

Szkolenie Xamarin 1b / 4

Pierwsza aplikacja i wstęp do XAML

Adam Szczerbiak
Witold Goralski

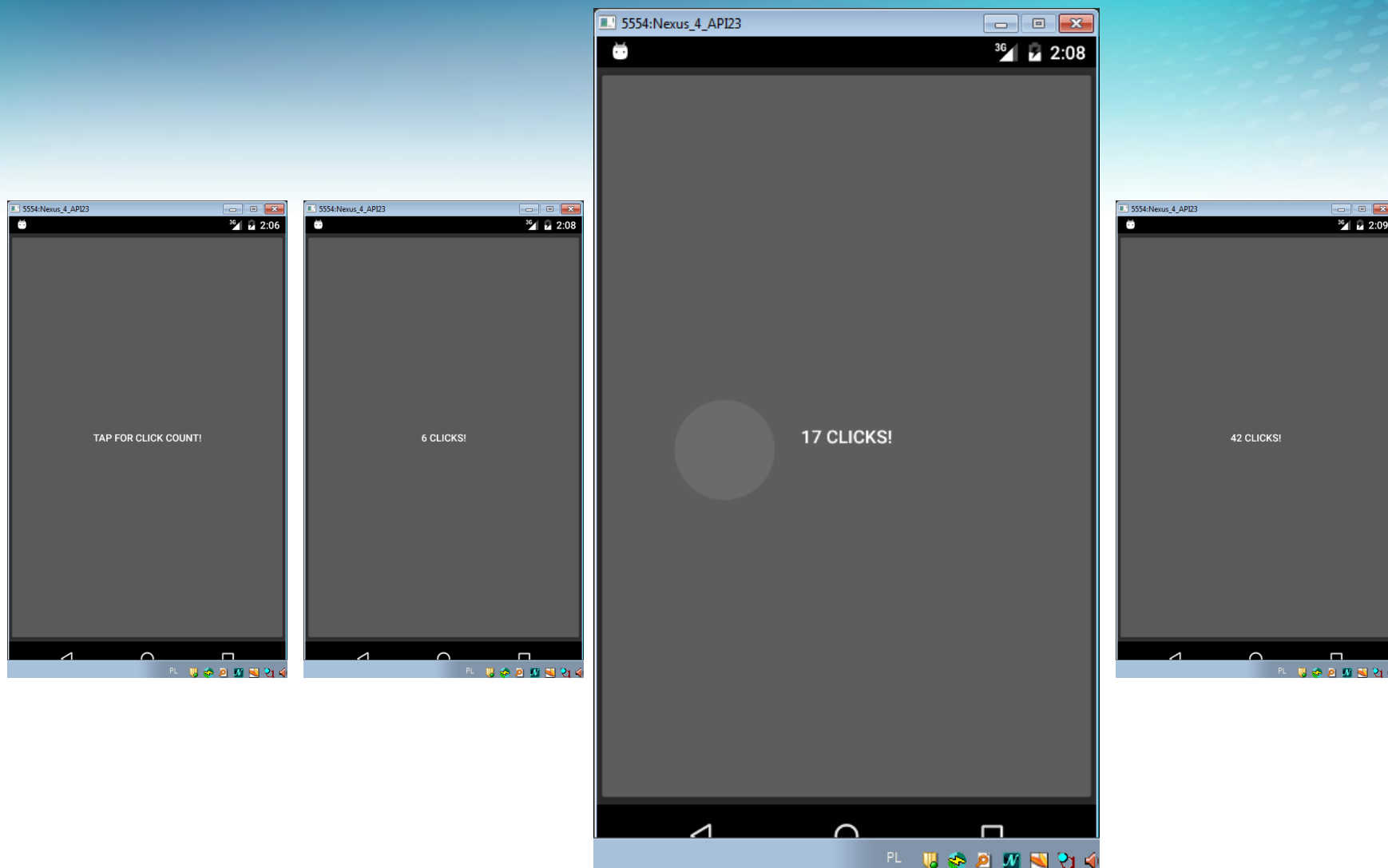


Plan warsztatów

- I Wprowadzenie do Xamarin
Pierwsza aplikacja i XAML
- II Układy stron i nawigacja
- III Układ siatkowy - Grid
- IV Zaawansowane układy stron



Pierwsza aplikacja



Środowisko programistyczne

Start Page - Microsoft Visual Studio (Administrator)

File Edit View Debug Team Tools Test Analyze Window Help

Start Page

Visual Studio

Start

- New Project...
- Open Project...
- Open from Source Control...

Recent

- ButtonCode
- TipCalc
- WorkingWithNavigation
- LoginNavigation
- CustomRenderer
- CustomRenderer
- Phoneword
- TableViewSamples
- ValidationCallback
- NestPlatformControl

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Explore what's new in Visual Studio Team Services

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News

The week in .NET – Adafruit Class Library for Windows IoT Core, Floor Plan

Adafruit is a familiar brand for anyone involved in the maker movement. Entrepreneur extraordinaire and open source advocate Limor Fried built the success of...

NEW środa, lutego 01, 2017

What's New in Visual Studio Team Services: Delivery Plans and mobile work item form (Jan 25)

We are excited to announce the preview of Delivery Plans! Delivery Plans help you drive alignment across teams by overlaying several backlogs onto your deliv...

NEW środa, lutego 01, 2017

New on Microsoft Platforms

- Windows
- Microsoft Azure
- ASP.NET Core and Web
- Microsoft Office
- SharePoint Development

Featured Videos

- Building JavaScript apps with Angular
- Connecting to Services with Visual Studio
- Code Editor Enhancements for XAML Developers

Team Explorer - Home

Search Work Items (Ctrl+Q)

Home | xamarin-samples

Project

- Changes
- Branches
- Sync
- Settings

Solutions

New... | Open...

- BoxViewClock.sln | BoxViewClock
- BugSweeper.sln | BugSweeper
- ButtonCode.sln | ButtonCode
- ButtonXaml.sln | ButtonXaml
- ClassHierarchy.sln | ClassHierarchy
- FormsWithCocosSharp.sln | CocosSharpForms
- DeepLinking.sln | DeepLinking
- EmployeeDirectory.sln | EmployeeDirectory
- SimpleColorPicker.sln | Forms2Native
- FormsGallery.sln | FormsGallery
- FormsGridLayout.sln | FormsGridLayout
- LabelledSectionsList.sln | LabelledSectionsList
- MobileCRM.sln | MobileCRM
- Native2Forms.sln | Native2Forms
- Phoneword.sln | Phoneword
- Phoneword.sln | PhonewordMultiscreen
- ScaleAndRotate.sln | ScaleAndRotate

Team Explorer | Class View

Package Manager Console

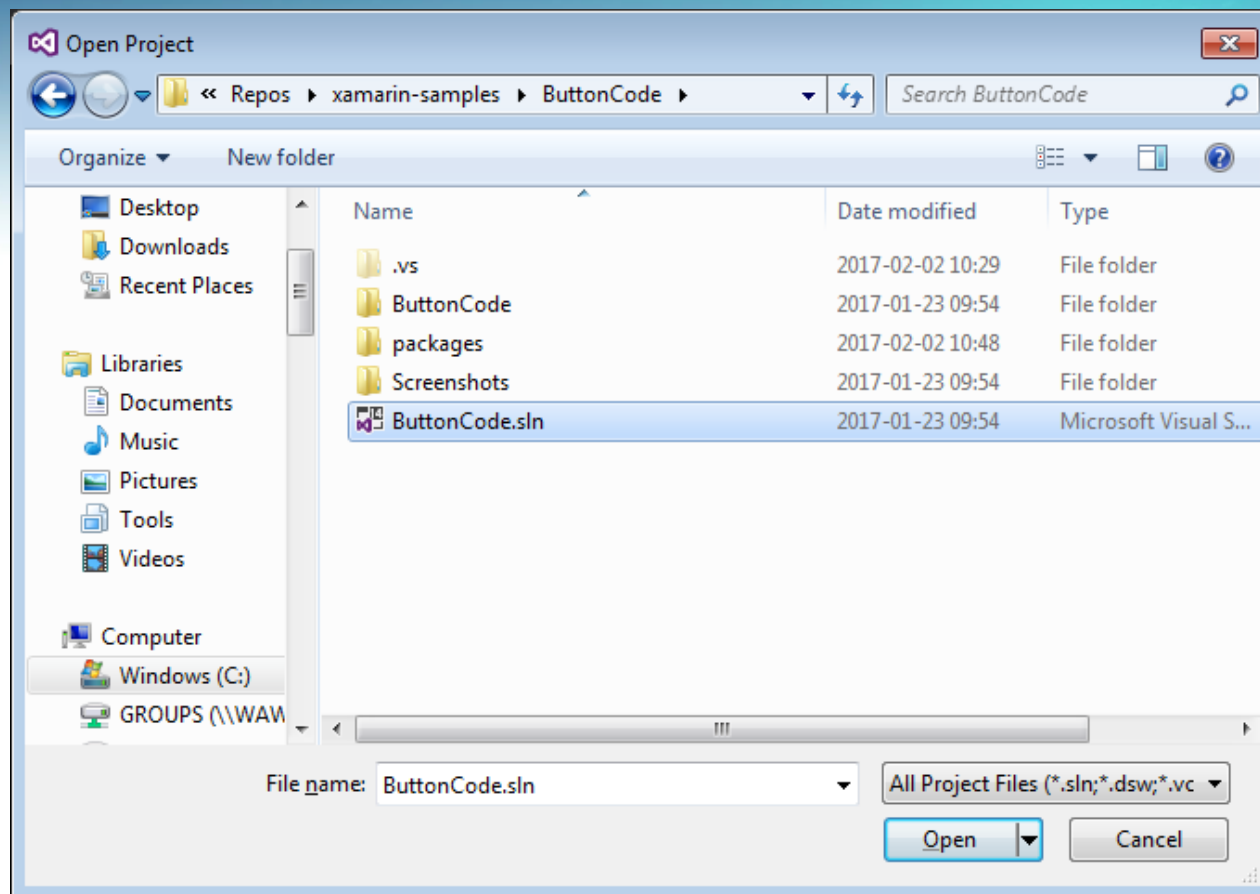
Ready

2 22 xamarin-samples devel/dotnet

PL

14:18
2017-02-02

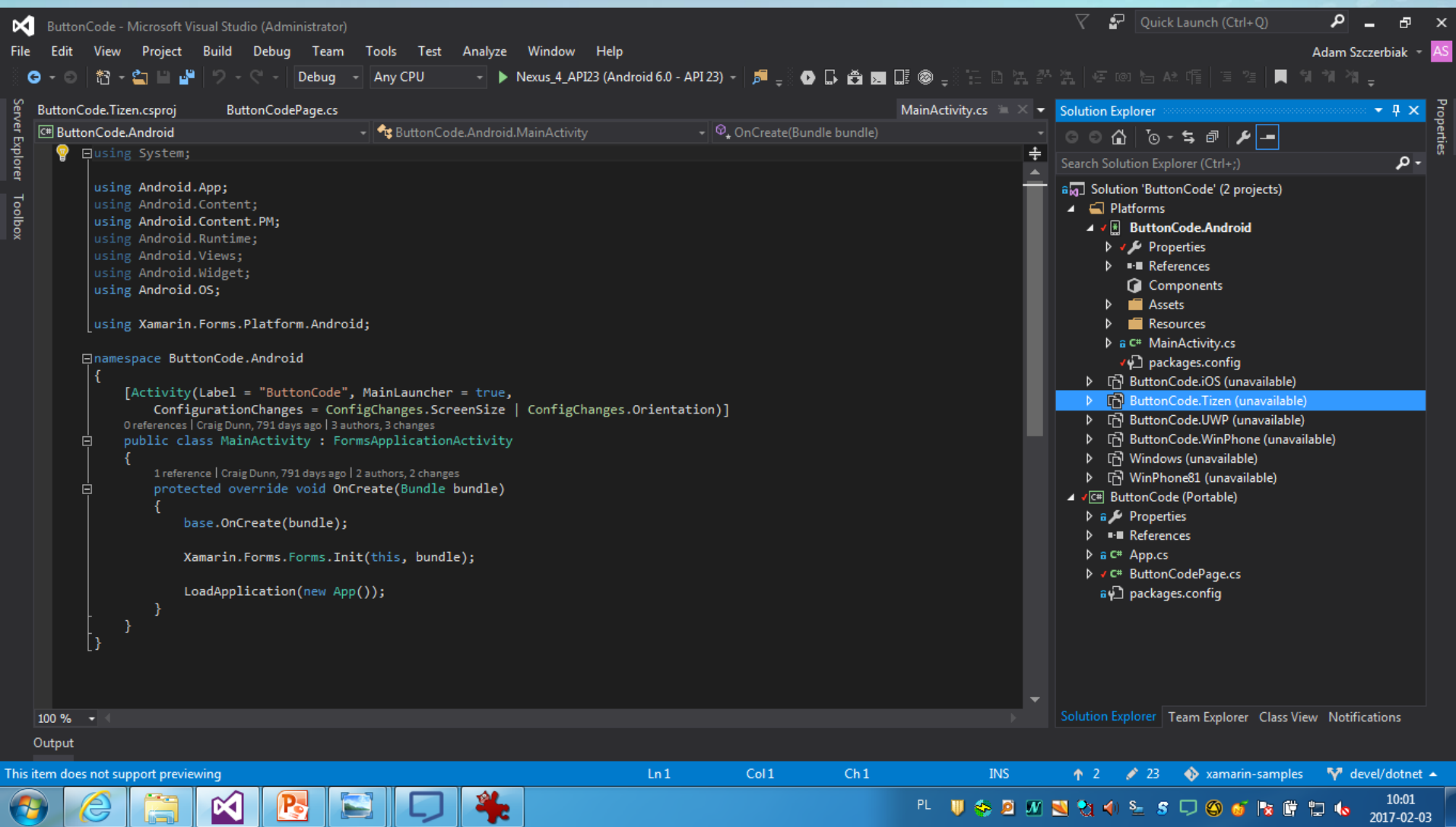
Importowanie projektu



(kod zostanie pokazany na następnych slajdach)

Wyłączanie zbędnych projektów

Wyłączenie zbędnych projektów przyspiesza czas aktualizacji pakietów oraz każdorazowej kompilacji kodu.



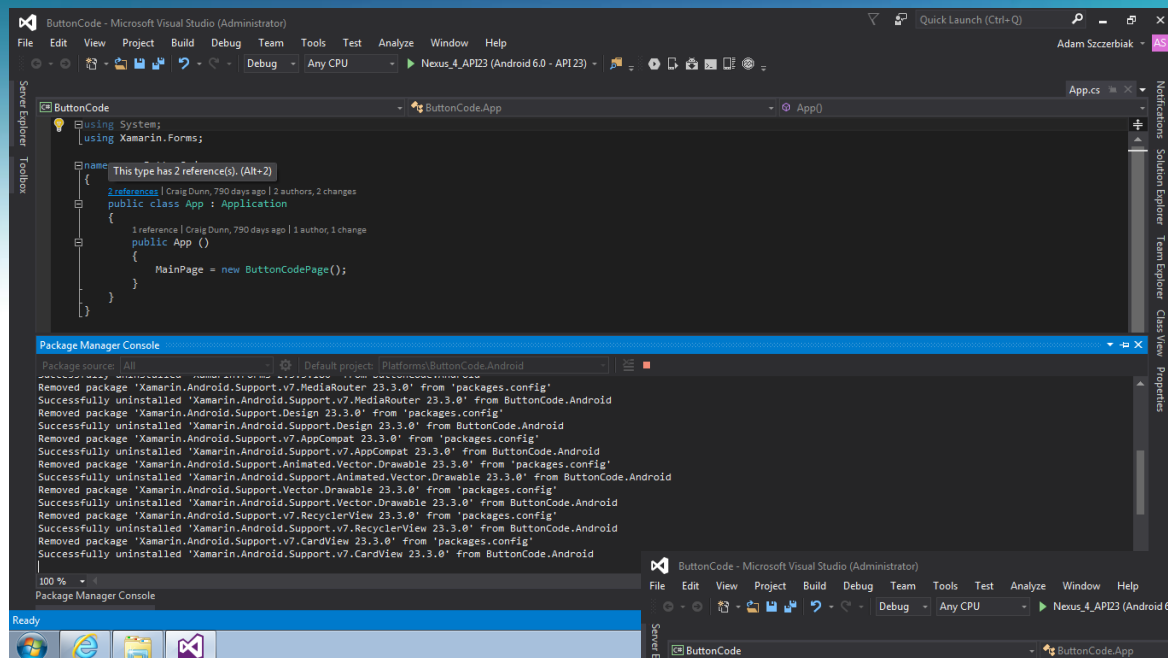
Aktualizacja pakietów NuGet

The screenshot shows the Microsoft Visual Studio (Administrator) interface. The main window displays the XML content of the `ButtonCode.Tizen.csproj` file. The XML includes project metadata, target framework information (DNXCore, v5.0), and build configurations. A context menu is open over the project file, with the option `Restore NuGet Packages` highlighted. The menu also includes options like `Build Solution`, `Rebuild Solution`, `Deploy Solution`, `Clean Solution`, `Analyze`, `Batch Build...`, `Configuration Manager...`, `Archive All...`, `View Archives`, `Manage NuGet Packages for Solution...`, `Restore NuGet Packages`, `New Solution Explorer View`, `Calculate Code Metrics`, `Install Missing Feature(s)`, `Project Dependencies...`, `Project Build Order...`, `Add`, `Set StartUp Projects...`, `Undo...`, `Commit...`, `View History...`, `Compare with Unmodified...`, `Annotate`, `Paste`, `Rename`, `Open Folder in File Explorer`, and `Properties`. The bottom status bar shows the current line and column (Ln 1, Col 1) and a message: "This item does not support previewing". The taskbar at the bottom displays various application icons and the system clock showing 09:53 on 2017-02-03.

```
<?xml version="1.0" encoding="utf-8"?>
<Project ToolsVersion="14.0" DefaultTargets="Build" xmlns="http://schemas.microsoft.com/develop...
  <PropertyGroup>
    <MinimumVisualStudioVersion>14.0</MinimumVisualStudioVersion>
    <Configuration Condition=" '$(Configuration)' == '' ">Debug</Configuration>
    <Platform Condition=" '$(Platform)' == '' ">AnyCPU</Platform>
    <ProductVersion>8.0.30703</ProductVersion>
    <SchemaVersion>2.0</SchemaVersion>
    <ProjectTypeGuids>{2F98DAC9-6F16-457B-AED7-D43CAC379341};{FAE04EC0-301F-11D3-BF4B-00C04F79...
    <ProjectGuid>{20ABEF83-B5A7-4C0C-B1AF-4083EBCF47D0}</ProjectGuid>
    <OutputType>Exe</OutputType>
    <AppDesignerFolder>Properties</AppDesignerFolder>
    <RootNamespace>ButtonCode</RootNamespace>
    <AssemblyName>ButtonCode.Tizen</AssemblyName>
    <FileAlignment>512</FileAlignment>
    <DefaultLanguage>en-US</DefaultLanguage>
  </PropertyGroup>
  <PropertyGroup>
    <TargetFrameworkIdentifier>DNXCore</TargetFrameworkIdentifier>
    <TargetFrameworkVersion>v5.0</TargetFrameworkVersion>
    <AddAdditionalExplicitAssemblyReferences>>false</AddAdditionalExplicitAssemblyReferences>
    <NuGetTargetMoniker>.NETCoreApp,Version=v1.0</NuGetTargetMoniker>
    <NoStdLib>true</NoStdLib>
    <NoWarn>$(NoWarn);1701</NoWarn>
    <UseVSHostingProcess>>false</UseVSHostingProcess>
  </PropertyGroup>
  <PropertyGroup Condition=" '$(Configuration)|$(Platform)' == 'Debug|AnyCPU' ">
    <DebugSymbols>true</DebugSymbols>
    <DebugType>full</DebugType>
    <Optimize>>false</Optimize>
    <OutputPath>bin\Debug\</OutputPath>
    <DefineConstants>DEBUG;TRACE</DefineConstants>
    <ErrorReport>prompt</ErrorReport>
    <WarningLevel>4</WarningLevel>
  </PropertyGroup>

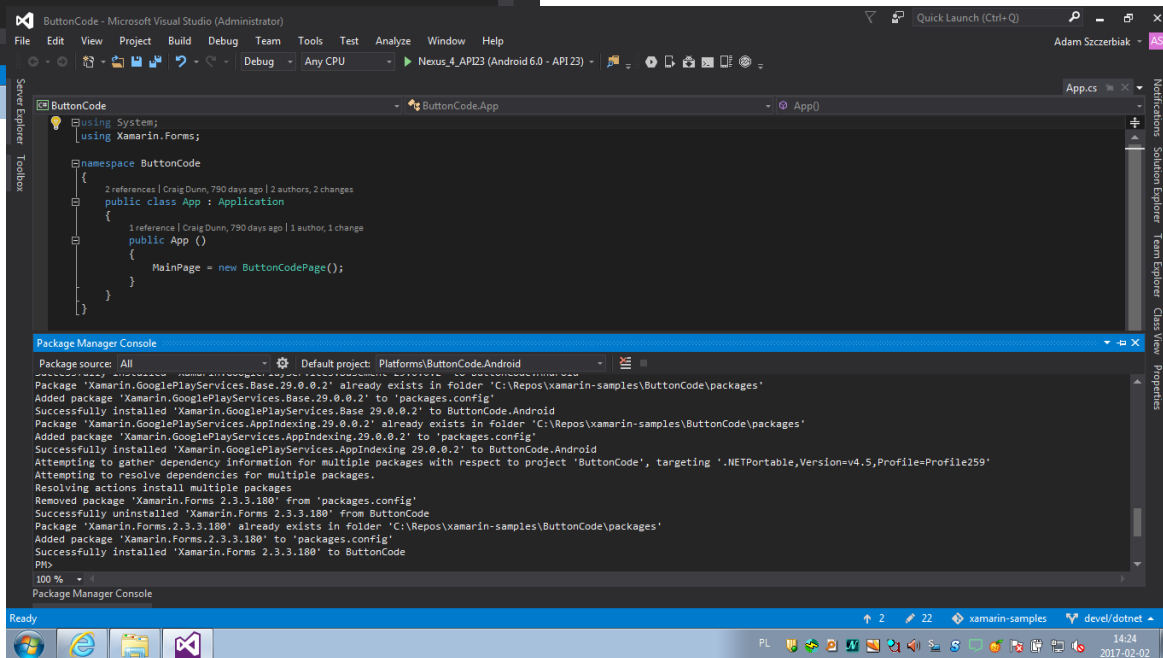
```

Aktualizacja pakietów NuGet



W trakcie...

Gotowe!



Wybór projektu startowego

The screenshot displays the Microsoft Visual Studio (Administrator) interface. The main editor shows the `ButtonCodePage.cs` file with the following code:

```
using System;
using Xamarin.Forms;

namespace ButtonCode
{
    2 references | cpetzold, 1000 days ago | 1 author, 1 change
    class ButtonCodePage : ContentPage
    {
        int count = 0;

        1 reference | cpetzold, 1000 days ago | 1 author, 1 change
        public ButtonCodePage()
        {
            Button button = new Button
            {
                Text = String.Format("Tap for click count!");
            };
            button.Clicked += (sender, args) =>
            {
                count++;
                button.Text =
                    String.Format("{0} click{1}!", count, count == 1 ? "" : "s");
            };
            this.Content = button;
        }
    }
}
```

The **Solution Explorer** on the right shows the project structure:

- Solution 'ButtonCode' (2 projects)
 - ButtonCode.Android
 - ButtonCode.iOS (unavailable)
 - ButtonCode.Tizen (unavailable)
 - ButtonCode.UWP (unavailable)
 - ButtonCode.WinPhone (unavailable)
 - ButtonCode.Windows (unavailable)
 - ButtonCode.Windows81 (unavailable)
 - ButtonCode.Portable
 - ButtonCode.Properties
 - ButtonCode.Resources
 - ButtonCodePage.cs
 - ButtonCode.config

A right-click context menu is open over the `ButtonCode` project, with **Set as StartUp Project** highlighted. Other menu items include Build, Rebuild, Deploy, Clean, View, Analyze, Archive..., View Archives..., Scope to This, New Solution Explorer View, Build Dependencies, Add, Manage NuGet Packages..., Debug, Source Control, Cut (Ctrl+X), Paste (Ctrl+V), Remove (Del), Rename, Unload Project, Open Folder in File Explorer, and Properties (Alt+Enter).

The status bar at the bottom indicates "This item does not support previewing" and shows the file path `Ln 27 Col 1 Ch 1`. The Windows taskbar at the very bottom shows the system clock as 14:30 on 2017-02-02.

Kod aplikacji

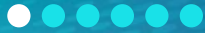


```
[-] using System;
    | using Xamarin.Forms;

[-] namespace ButtonCode
    | {
    |     2 references | Craig Dunn, 790 days ago | 2 authors, 2 changes
    |     [-] public class App : Application
    |         {
    |             1 reference | Craig Dunn, 790 days ago | 1 author, 1 change
    |             [-] public App ()
    |                 {
    |                     MainPage = new ButtonCodePage();
    |                 }
    |             }
    |         }
    |     }
```

App.cs

Kod aplikacji



```
using System;
using Xamarin.Forms;

namespace ButtonCode
{
    2 references | cpetzold, 1000 days ago | 1 author, 1 change
    class ButtonCodePage : ContentPage
    {
        int count = 0;

        1 reference | cpetzold, 1000 days ago | 1 author, 1 change
        public ButtonCodePage()
        {
            Button button = new Button
            {
                Text = String.Format("Tap for click count!")
            };
            button.Clicked += (sender, args) =>
            {
                count++;
                button.Text =
                    String.Format("{0} click{1}!", count, count == 1 ? "" : "s");
            };
            this.Content = button;
        }
    }
}
```

ButtonCodePage.cs

Budowanie projektu

The screenshot displays the Microsoft Visual Studio (Administrator) interface. The main editor window shows the file `ButtonCodePage.cs` with the following code:

```
using System;
using Xamarin.Forms;

namespace ButtonCode
{
    2 references | cpetzold, 1000 days ago | 1 author, 1 change
    class ButtonCodePage : ContentPage
    {
        int count = 0;

        1 reference | cpetzold, 1000 days ago | 1 author, 1 change
        public ButtonCodePage()
        {
            Button button = new Button
            {
                Text = String.Format("Tap for click count!");
            };
            button.Clicked += (sender, args) =>
            {
                count++;
                button.Text =
                    String.Format("{0} click{1}!", count, count == 1 ? "" : "s");
            };
            this.Content = button;
        }
    }
}
```

The Solution Explorer on the right shows the project structure for 'Solution 'ButtonCode' (2 projects)', including `ButtonCode.Android`, `ButtonCode.iOS (unavailable)`, `ButtonCode.Tizen (unavailable)`, `ButtonCode.UWP (unavailable)`, `ButtonCode.WinPhone (unavailable)`, `ButtonCode81 (unavailable)`, and `ButtonCode81 (Portable)`. The file `ButtonCodePage.cs` is selected.

A context menu is open over the Solution Explorer, listing various actions:

- Build
- Rebuild
- Deploy
- Clean
- View
- Analyze
- Archive...
- View Archives...
- Scope to This
- New Solution Explorer View
- Build Dependencies
- Add
- Manage NuGet Packages...
- Set as StartUp Project
- Debug
- Source Control
- Cut (Ctrl+X)
- Paste (Ctrl+V)
- Remove (Del)
- Rename
- Unload Project
- Open Folder in File Explorer
- Properties (Alt+Enter)

The status bar at the bottom indicates 'This item does not support previewing' and shows the current line (Ln 27), column (Col 1), and character (Ch 1). The system tray at the bottom right shows the date and time: 14:31, 2017-02-02.

Zadanie 2.1

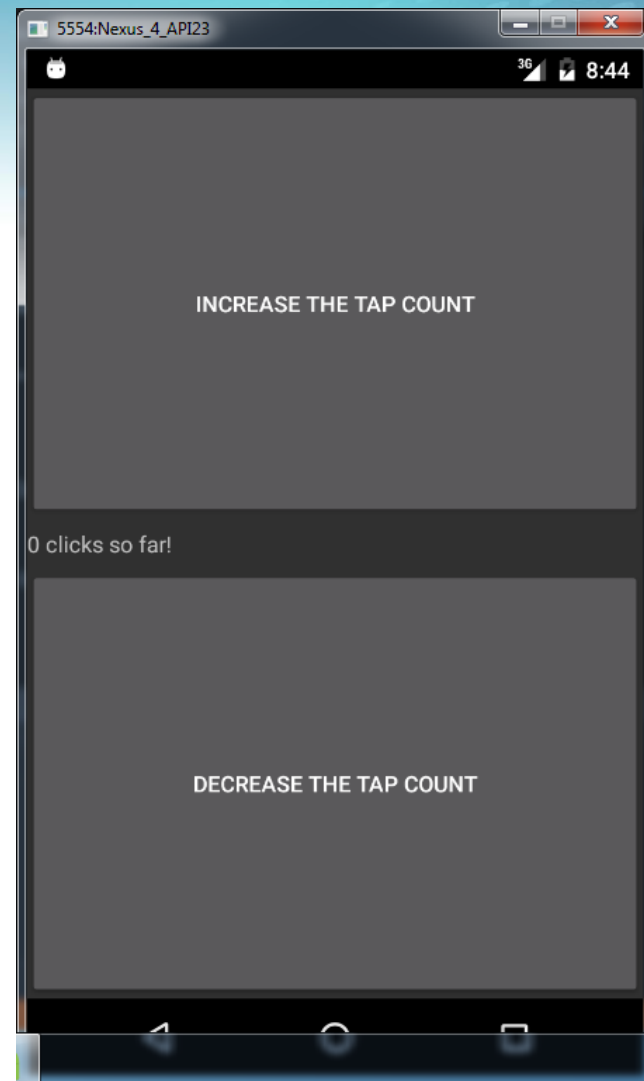


Napisz aplikację składającą się z dwóch przycisków i etykiety.

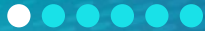
Kliknięcie górnego przycisku zwiększa licznik o 1

Kliknięcie dolnego przycisku zmniejsza licznik o 1

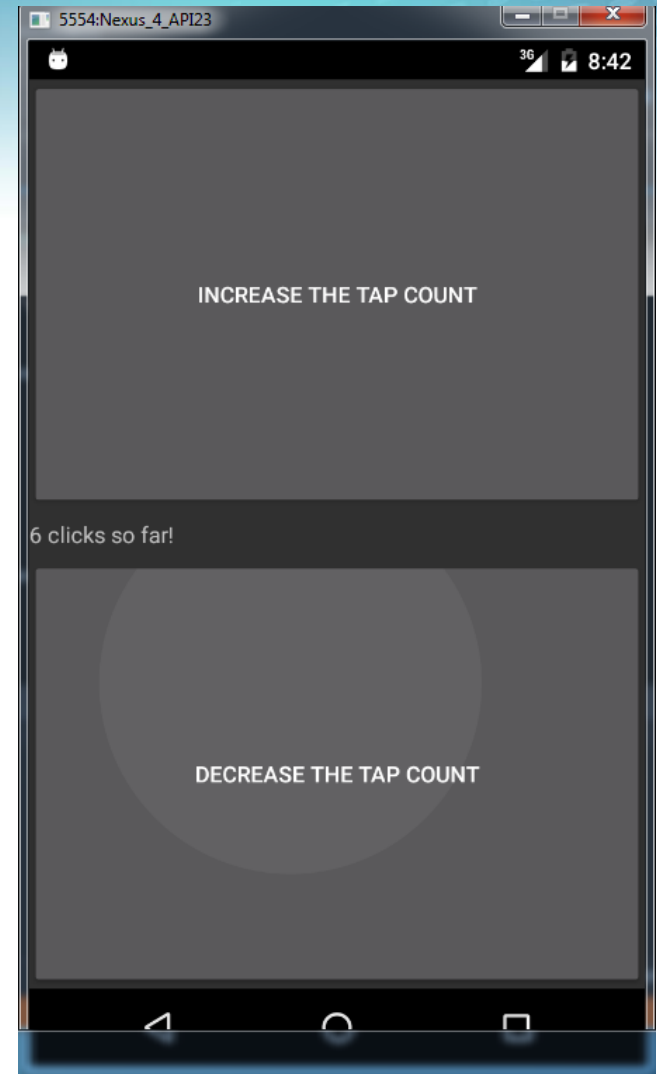
Układ przycisków jak na obrazie



Zadanie 2.1



[FILM]



Zadanie 2.1 - Niezbędne narzędzia



StackLayout

- **Orientation** : Horizontal | Vertical
- **Children** (dodawanie za pomocą metody **Add()**)

Label

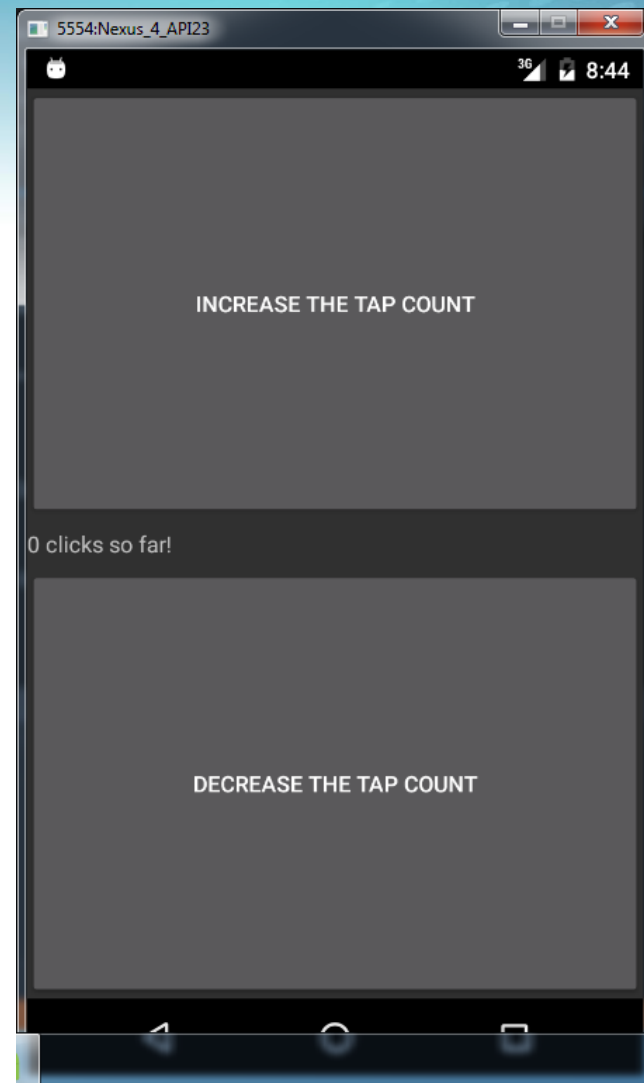
- **Text** (formatowanie za pomocą metody **String.Format()**)

Button

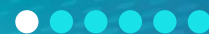
- **Text**
- **Clicked** (event handler)

Podobny projekt:

xamarin-samples → **ButtonCode**



Zadanie 2.1 – rozwiązanie (1/3)



```
using System;
using Xamarin.Forms;

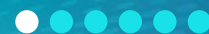
namespace ButtonCode
{
    2 references | Adam Szczerbiak, 2 hours ago | 1 author, 1 change
    class ButtonCodePage : ContentPage
    {
        int count = 0;
        Button buttonUp;
        Button buttonDown;
        Label lblCount;
        StackLayout layout;

        1 reference | Adam Szczerbiak, 2 hours ago | 1 author, 1 change
        public ButtonCodePage()
        {
            buttonUp = new Button {
                Text = "Increase the tap count",
                VerticalOptions = LayoutOptions.FillAndExpand,
            };
            buttonDown = new Button {
                Text = "Decrease the tap count",
                VerticalOptions = LayoutOptions.FillAndExpand,
            };
            lblCount = new Label {
                Text = "",
            };
            updateCount();

            buttonDown.Clicked += (sender, args) =>
            {
                if (count > 0)
                {
```

ButtonCodePage.cs

Zadanie 2.1 – rozwiązanie (2/3)



```
};  
lblCount = new Label {  
    Text = "",  
};  
updateCount();  
  
buttonDown.Clicked += (sender, args) =>  
{  
    if (count > 0)  
    {  
        count -= 1;  
        updateCount();  
    }  
};  
  
buttonUp.Clicked += (sender, args) =>  
{  
    count += 1;  
    updateCount();  
};  
  
layout = new StackLayout {  
    Orientation = StackOrientation.Vertical,  
};  
layout.Children.Add(buttonUp);  
layout.Children.Add(lblCount);  
layout.Children.Add(buttonDown);  
  
this.Content = layout;  
}
```

3 references | Adam Szczerbiak, 2 hours ago | 1 author, 1 change

```
private void updateCount()  
{
```

ButtonCodePage.cs

Zadanie 2.1 – rozwiązanie (3/3)



```
        updateCount();
    };

    layout = new StackLayout {
        Orientation = StackOrientation.Vertical,
    };
    layout.Children.Add(buttonUp);
    layout.Children.Add(lblCount);
    layout.Children.Add(buttonDown);

    this.Content = layout;
}
```

3 references | Adam Szczerbiak, 2 hours ago | 1 author, 1 change

```
private void updateCount()
{
    lblCount.Text = String.Format("{0} click{1} so far!", count, (1 == count ? "" : "s"));
}
}
```

Zadanie 2.2



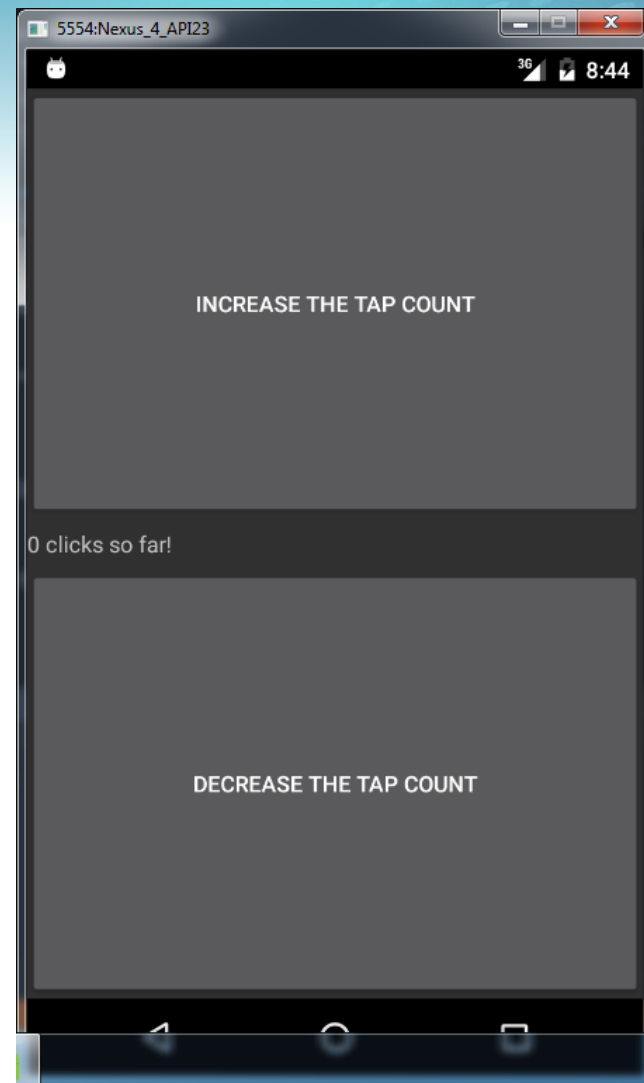
Napisz aplikację składającą się z dwóch przycisków i etykiety.

Kliknięcie górnego przycisku zwiększa licznik o 1

Kliknięcie dolnego przycisku zmniejsza licznik o 1

Układ przycisków jak na obrazie (tak jak w poprzednim zadaniu)

Opisz układ (layout) aplikacji w pliku XAML, a logikę w pliku xaml.cs



Zadanie 2.2 - Niezbędne narzędzia



StackLayout

- **Orientation** : Horizontal | Vertical
- **Children** (opisane w pliku XAML)

Label

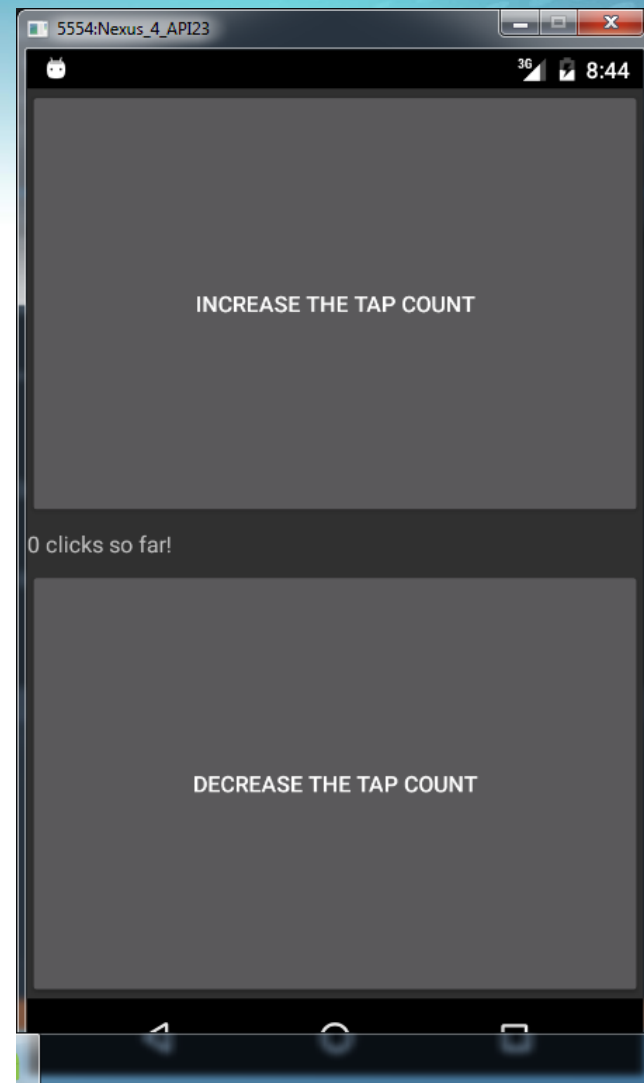
- **Text** (formatowanie za pomocą metody **String.Format()**)

Button

- **Text**
- **Clicked** (event handler)

Podobny projekt:

xamarin-samples → **ButtonXaml**



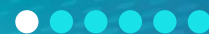
Zadanie 2.2 – rozwiązanie (1/3)



```
<?xml version="1.0" encoding="utf-8" ?>
<ContentPage xmlns="http://xamarin.com/schemas/2014/forms"
  xmlns:x="http://schemas.microsoft.com/winfx/2009/xaml"
  x:Class="ButtonXaml.ButtonXamlPage">
  <ContentPage.Content>
    <StackLayout>
      <Button x:Name="buttonUp"
        Text="Increase the counter!"
        Clicked="OnButtonUpClicked"
        HorizontalOptions="FillAndExpand"
        VerticalOptions="FillAndExpand" />
      <Label x:Name="label"
        Text="Use the buttons to manipulate the counter!"
        HorizontalOptions="FillAndExpand"
        VerticalOptions="Center" />
      <Button x:Name="buttonDown"
        Text="Decrease the counter!"
        Clicked="OnButtonDownClicked"
        HorizontalOptions="FillAndExpand"
        VerticalOptions="FillAndExpand" />
    </StackLayout>
  </ContentPage.Content>
</ContentPage>
```

CounterXamlPage.xaml

Zadanie 2.2 – rozwiązanie (2/3)



```
using System;
using Xamarin.Forms;

namespace ButtonXaml
{
    4 references | Adam Szczerbiak, 2 hours ago | 1 author, 1 change
    public partial class ButtonXamlPage
    {
        int counter = 0;

        1 reference | Adam Szczerbiak, 2 hours ago | 1 author, 1 change
        public ButtonXamlPage()
        {
            InitializeComponent();
        }

        0 references | Adam Szczerbiak, 2 hours ago | 1 author, 1 change
        public void OnButtonUpClicked(object sender, EventArgs ea)
        {
            counter += 1;
            UpdateLabel();
        }

        0 references | Adam Szczerbiak, 2 hours ago | 1 author, 1 change
        public void OnButtonDownClicked(object sender, EventArgs ea)
        {
            if (counter > 0)
            {
                counter -= 1;
                UpdateLabel();
            }
        }
    }
    2 references | Adam Szczerbiak, 2 hours ago | 1 author, 1 change
}
```

CounterXamlPage.xaml.cs

Zadanie 2.2 – rozwiązanie (3/3)



```
{
    InitializeComponent();
}

0 references | Adam Szczerbiak, 2 hours ago | 1 author, 1 change
public void OnButtonUpClicked(object sender, EventArgs ea)
{
    counter += 1;
    UpdateLabel();
}

0 references | Adam Szczerbiak, 2 hours ago | 1 author, 1 change
public void OnButtonDownClicked(object sender, EventArgs ea)
{
    if (counter > 0)
    {
        counter -= 1;
        UpdateLabel();
    }
}

2 references | Adam Szczerbiak, 2 hours ago | 1 author, 1 change
public void UpdateLabel()
{
    label.Text = String.Format("{0} click{1} so far!",
        counter, (counter == 1 ? "" : "s"));
}
}
```

CounterXamlPage.xaml.cs

Dziękujemy!