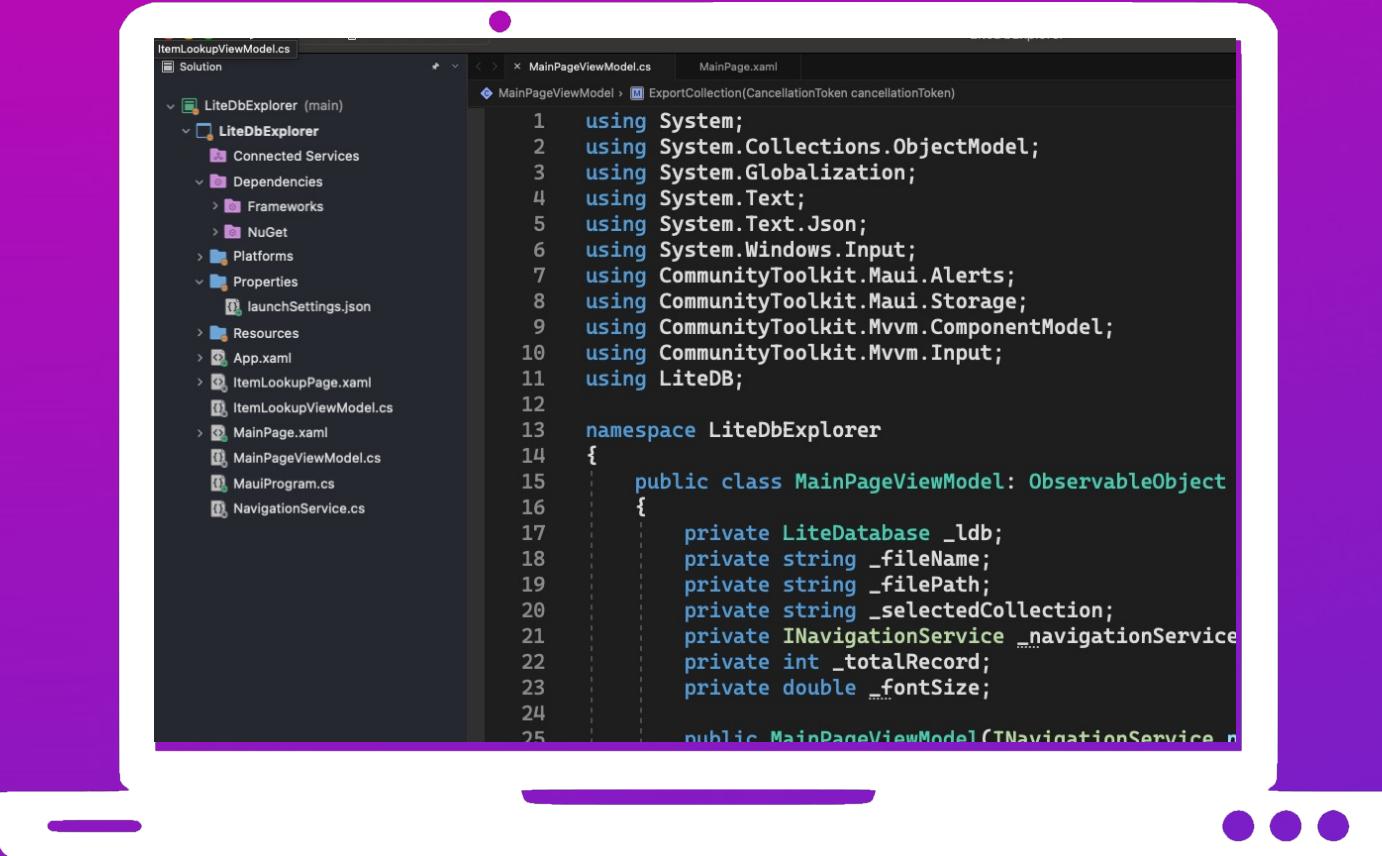
Important

Multi-window support works on Android and Windows without additional configuration. However, additional configuration is required on iPadOS and Mac Catalyst.

Warning

Mac Catalyst doesn't support resizing or repositioning windows programmatically by setting the X, Y, Width, and Height properties.

Demo



```
ItemLookupViewModel.cs
Solution
LiteDbExplorer (main)
  LiteDbExplorer
    Connected Services
  Dependencies
    Frameworks
    NuGet
  Platforms
  Properties
    launchSettings.json
  Resources
  App.xaml
  ItemLookupPage.xaml
  ItemLookupViewModel.cs
  MainPage.xaml
  MainPageViewModel.cs
  MauiProgram.cs
  NavigationService.cs

MainPageViewModel.cs
MainPage.xaml

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LiteDbExplorer



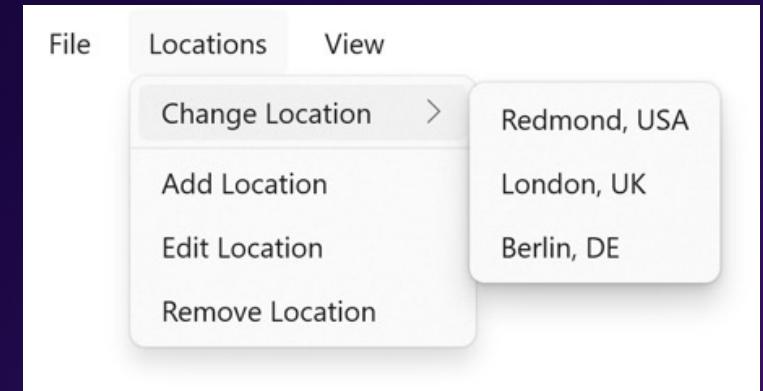
Menu Bar

La barra dei menu è una caratteristica comune delle applicazioni desktop su Windows e Mac.

.NET MAUI consente di integrare facilmente una barra dei menu con poche righe di codice.

E' possibile creare voci di menu sia in XAML che in modo programmatico, per renderle dinamiche. Possono essere abilitate/disabilitate, inserire separatori, sottomenu e icone su Windows. Inoltre, è possibile associare un comando e un evento Clicked

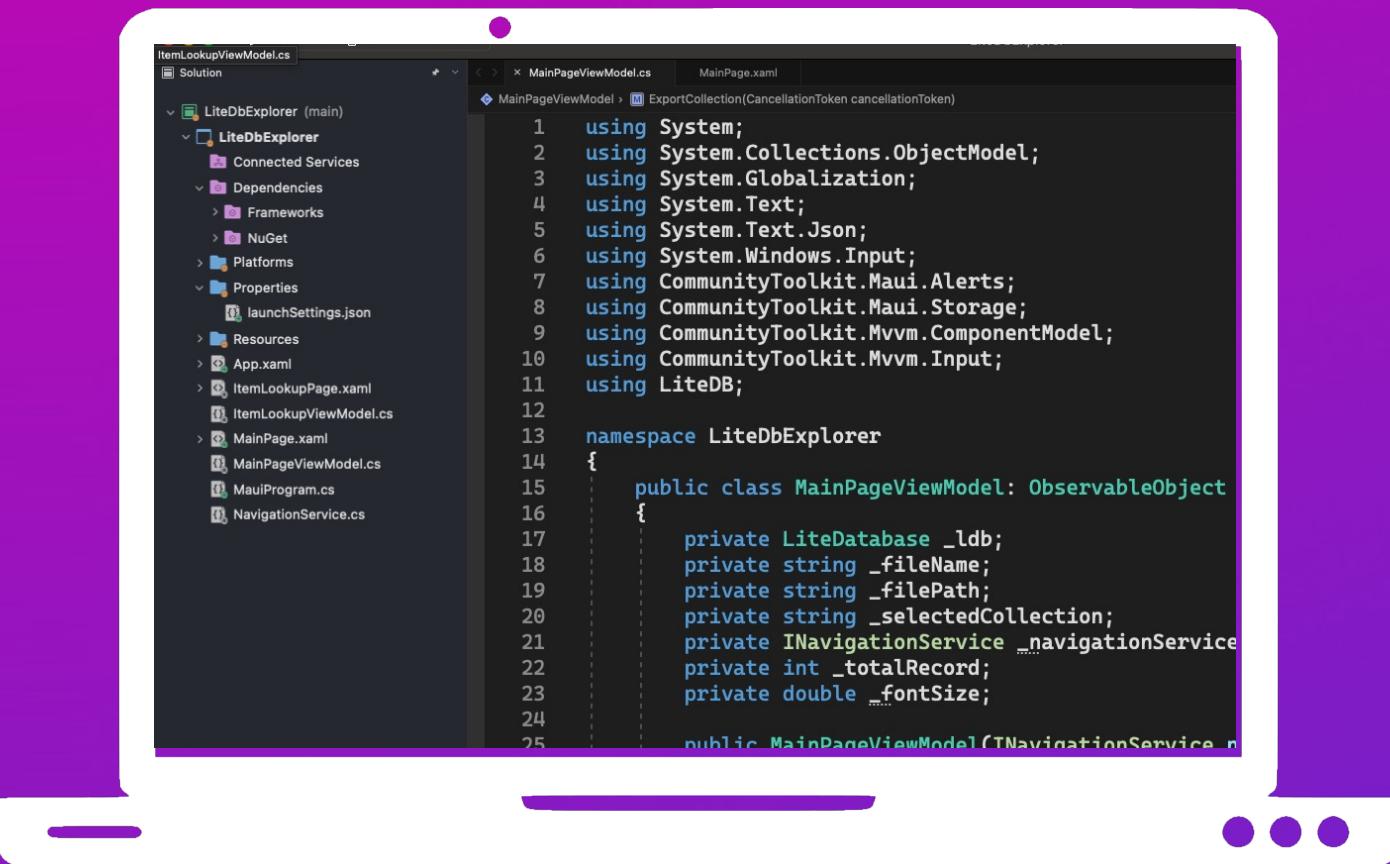
```
<Editor>
    <FlyoutBase.ContextFlyout>
        <MenuFlyout>
            <MenuFlyoutItem Text="Bold" Clicked="OnBoldClicked"/>
            <MenuFlyoutItem Text="Italics" Clicked="On Italics Clicked"/>
            <MenuFlyoutItem Text="Underline" Clicked="On Underline Clicked"/>
        </MenuFlyout>
    </FlyoutBase.ContextFlyout>
</Editor>
```



⚠ Warning

Mac Catalyst does not support displaying icons on menu items.

Demo



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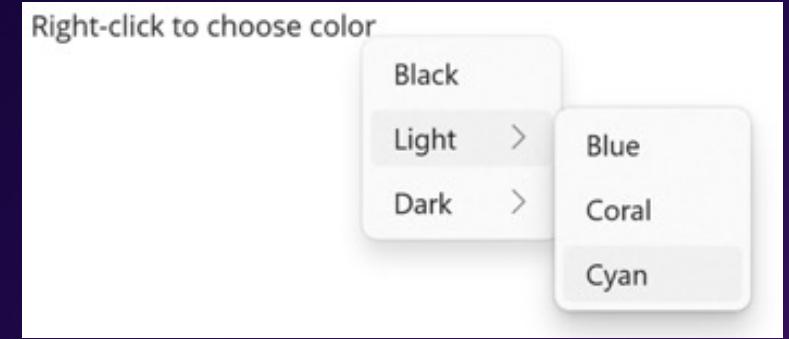
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Context Menu

In ambiente desktop, si può sfruttare il tasto destro del mouse per effettuare operazioni specifiche sull'elemento selezionato.

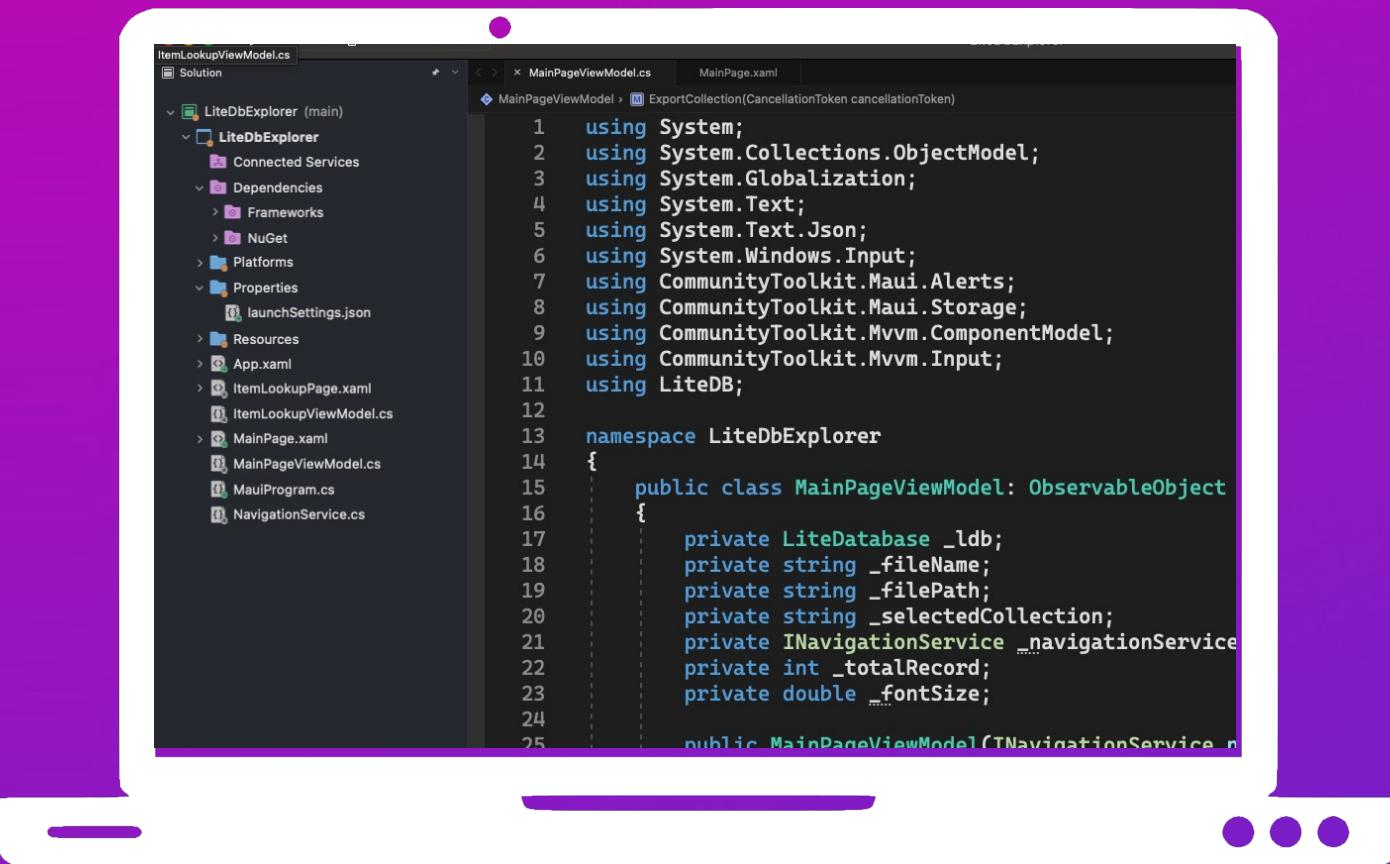
In .NET MAUI i menu contestuali offrono opzioni aggiuntive quando un utente fa clic con il tasto destro su un elemento, simili alla barra dei menu, ma basati sul contesto specifico



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            <MenuFlyoutItem Text="Bold" Clicked="OnBoldClicked"/>
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            <MenuFlyoutItem Text="Underline" Clicked="OnUnderlineClicked"/>
        </MenuFlyout>
    </FlyoutBase.ContextFlyout>
</Editor>
```

- ⚠ Warning
Mac Catalyst does not support displaying icons on context menu items.
- ⚠ Warning
It's not currently possible to add items to, or remove items from, the `MenuFlyout` at runtime.
- ⚠ Warning
A context menu on an `Entry` is currently unsupported on Mac Catalyst.

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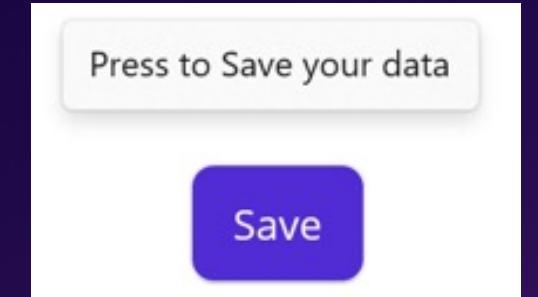
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LiteDbExplorer



Tooltip

Nelle applicazioni desktop sono molto usati i Tooltip per descrivere meglio i comandi e le etichette.



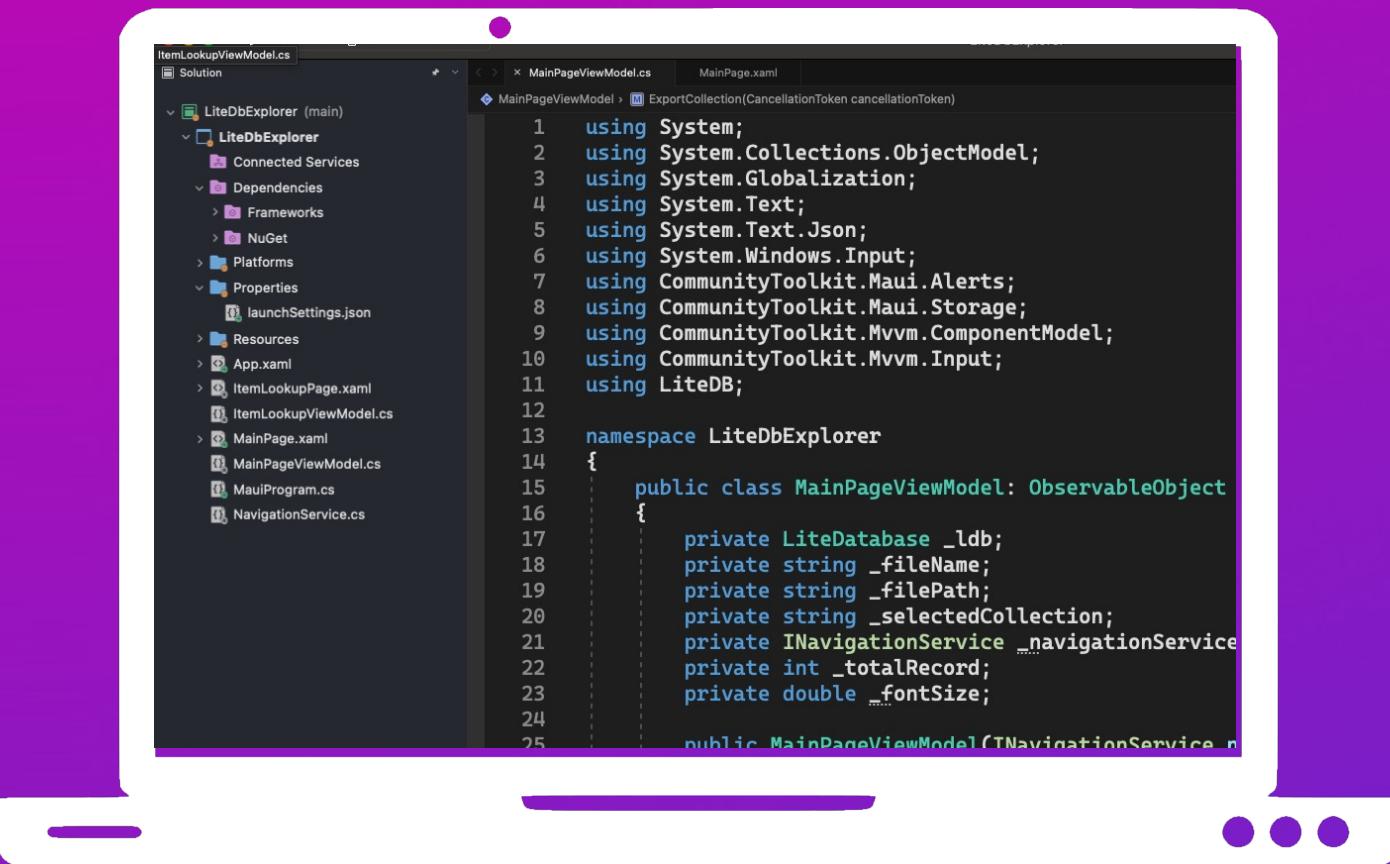
In .NET MAUI utilizzando la proprietà `ToolTipProperties.Text` è possibile fornire informazioni aggiuntive sui controlli quando gli utenti passano il mouse su di essi.

```
<Button Text="Save"  
       ToolTipProperties.Text="Click to save your comment" />
```

ⓘ Note

Configuring tooltip placement is currently unsupported.

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PointerGestureRecognizer

.NET MAUI offre diversi riconoscitori di gesti del mouse per migliorare le applicazioni desktop, consentendo di monitorare facilmente l'entrata, l'uscita o il movimento del puntatore all'interno di un controllo.

E' possibile associare anche un comando.

```
<Image Source="dotnet_bot.png">
    <Image.GestureRecognizers>
        <PointerGestureRecognizer PointerEntered="OnPointerEntered"
            PointerExited="OnPointerExited"
            PointerMoved="OnPointerMoved" />
    </Image.GestureRecognizers>
</Image>
```

```
void OnPointerExited(object sender, PointerEventArgs e)
{
    // Position inside window
    Point? windowPosition = e.GetPosition(null);

    // Position relative to an Image
    Point? relativeToImagePosition = e.GetPosition(image);

    // Position relative to the container view
    Point? relativeToContainerPosition = e.GetPosition((View)sender);
}
```

Resources

5 .NET MAUI Features for Building Great Desktop Apps

<https://devblogs.microsoft.com/dotnet/5-dotnet-maui-desktop-features/>

What's new in .NET MAUI for .NET 7

<https://learn.microsoft.com/en-us/dotnet/maui/whats-new/dotnet-7?view=net-maui-7.0>

.NET Multi-platform App UI (.NET MAUI) Community Toolkit documentation

<https://learn.microsoft.com/en-us/dotnet/communitytoolkit/maui/>

Community Toolkit MVVM

<https://learn.microsoft.com/it-it/dotnet/communitytoolkit/mvvm/>

Demo Application LiteDbExplorer

<https://github.com/bortolin/LiteDbExplorer>

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twitter: @marcobortolin

<https://github.com/bortolin>

<https://www.linkedin.com/in/marcobortolin>

