# ticksy

## PROJECT PRESENTATION

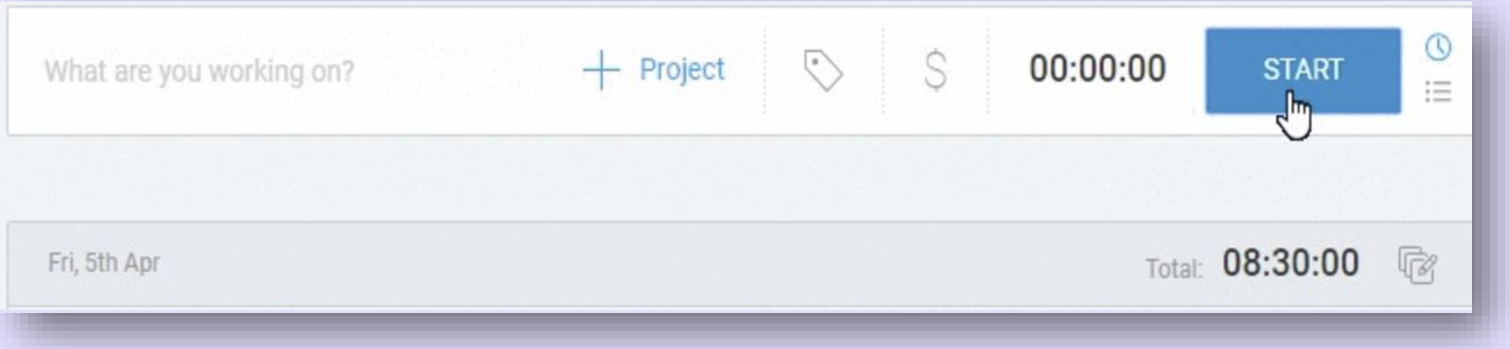
APPLICATION DEVELOPMENT

Tamara Plante | Dong Huang | Iana Setrakova

# PROJECT PURPOSE

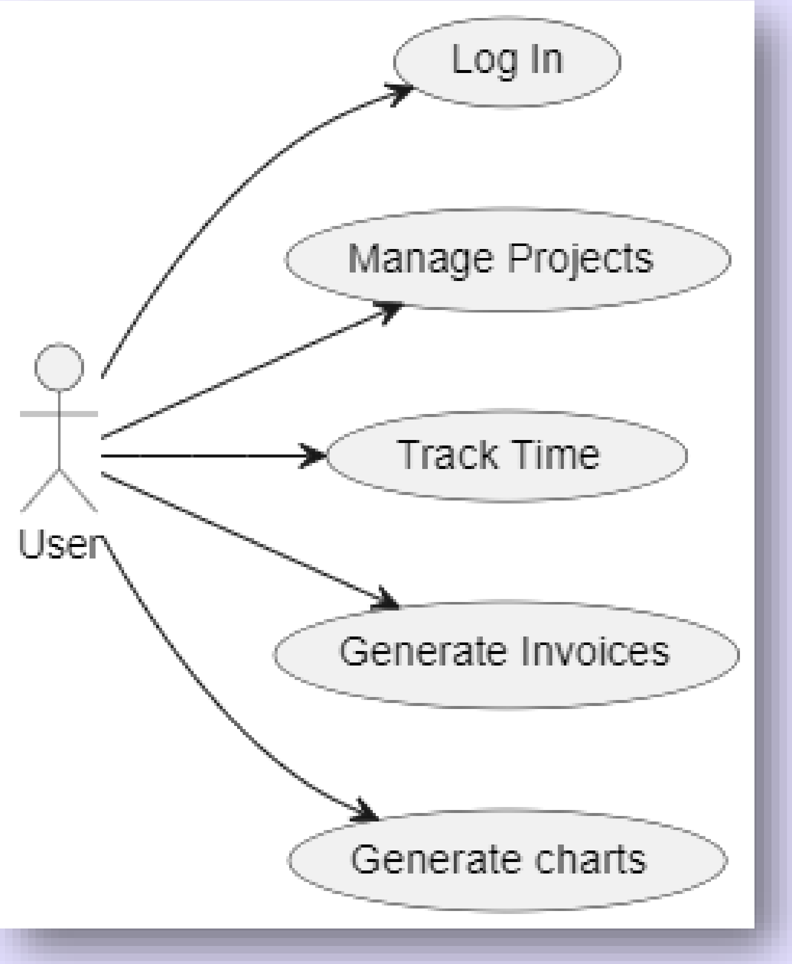
## Time Tracking Application

- Manage projects, tasks, and track productivity
- Log hours worked and monitor task progress
- Generate invoices and detailed reports
- Simplify payments and track earnings with charts
- Essential tool for improving efficiency and financial management



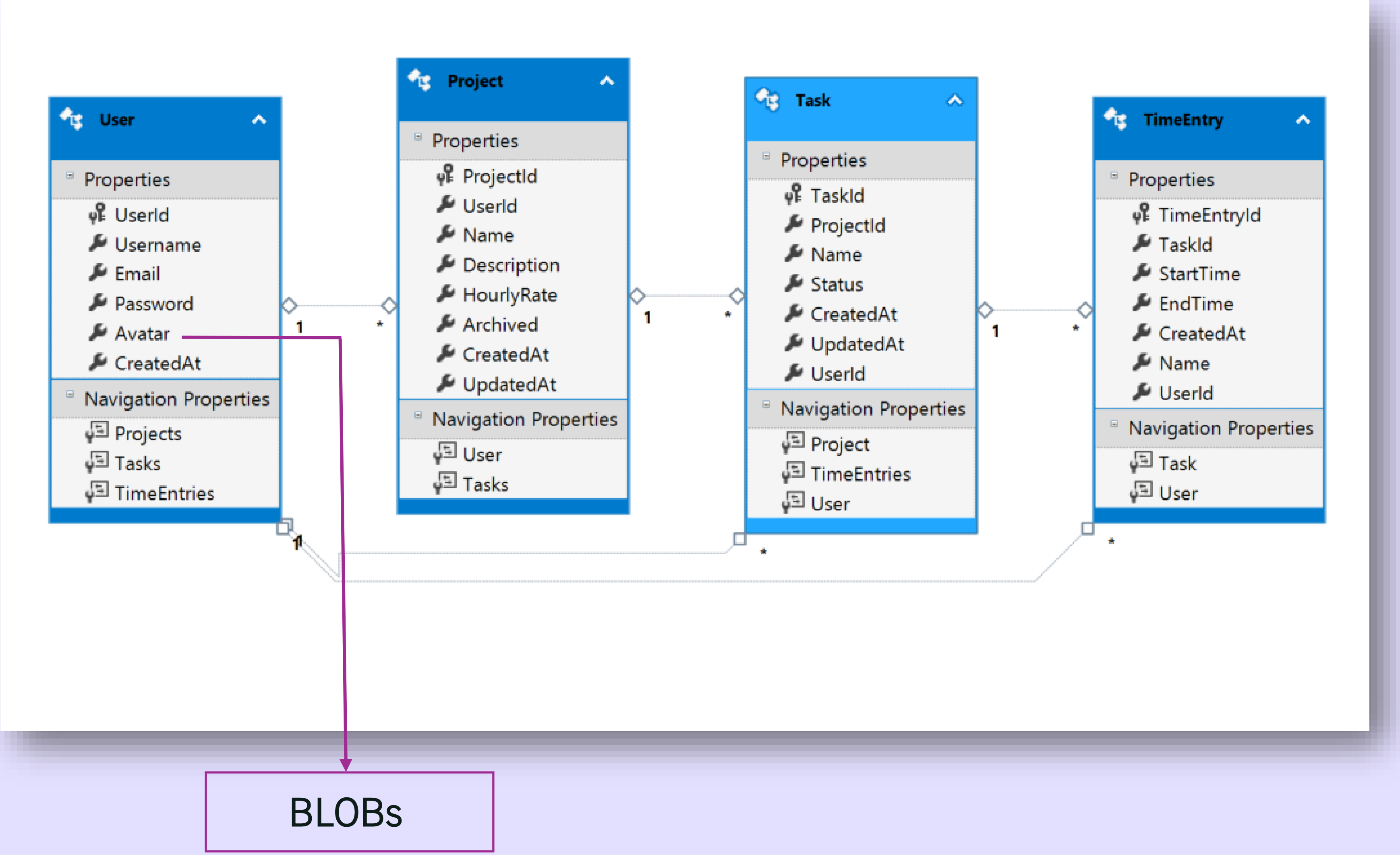
# PROJECT SOLUTION OVERVIEW

USE CASE DIAGRAM



# PROJECT SOLUTION OVERVIEW

E/R DIAGRAM



User

Properties
- UserId
- Username
- Email
- Password
- Avatar
- CreatedAt

Navigation Properties
- Projects
- Tasks
- TimeEntries

Project

Properties
- ProjectId
- UserId
- Name
- Description
- HourlyRate
- Archived
- CreatedAt
- UpdatedAt

Navigation Properties
- User
- Tasks

Task

Properties
- TaskId
- ProjectId
- Name
- Status
- CreatedAt
- UpdatedAt
- UserId

Navigation Properties
- Project
- TimeEntries
- User

TimeEntry

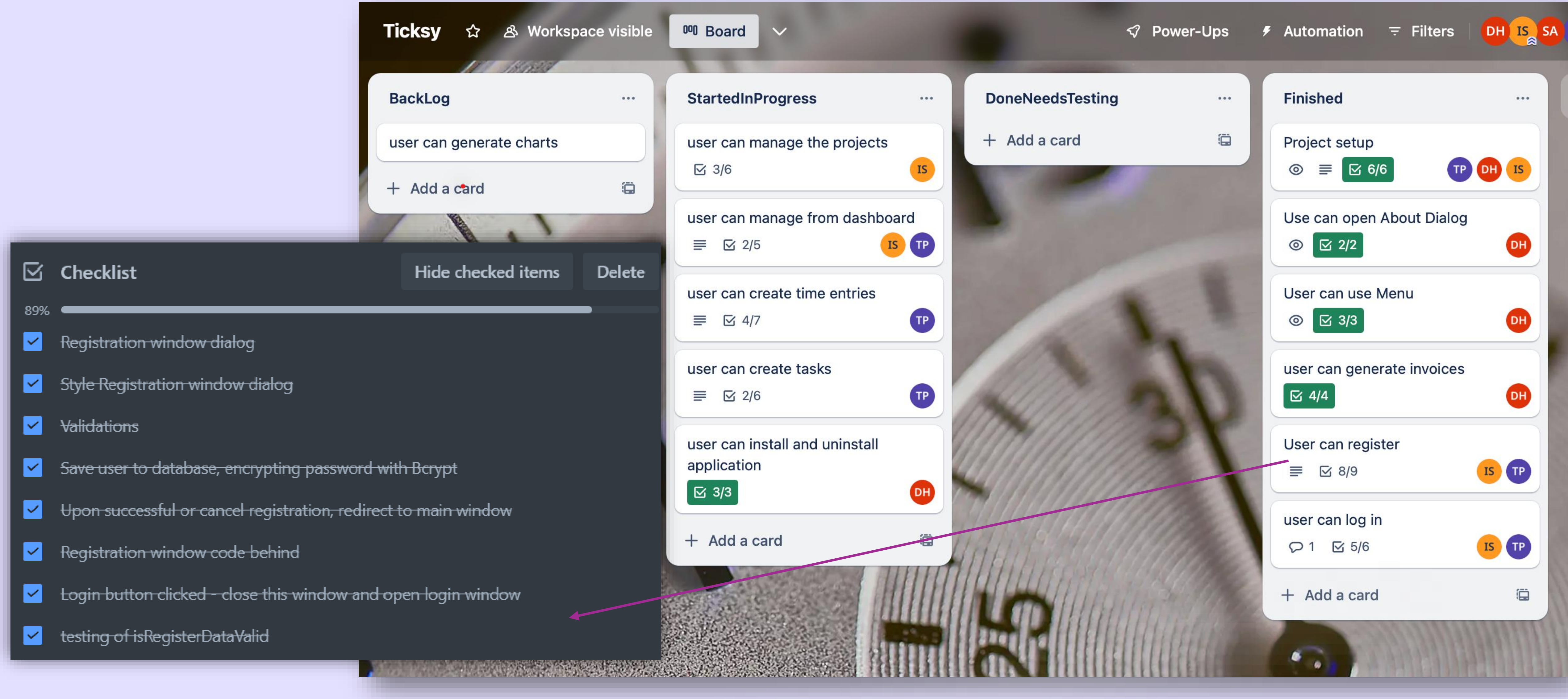
Properties
- TimeEntryId
- TaskId
- StartTime
- EndTime
- CreatedAt
- Name
- UserId

Navigation Properties
- Task
- User

BLOBs

# PROJECT SOLUTION OVERVIEW

TRELLO BOARD



**BackLog**

- user can generate charts
- + Add a card

**StartedInProgress**

- user can manage the projects — ☑ 3/6 — IS
- user can manage from dashboard — ☑ 2/5 — IS TP
- user can create time entries — ☑ 4/7 — TP
- user can create tasks — ☑ 2/6 — TP
- user can install and uninstall application — ☑ 3/3 — DH
- + Add a card

**DoneNeedsTesting**

- + Add a card

**Finished**

- Project setup — ☑ 6/6 — TP DH IS
- Use can open About Dialog — ☑ 2/2 — DH
- User can use Menu — ☑ 3/3 — DH
- user can generate invoices — ☑ 4/4 — DH
- User can register — ☑ 8/9 — IS TP
- user can log in — 1 — ☑ 5/6 — IS TP
- + Add a card

**Checklist**

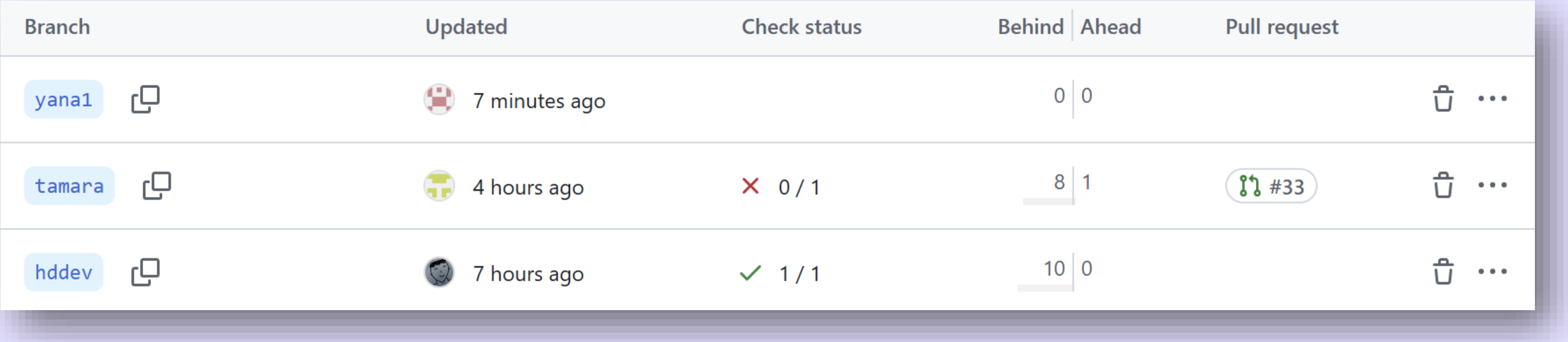
89%

- ☑ ~~Registration window dialog~~
- ☑ ~~Style Registration window dialog~~
- ☑ ~~Validations~~
- ☑ ~~Save user to database, encrypting password with Bcrypt~~
- ☑ ~~Upon successful or cancel registration, redirect to main window~~
- ☑ ~~Registration window code behind~~
- ☑ ~~Login button clicked - close this window and open login window~~
- ☑ ~~testing of isRegisterDataValid~~

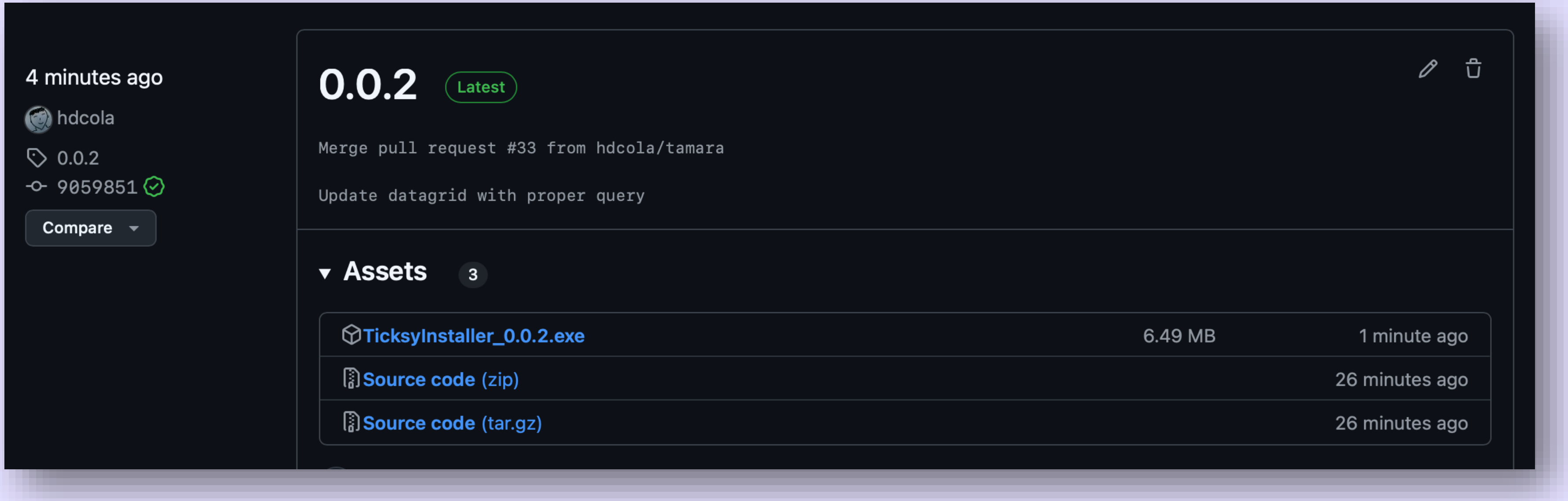
# PROJECT SOLUTION OVERVIEW

GITHUB

- Individual branches
- Tag and Releases



| Branch | Updated | Check status | Behind | Ahead | Pull request |
|---|---|---|---|---|---|
| yana1 | 7 minutes ago | | 0 | 0 | |
| tamara | 4 hours ago | ✗ 0 / 1 | 8 | 1 | #33 |
| hddev | 7 hours ago | ✓ 1 / 1 | 10 | 0 | |



4 minutes ago

hdcola

0.0.2

9059851 ✓

Compare

## 0.0.2 Latest

```
Merge pull request #33 from hdcola/tamara

Update datagrid with proper query
```

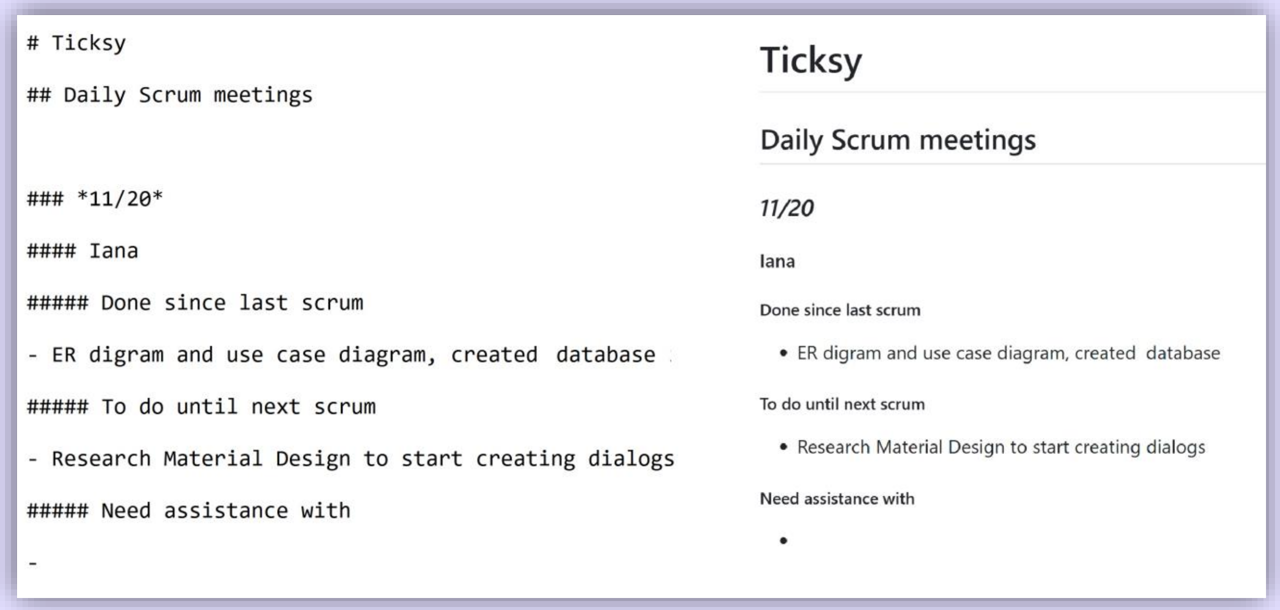
▾ Assets 3

| | | |
|---|---|---|
| TicksyInstaller_0.0.2.exe | 6.49 MB | 1 minute ago |
| Source code (zip) | | 26 minutes ago |
| Source code (tar.gz) | | 26 minutes ago |

# PROJECT SOLUTION OVERVIEW

GITHUB

- Markdown format



```
# Ticksy

## Daily Scrum meetings


### *11/20*

#### Iana

##### Done since last scrum

- ER digram and use case diagram, created  database

##### To do until next scrum

- Research Material Design to start creating dialogs

##### Need assistance with

-
```

# Ticksy

## Daily Scrum meetings

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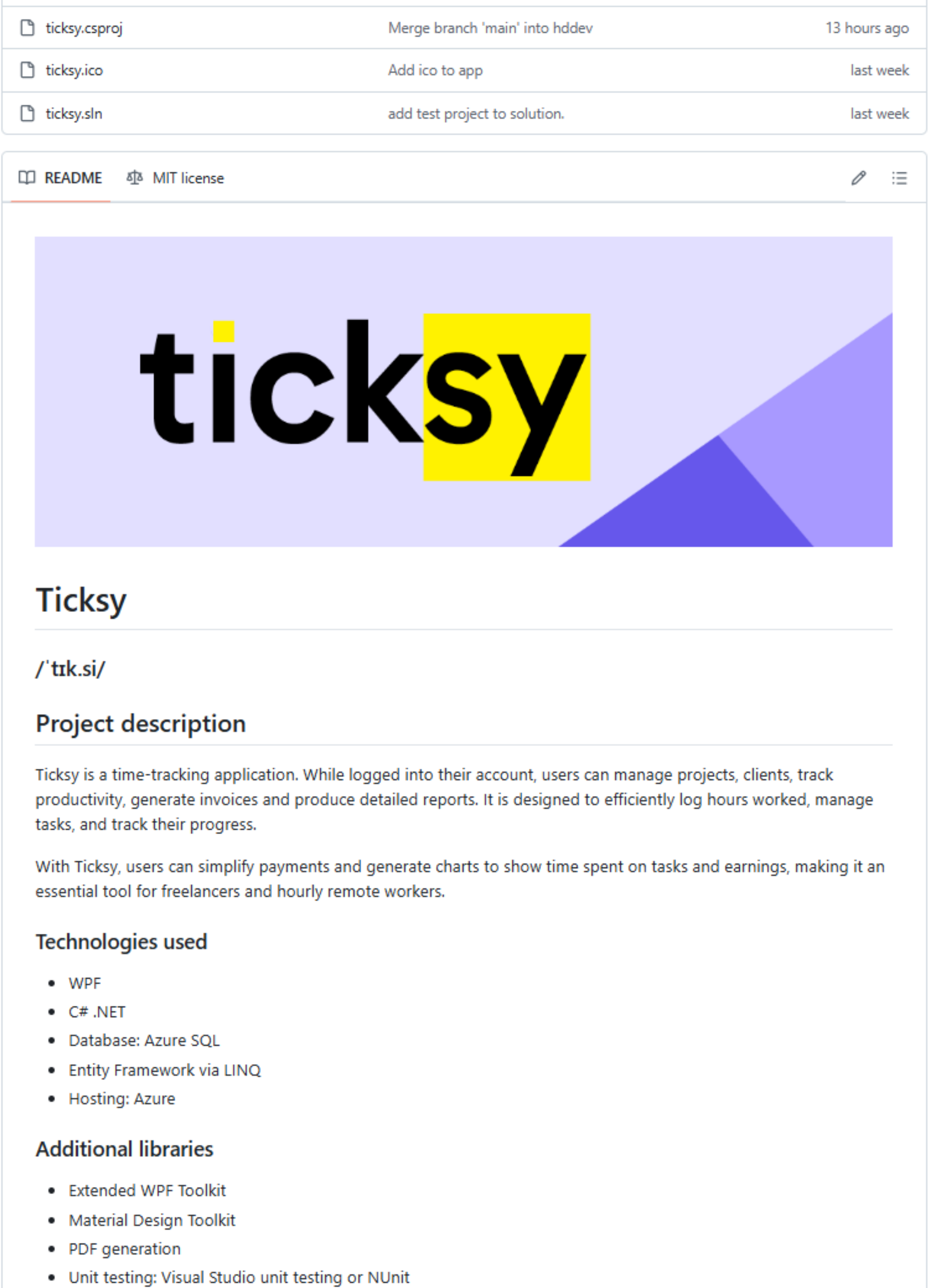
-



| | | |
|---|---|---|
| ticksy.csproj | Merge branch 'main' into hddev | 13 hours ago |
| ticksy.ico | Add ico to app | last week |
| ticksy.sln | add test project to solution. | last week |

# Ticksy

### /ˈtɪk.si/

## Project description

Ticksy is a time-tracking application. While logged into their account, users can manage projects, clients, track productivity, generate invoices and produce detailed reports. It is designed to efficiently log hours worked, manage tasks, and track their progress.

With Ticksy, users can simplify payments and generate charts to show time spent on tasks and earnings, making it an essential tool for freelancers and hourly remote workers.

### Technologies used

- WPF
- C# .NET
- Database: Azure SQL
- Entity Framework via LINQ
- Hosting: Azure

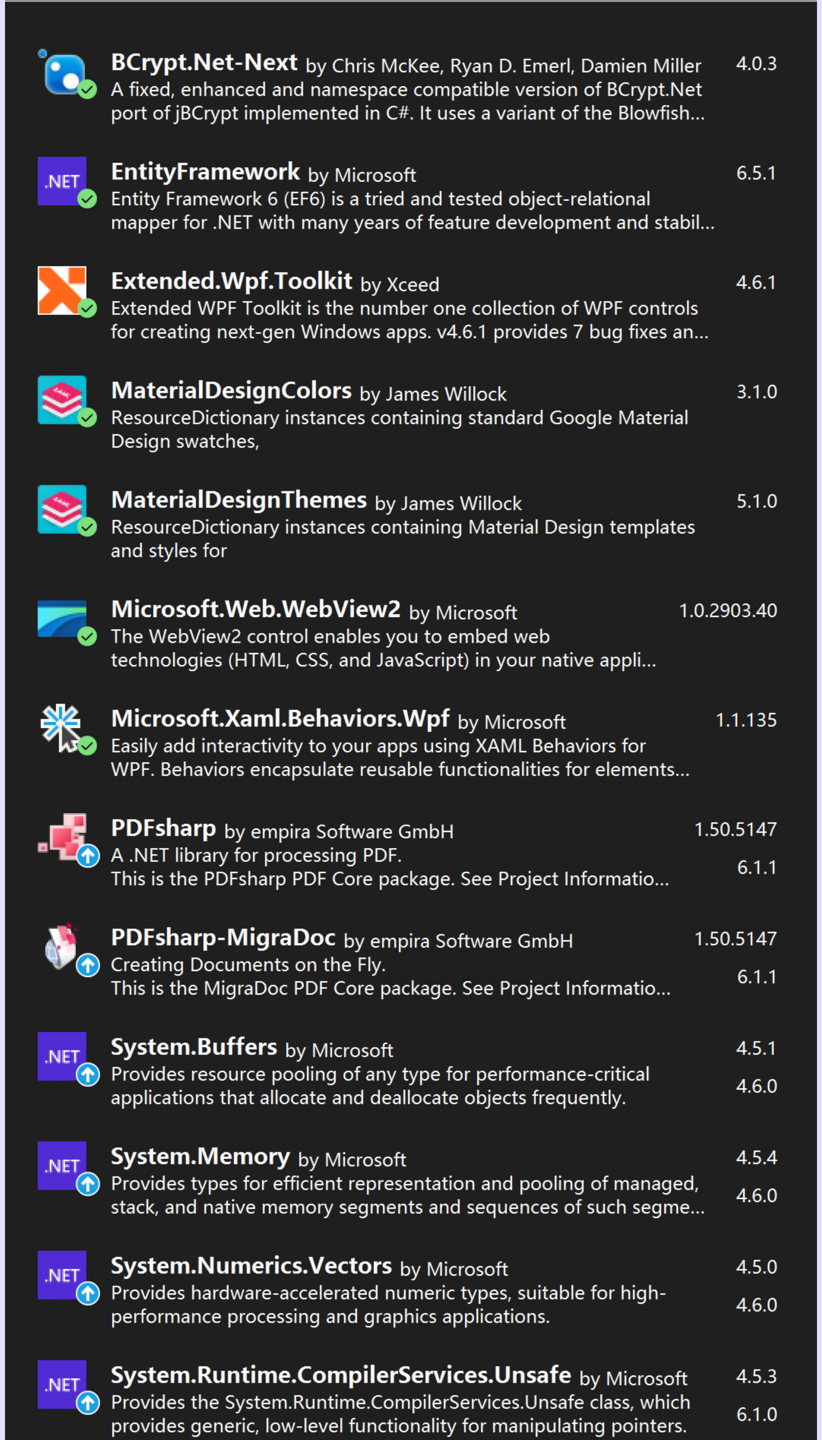
### Additional libraries

- Extended WPF Toolkit
- Material Design Toolkit
- PDF generation
- Unit testing: Visual Studio unit testing or NUnit

# PROJECT SOLUTION OVERVIEW

## Technologies and libraries:

- WPF, C# .NET
- Database: Azure SQL
- Entity Framework via LINQ
- Hosting: Azure
- Extended WPF Toolkit
- Material Design Toolkit
- PDF sharp & Migra Doc
- WebView2
- Visual Studio Test
- GitHub Action
- Inno Setup



**BCrypt.Net-Next** by Chris McKee, Ryan D. Emerl, Damien Miller 4.0.3
A fixed, enhanced and namespace compatible version of BCrypt.Net port of jBCrypt implemented in C#. It uses a variant of the Blowfish...

**EntityFramework** by Microsoft 6.5.1
Entity Framework 6 (EF6) is a tried and tested object-relational mapper for .NET with many years of feature development and stabil...

**Extended.Wpf.Toolkit** by Xceed 4.6.1
Extended WPF Toolkit is the number one collection of WPF controls for creating next-gen Windows apps. v4.6.1 provides 7 bug fixes an...

**MaterialDesignColors** by James Willock 3.1.0
ResourceDictionary instances containing standard Google Material Design swatches,

**MaterialDesignThemes** by James Willock 5.1.0
ResourceDictionary instances containing Material Design templates and styles for

**Microsoft.Web.WebView2** by Microsoft 1.0.2903.40
The WebView2 control enables you to embed web technologies (HTML, CSS, and JavaScript) in your native appli...

**Microsoft.Xaml.Behaviors.Wpf** by Microsoft 1.1.135
Easily add interactivity to your apps using XAML Behaviors for WPF. Behaviors encapsulate reusable functionalities for elements...

**PDFsharp** by empira Software GmbH 1.50.5147
A .NET library for processing PDF. 6.1.1
This is the PDFsharp PDF Core package. See Project Informatio...

**PDFsharp-MigraDoc** by empira Software GmbH 1.50.5147
Creating Documents on the Fly. 6.1.1
This is the MigraDoc PDF Core package. See Project Informatio...

**System.Buffers** by Microsoft 4.5.1
Provides resource pooling of any type for performance-critical applications that allocate and deallocate objects frequently. 4.6.0

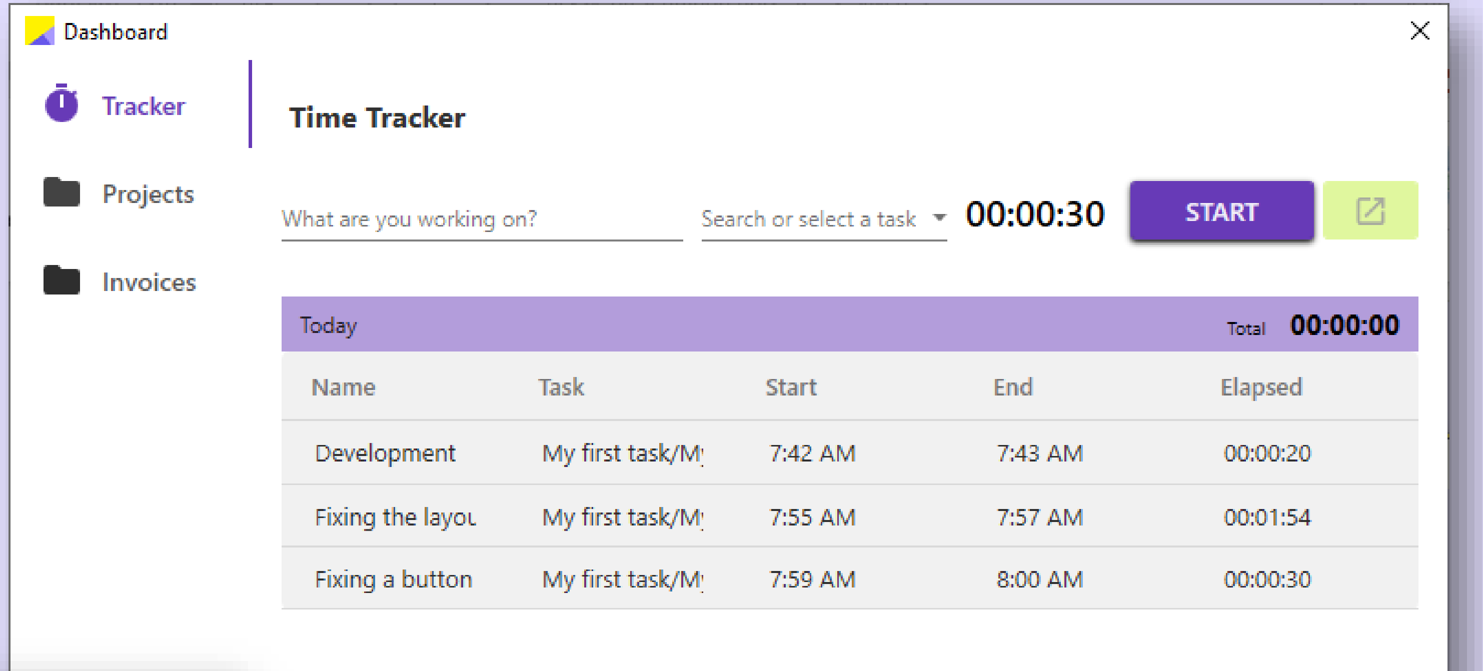
**System.Memory** by Microsoft 4.5.4
Provides types for efficient representation and pooling of managed, stack, and native memory segments and sequences of such segme... 4.6.0

**System.Numerics.Vectors** by Microsoft 4.5.0
Provides hardware-accelerated numeric types, suitable for high-performance processing and graphics applications. 4.6.0

**System.Runtime.CompilerServices.Unsafe** by Microsoft 4.5.3
Provides the System.Runtime.CompilerServices.Unsafe class, which provides generic, low-level functionality for manipulating pointers. 6.1.0

# CHALLENGES AND SOLUTIONS

- Material Design

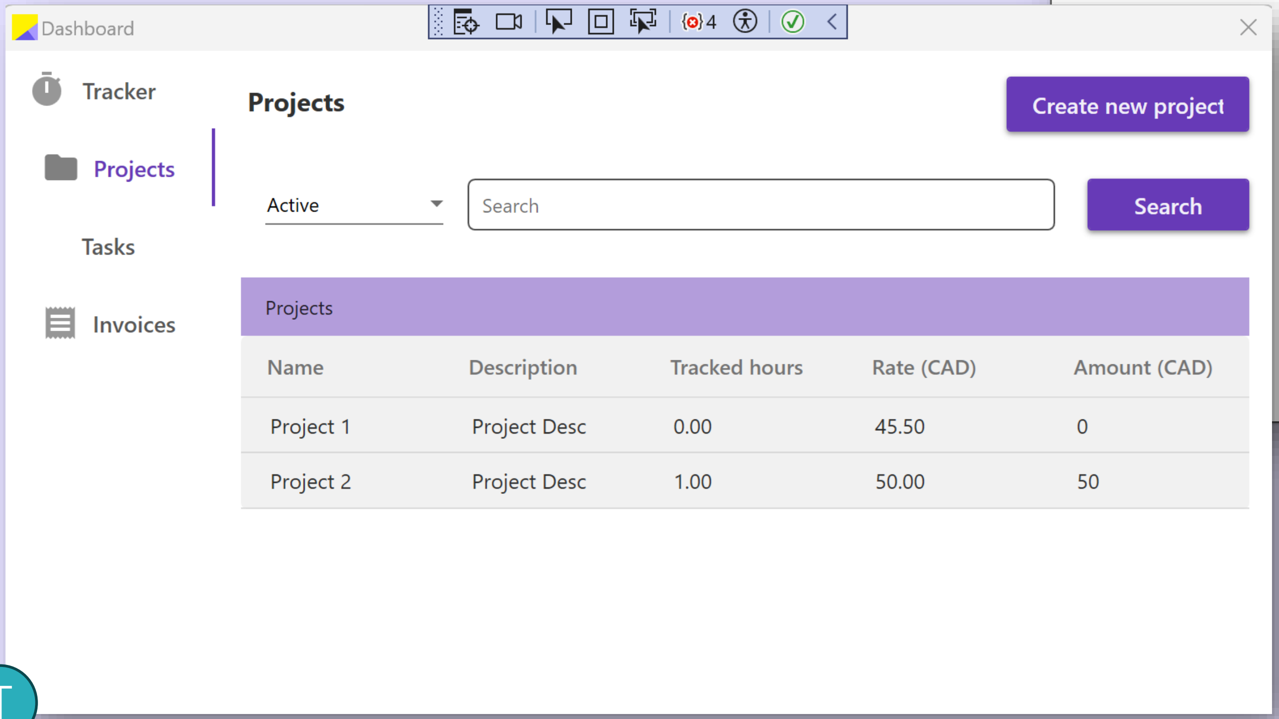


## Time Tracker

What are you working on? | Search or select a task | 00:00:30

Today — Total 00:00:00

| Name | Task | Start | End | Elapsed |
|---|---|---|---|---|
| Development | My first task/My | 7:42 AM | 7:43 AM | 00:00:20 |
| Fixing the layou | My first task/My | 7:55 AM | 7:57 AM | 00:01:54 |
| Fixing a button | My first task/My | 7:59 AM | 8:00 AM | 00:00:30 |



## Projects

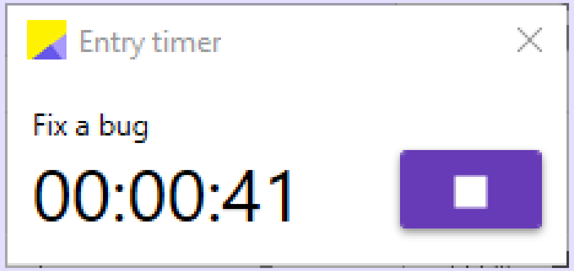
Active | Search

Projects

| Name | Description | Tracked hours | Rate (CAD) | Amount (CAD) |
|---|---|---|---|---|
| Project 1 | Project Desc | 0.00 | 45.50 | 0 |
| Project 2 | Project Desc | 1.00 | 50.00 | 50 |

# CHALLENGES AND SOLUTIONS

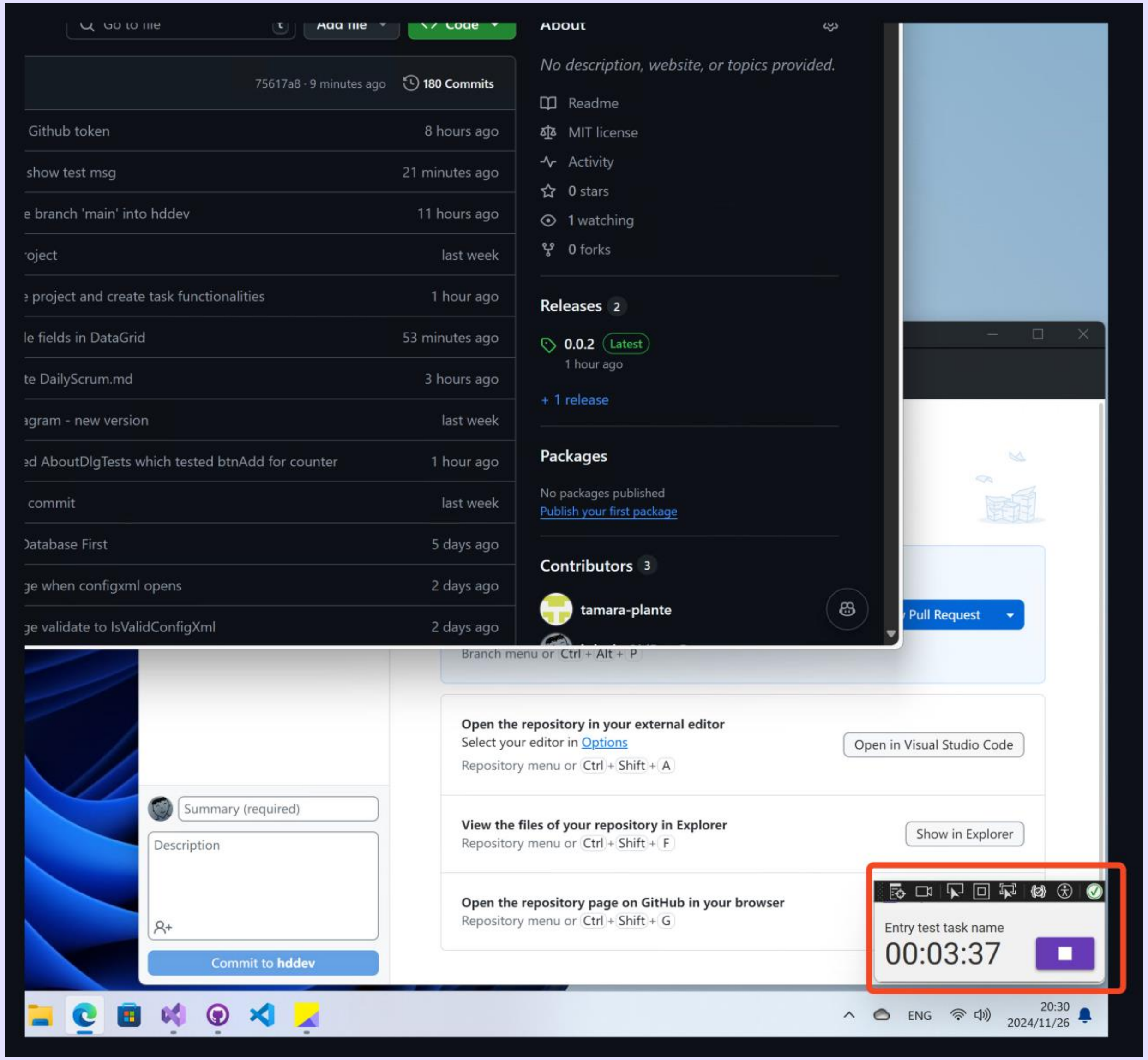
- Magical Floating Timer



Entry timer

Fix a bug

00:00:41



75617a8 · 9 minutes ago 180 Commits

```
Github token                                             8 hours ago
show test msg                                            21 minutes ago
e branch 'main' into hddev                               11 hours ago
oject                                                    last week
 project and create task functionalities                 1 hour ago
le fields in DataGrid                                    53 minutes ago
te DailyScrum.md                                         3 hours ago
agram - new version                                      last week
ed AboutDlgTests which tested btnAdd for counter         1 hour ago
commit                                                   last week
Database First                                           5 days ago
ge when configxml opens                                  2 days ago
ge validate to IsValidConfigXml                          2 days ago
```

About

*No description, website, or topics provided.*

Readme
MIT license
Activity
0 stars
1 watching
0 forks

Releases 2

0.0.2 Latest
1 hour ago

+ 1 release

Packages

No packages published
Publish your first package

Contributors 3

tamara-plante

Open the repository in your external editor
Select your editor in Options
Repository menu or Ctrl + Shift + A

View the files of your repository in Explorer
Repository menu or Ctrl + Shift + F

Open the repository page on GitHub in your browser
Repository menu or Ctrl + Shift + G

Summary (required)

Description

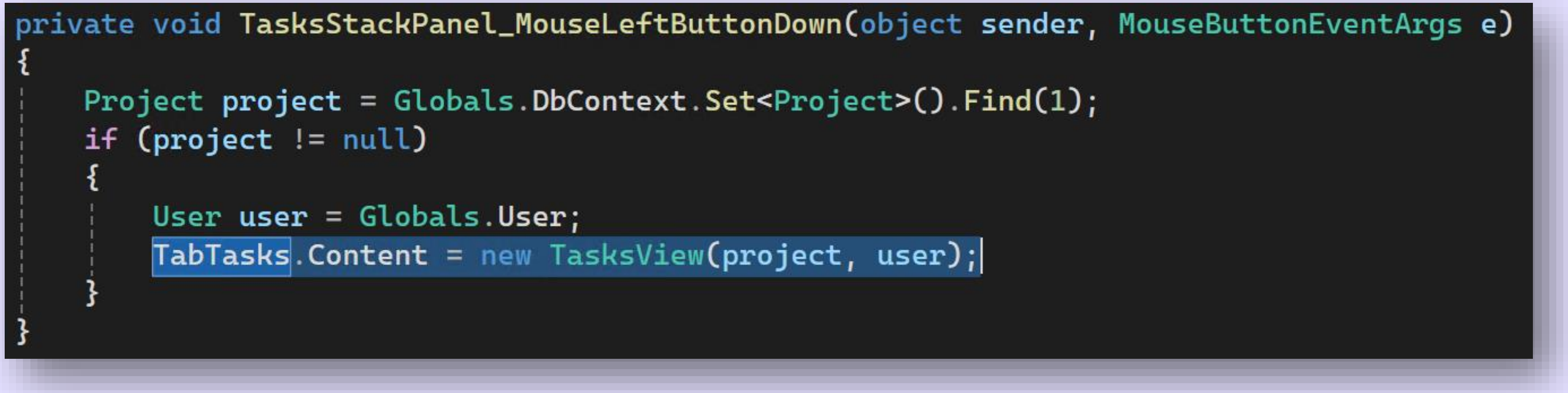
Commit to hddev

Entry test task name

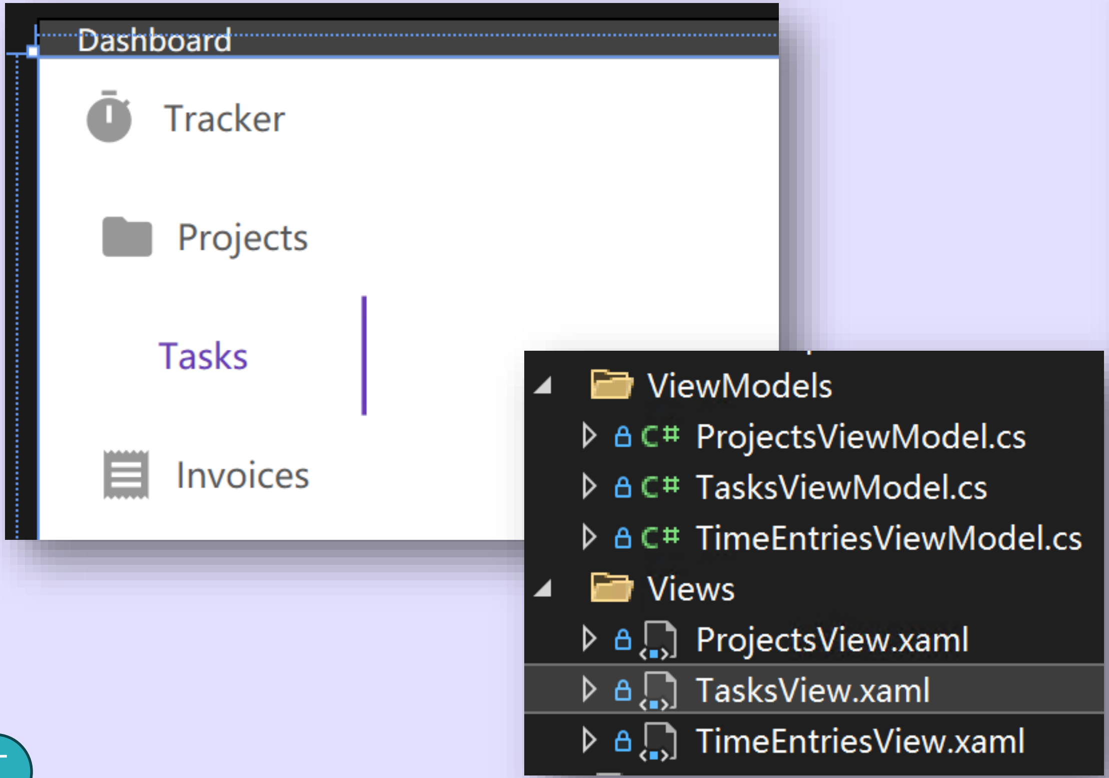
00:03:37

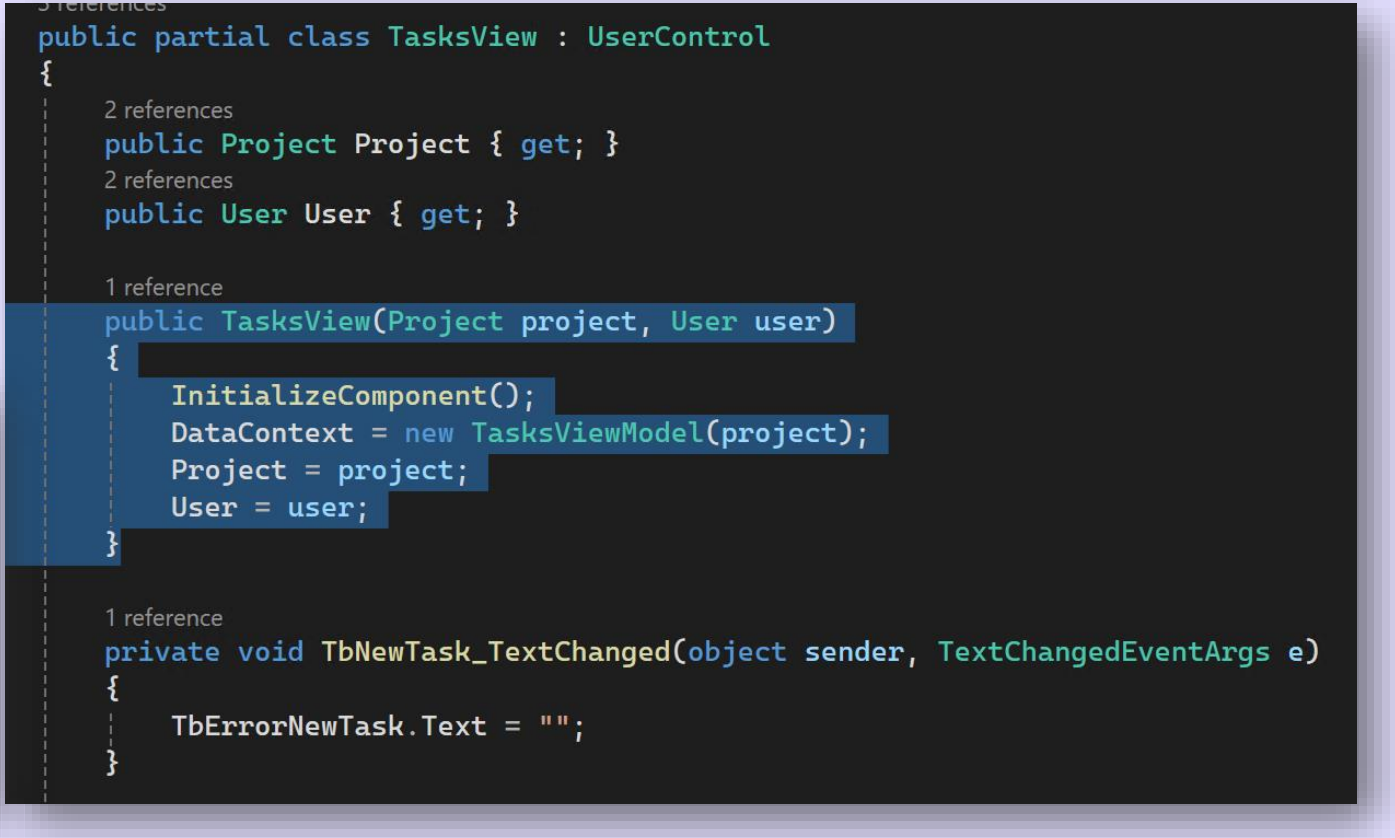
# CHALLENGES AND SOLUTIONS

- Model View View Model



```
private void TasksStackPanel_MouseLeftButtonDown(object sender, MouseButtonEventArgs e)
{
    Project project = Globals.DbContext.Set<Project>().Find(1);
    if (project != null)
    {
        User user = Globals.User;
        TabTasks.Content = new TasksView(project, user);
    }
}
```





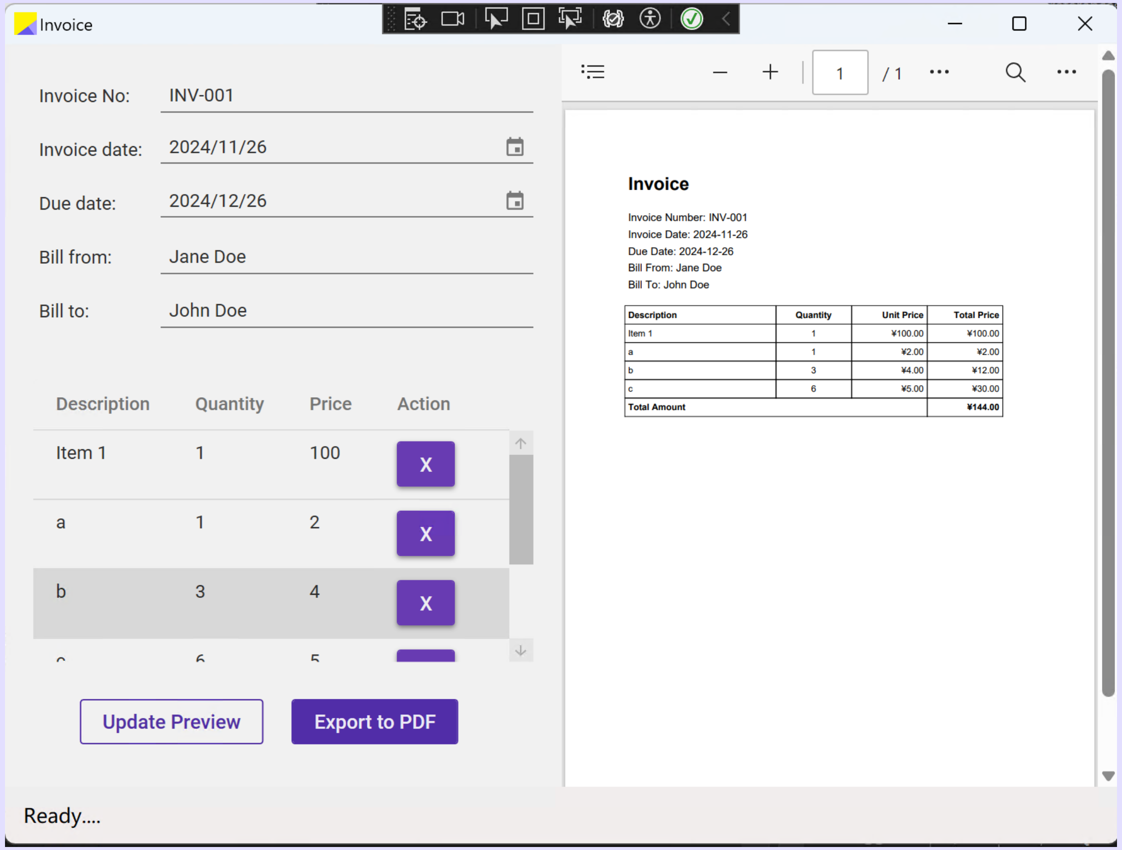
```
3 references
public partial class TasksView : UserControl
{
    2 references
    public Project Project { get; }
    2 references
    public User User { get; }

    1 reference
    public TasksView(Project project, User user)
    {
        InitializeComponent();
        DataContext = new TasksViewModel(project);
        Project = project;
        User = user;
    }

    1 reference
    private void TbNewTask_TextChanged(object sender, TextChangedEventArgs e)
    {
        TbErrorNewTask.Text = "";
    }
```

# CHALLENGES AND SOLUTIONS

- Use WebView2 to preview PDF
- DataGrid custom columns
- Use PDF sharp & Migra Doc to generating PDF
- Window Size Adaptive Layout



Invoice No: INV-001

Invoice date: 2024/11/26

Due date: 2024/12/26

Bill from: Jane Doe

Bill to: John Doe

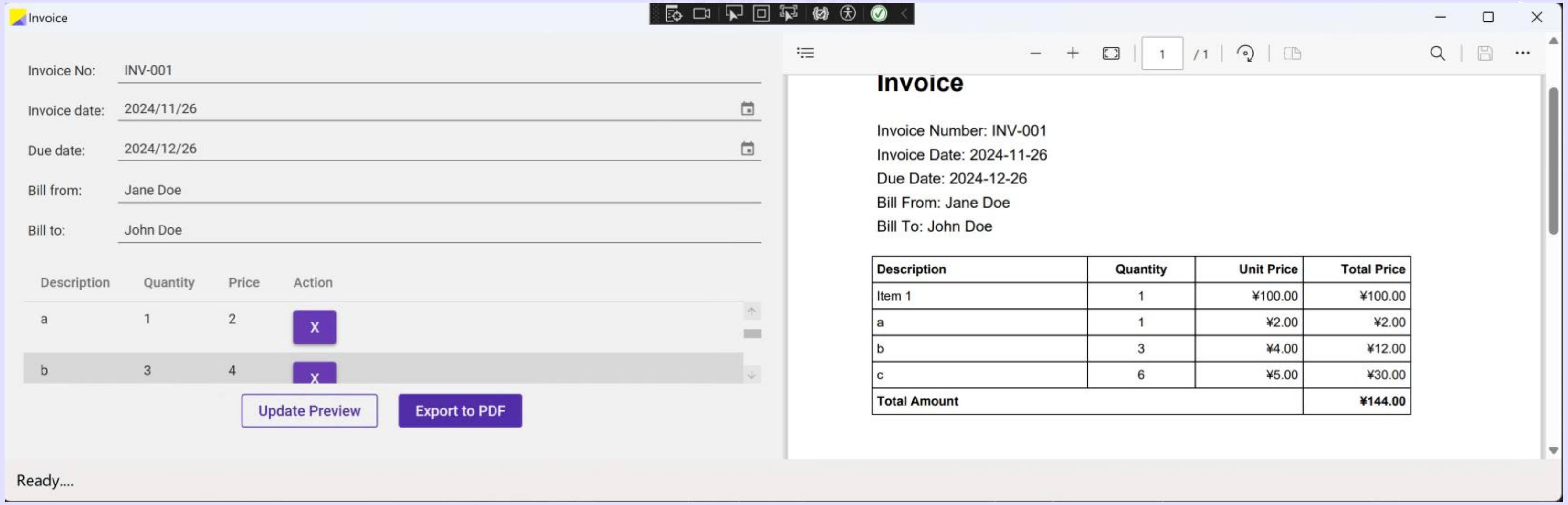
| Description | Quantity | Price | Action |
|---|---|---|---|
| Item 1 | 1 | 100 | X |
| a | 1 | 2 | X |
| b | 3 | 4 | X |
| c | 6 | 5 | |

Ready....

**Invoice**

Invoice Number: INV-001
Invoice Date: 2024-11-26
Due Date: 2024-12-26
Bill From: Jane Doe
Bill To: John Doe

| Description | Quantity | Unit Price | Total Price |
|---|---|---|---|
| Item 1 | 1 | ¥100.00 | ¥100.00 |
| a | 1 | ¥2.00 | ¥2.00 |
| b | 3 | ¥4.00 | ¥12.00 |
| c | 6 | ¥5.00 | ¥30.00 |
| **Total Amount** | | | **¥144.00** |



Invoice No: INV-001

Invoice date: 2024/11/26

Due date: 2024/12/26

Bill from: Jane Doe

Bill to: John Doe

| Description | Quantity | Price | Action |
|---|---|---|---|
| a | 1 | 2 | X |
| b | 3 | 4 | X |

Ready....

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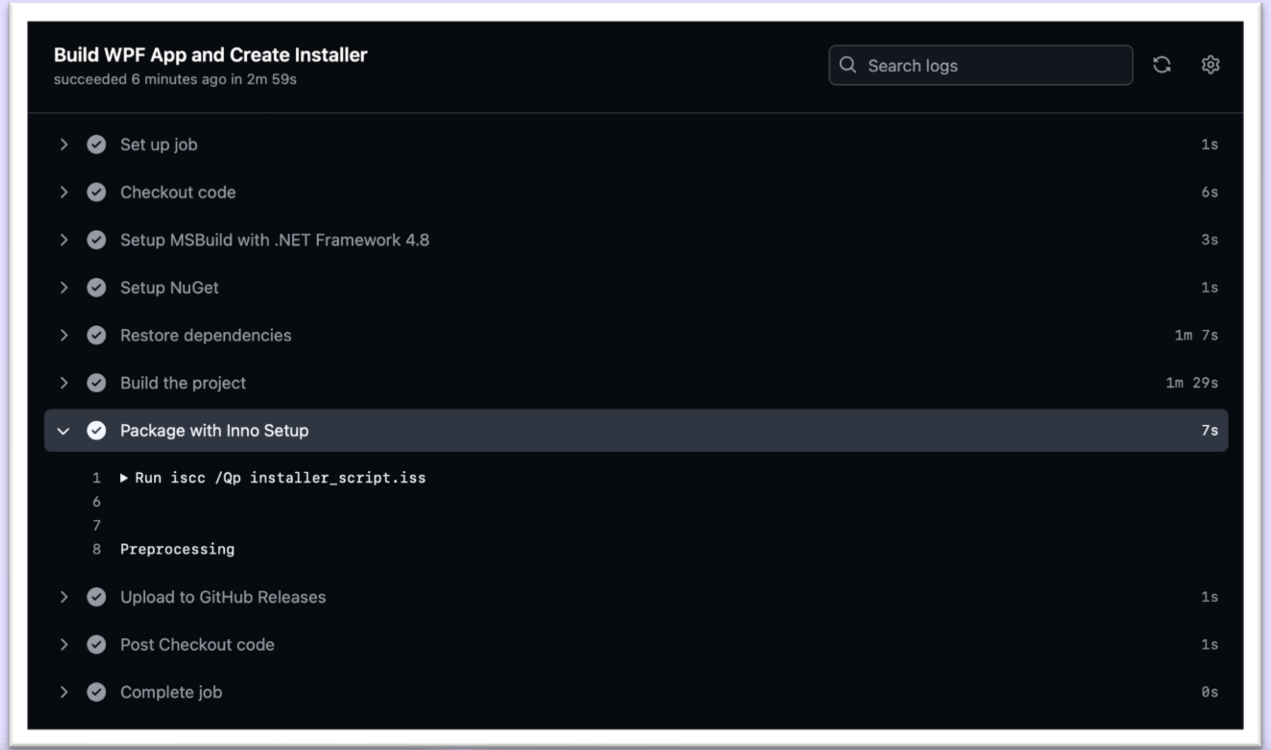
| c | 6 | ¥5.00 | ¥30.00 |
| **Total Amount** | | | **¥144.00** |

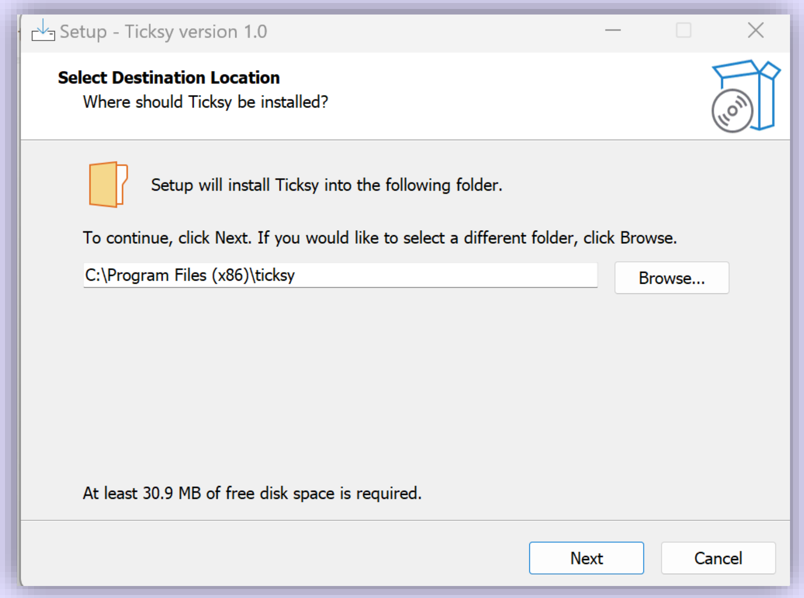
# CHALLENGES AND SOLUTIONS

- Use Inno setup
- GitHub Release workflow



**Build WPF App and Create Installer**
succeeded 6 minutes ago in 2m 59s

```
Set up job                              1s
Checkout code                           6s
Setup MSBuild with .NET Framework 4.8   3s
Setup NuGet                             1s
Restore dependencies                    1m 7s
Build the project                       1m 29s
Package with Inno Setup                 7s
  ▶ Run iscc /Qp installer_script.iss


  Preprocessing
Upload to GitHub Releases               1s
Post Checkout code                      1s
Complete job                            0s
```



Setup - Ticksy version 1.0

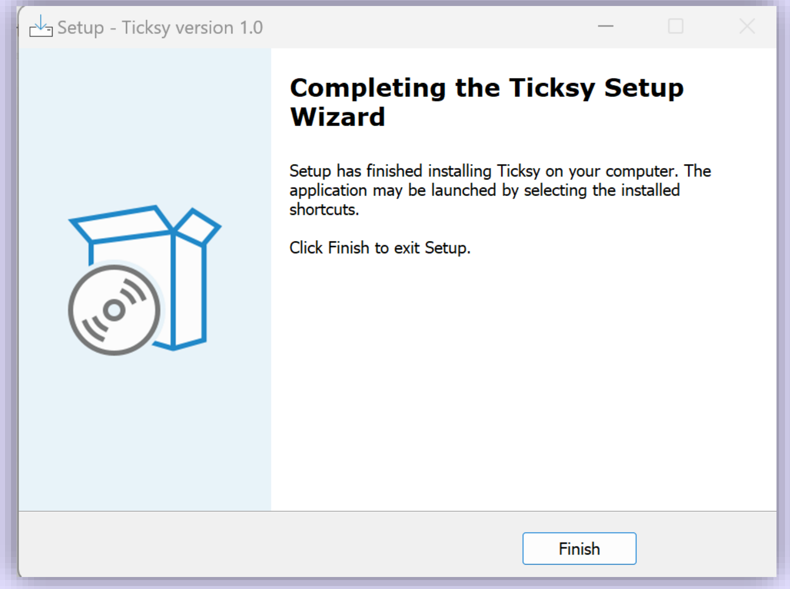
**Select Destination Location**
Where should Ticksy be installed?

Setup will install Ticksy into the following folder.

To continue, click Next. If you would like to select a different folder, click Browse.

C:\Program Files (x86)\ticksy

At least 30.9 MB of free disk space is required.

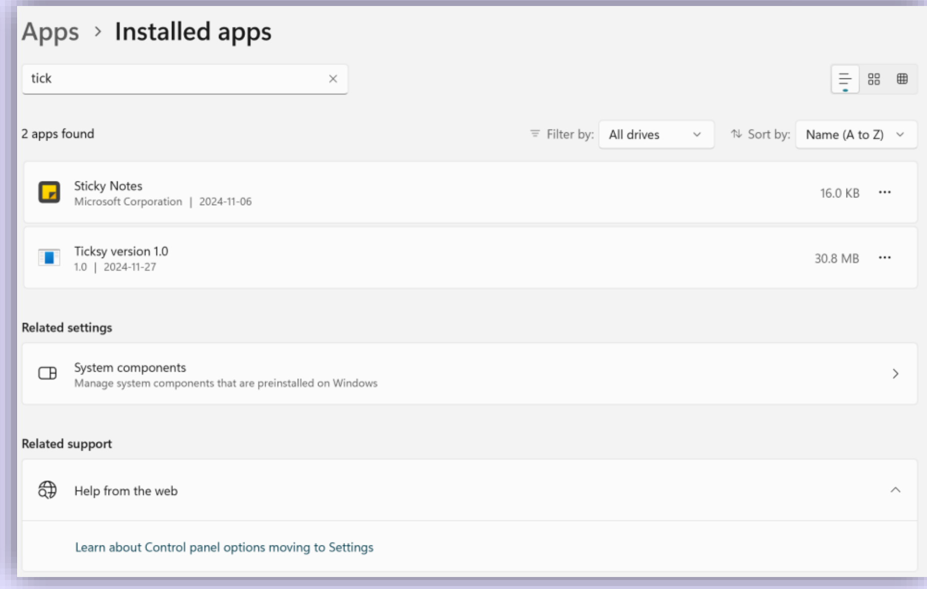


Setup - Ticksy version 1.0

**Completing the Ticksy Setup Wizard**

Setup has finished installing Ticksy on your computer. The application may be launched by selecting the installed shortcuts.

Click Finish to exit Setup.



Apps › Installed apps

tick

2 apps found

Filter by: All drives

Sort by: Name (A to Z)

| | | |
|---|---|---|
| Sticky Notes<br>Microsoft Corporation \| 2024-11-06 | 16.0 KB | ··· |
| Ticksy version 1.0<br>1.0 \| 2024-11-27 | 30.8 MB | ··· |

Related settings

System components
Manage system components that are preinstalled on Windows

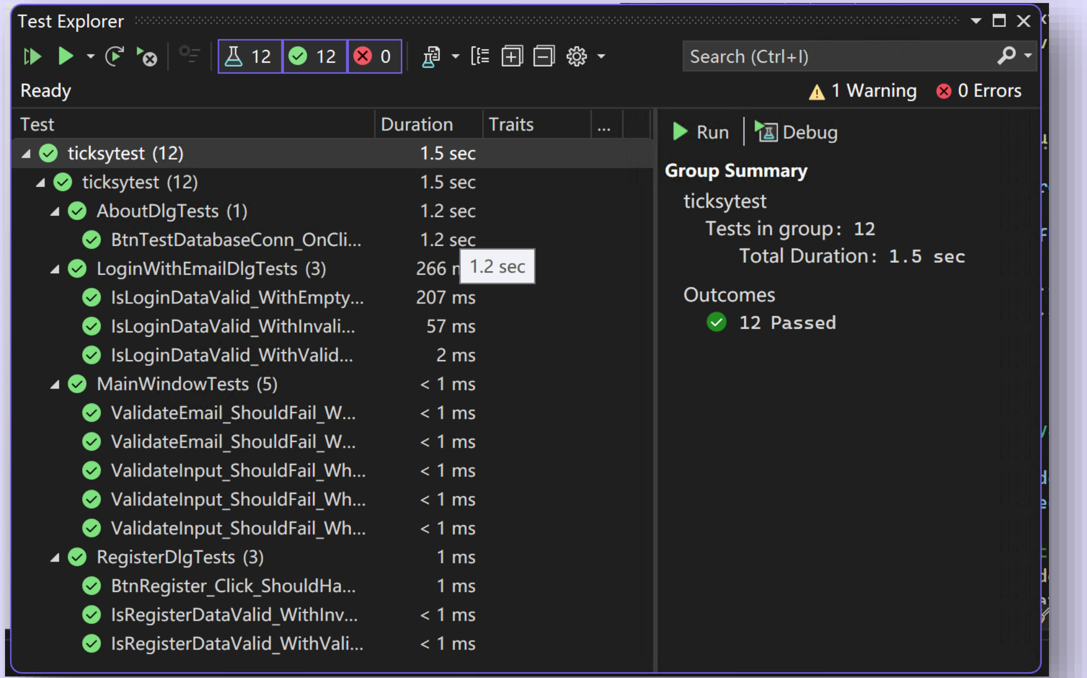
Related support

Help from the web

Learn about Control panel options moving to Settings

# CHALLENGES AND SOLUTIONS

- Use MS Test do unit test
- GitHub CI do unit test



Test Explorer

Ready  ⚠ 1 Warning  ⊗ 0 Errors

| Test | Duration | Traits |
|---|---|---|
| ✓ ticksytest (12) | 1.5 sec | |
| ✓ ticksytest (12) | 1.5 sec | |
| ✓ AboutDlgTests (1) | 1.2 sec | |
| ✓ BtnTestDatabaseConn_OnCli... | 1.2 sec | |
| ✓ LoginWithEmailDlgTests (3) | 266 r 1.2 sec | |
| ✓ IsLoginDataValid_WithEmpty... | 207 ms | |
| ✓ IsLoginDataValid_WithInvali... | 57 ms | |
| ✓ IsLoginDataValid_WithValid... | 2 ms | |
| ✓ MainWindowTests (5) | < 1 ms | |
| ✓ ValidateEmail_ShouldFail_W... | < 1 ms | |
| ✓ ValidateEmail_ShouldFail_W... | < 1 ms | |
| ✓ ValidateInput_ShouldFail_Wh... | < 1 ms | |
| ✓ ValidateInput_ShouldFail_Wh... | < 1 ms | |
| ✓ ValidateInput_ShouldFail_Wh... | < 1 ms | |
| ✓ RegisterDlgTests (3) | 1 ms | |
| ✓ BtnRegister_Click_ShouldHa... | 1 ms | |
| ✓ IsRegisterDataValid_WithInv... | < 1 ms | |
| ✓ IsRegisterDataValid_WithVali... | < 1 ms | |

**Group Summary**

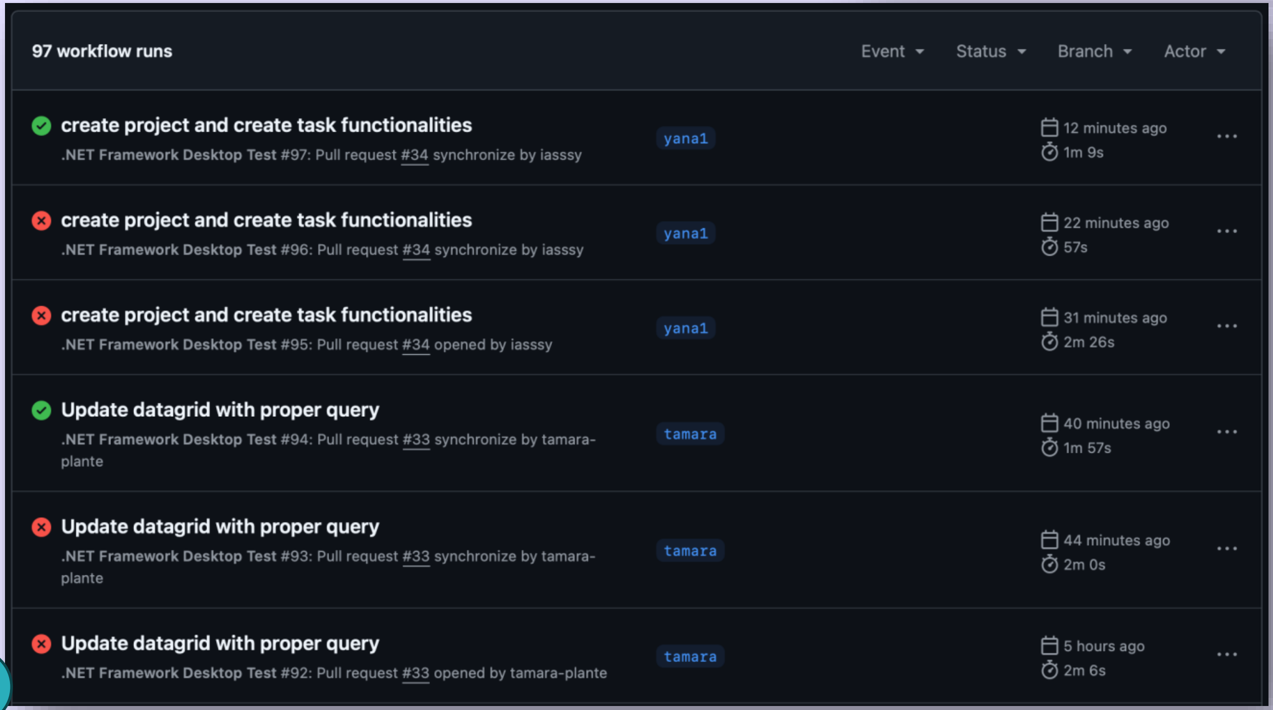
ticksytest

Tests in group: 12

Total Duration: 1.5 sec

Outcomes

✓ 12 Passed



**97 workflow runs**

✓ **create project and create task functionalities**
.NET Framework Desktop Test #97: Pull request #34 synchronize by iasssy
yana1
12 minutes ago
1m 9s

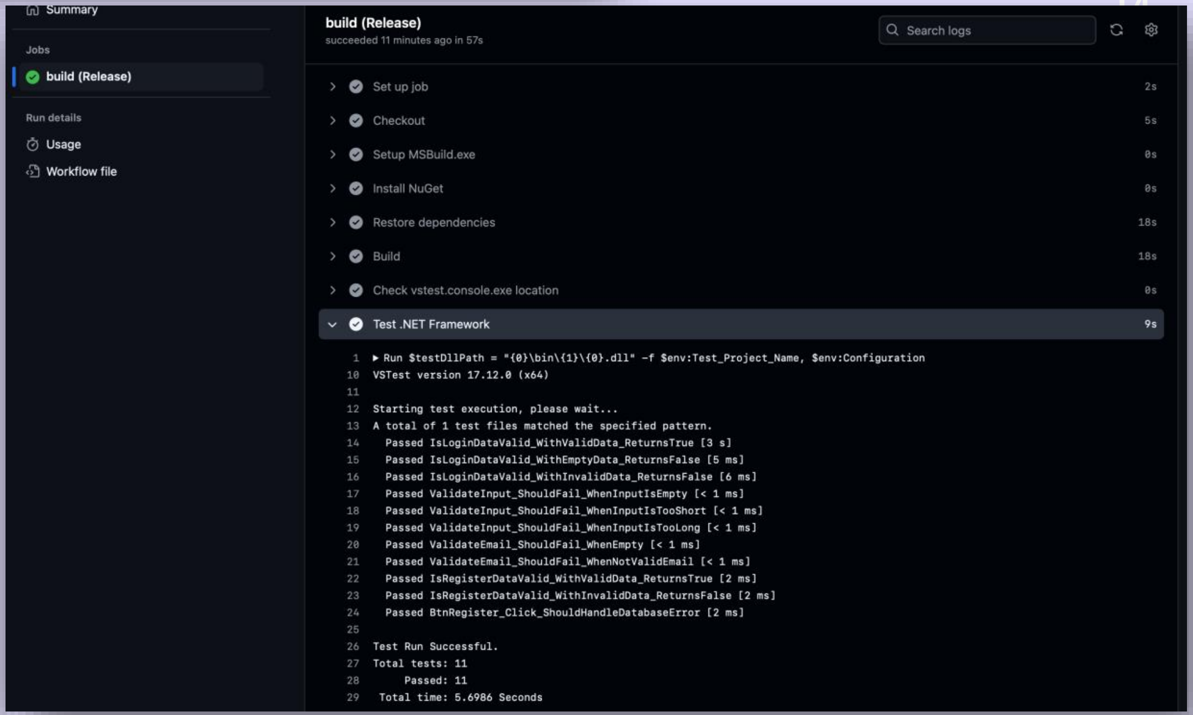
⊗ **create project and create task functionalities**
.NET Framework Desktop Test #96: Pull request #34 synchronize by iasssy
yana1
22 minutes ago
57s

⊗ **create project and create task functionalities**
.NET Framework Desktop Test #95: Pull request #34 opened by iasssy
yana1
31 minutes ago
2m 26s

✓ **Update datagrid with proper query**
.NET Framework Desktop Test #94: Pull request #33 synchronize by tamara-plante
tamara
40 minutes ago
1m 57s

⊗ **Update datagrid with proper query**
.NET Framework Desktop Test #93: Pull request #33 synchronize by tamara-plante
tamara
44 minutes ago
2m 0s

⊗ **Update datagrid with proper query**
.NET Framework Desktop Test #92: Pull request #33 opened by tamara-plante
tamara
5 hours ago
2m 6s



**build (Release)**
succeeded 11 minutes ago in 57s

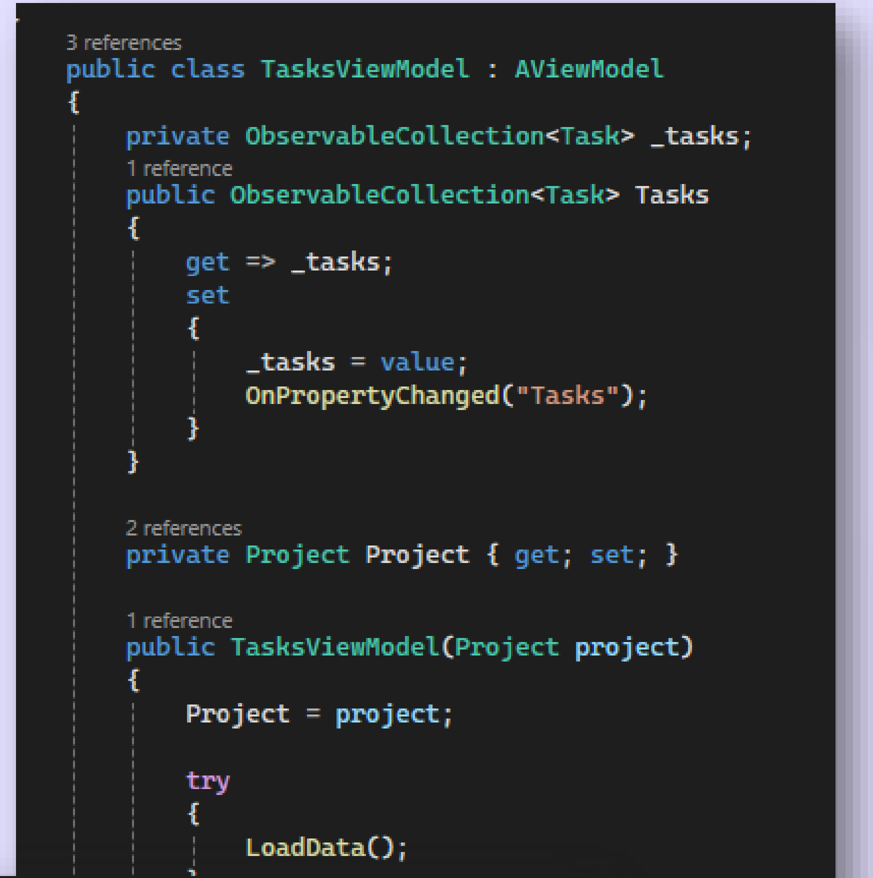
```
> ✓ Set up job                          2s
> ✓ Checkout                            5s
> ✓ Setup MSBuild.exe                   0s
> ✓ Install NuGet                       0s
> ✓ Restore dependencies                18s
> ✓ Build                               18s
> ✓ Check vstest.console.exe location   0s
v ✓ Test .NET Framework                 9s
```

```
▶ Run $testDllPath = "{0}\bin\{1}\{0}.dll" -f $env:Test_Project_Name, $env:Configuration
VSTest version 17.12.0 (x64)

Starting test execution, please wait...
A total of 1 test files matched the specified pattern.
  Passed IsLoginDataValid_WithValidData_ReturnsTrue [3 s]
  Passed IsLoginDataValid_WithEmptyData_ReturnsFalse [5 ms]
  Passed IsLoginDataValid_WithInvalidData_ReturnsFalse [6 ms]
  Passed ValidateInput_ShouldFail_WhenInputIsEmpty [< 1 ms]
  Passed ValidateInput_ShouldFail_WhenInputIsTooShort [< 1 ms]
  Passed ValidateInput_ShouldFail_WhenInputIsTooLong [< 1 ms]
  Passed ValidateEmail_ShouldFail_WhenEmpty [< 1 ms]
  Passed ValidateEmail_ShouldFail_WhenNotValidEmail [< 1 ms]
  Passed IsRegisterDataValid_WithValidData_ReturnsTrue [2 ms]
  Passed IsRegisterDataValid_WithInvalidData_ReturnsFalse [2 ms]
  Passed BtnRegister_Click_ShouldHandleDatabaseError [2 ms]

Test Run Successful.
Total tests: 11
     Passed: 11
 Total time: 5.6986 Seconds
```

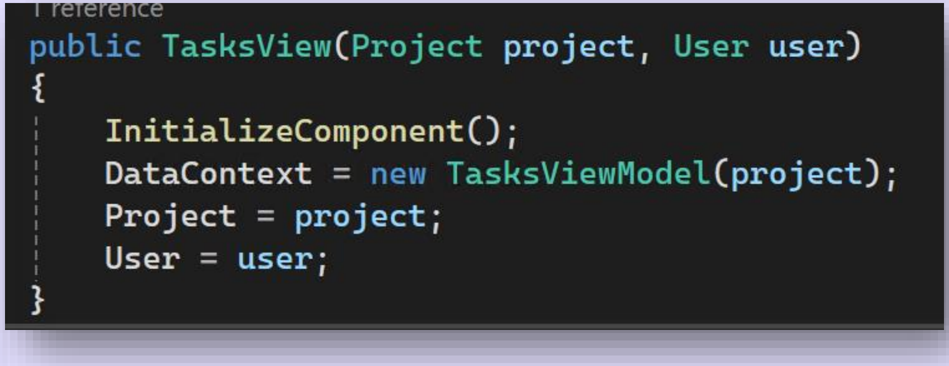
# WHAT WE LEARNED

Technologies:

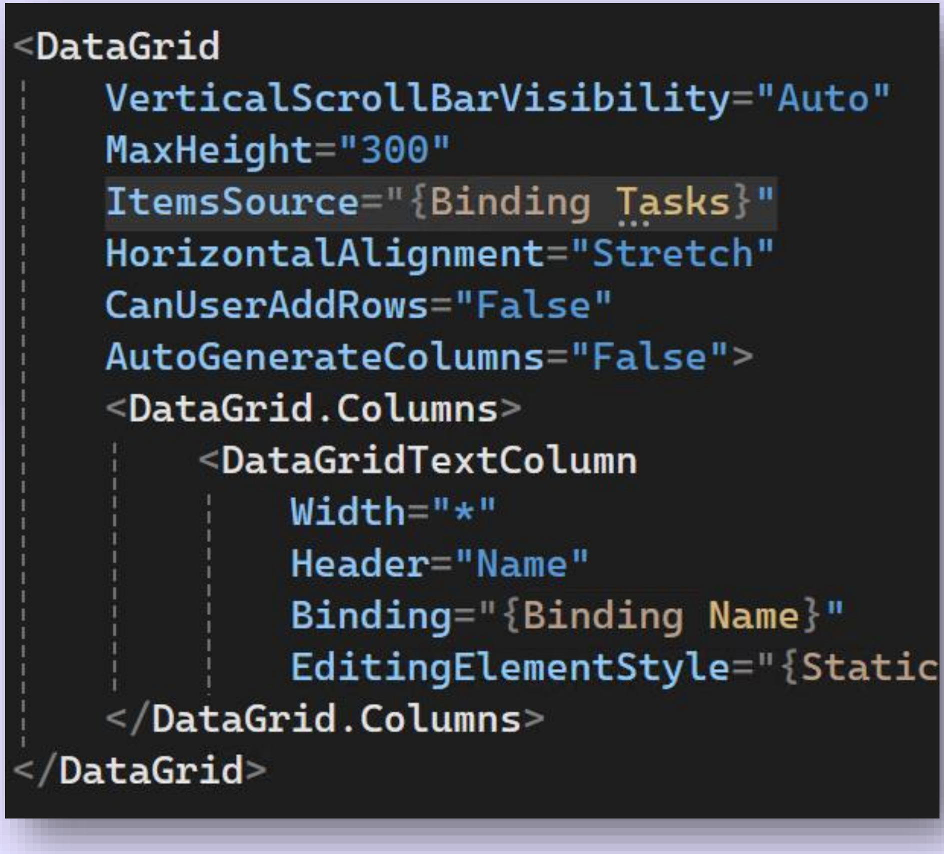
Bindings



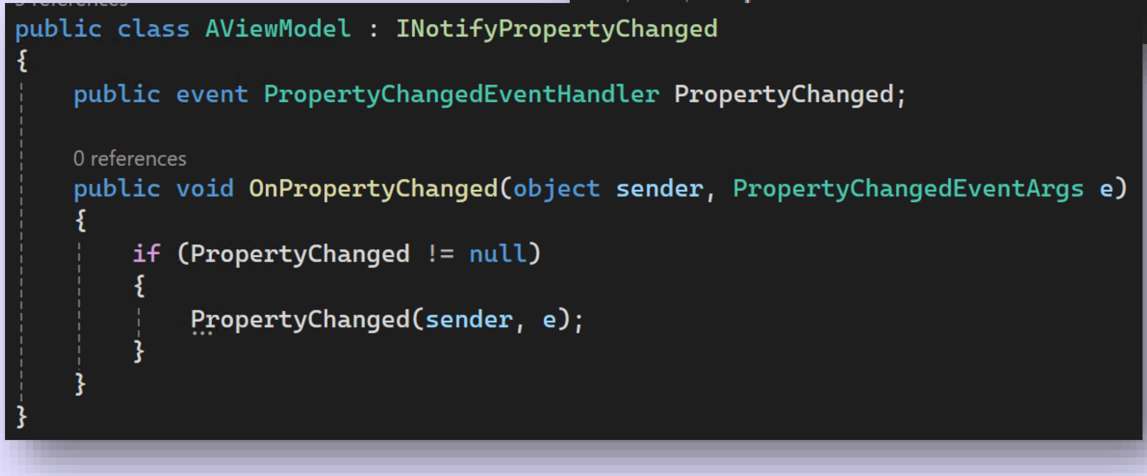
```
3 references
public class TasksViewModel : AViewModel
{
    private ObservableCollection<Task> _tasks;
    1 reference
    public ObservableCollection<Task> Tasks
    {
        get => _tasks;
        set
        {
            _tasks = value;
            OnPropertyChanged("Tasks");
        }
    }

    2 references
    private Project Project { get; set; }

    1 reference
    public TasksViewModel(Project project)
    {
        Project = project;

        try
        {
            LoadData();
```



```
1 reference
public TasksView(Project project, User user)
{
    InitializeComponent();
    DataContext = new TasksViewModel(project);
    Project = project;
    User = user;
}
```

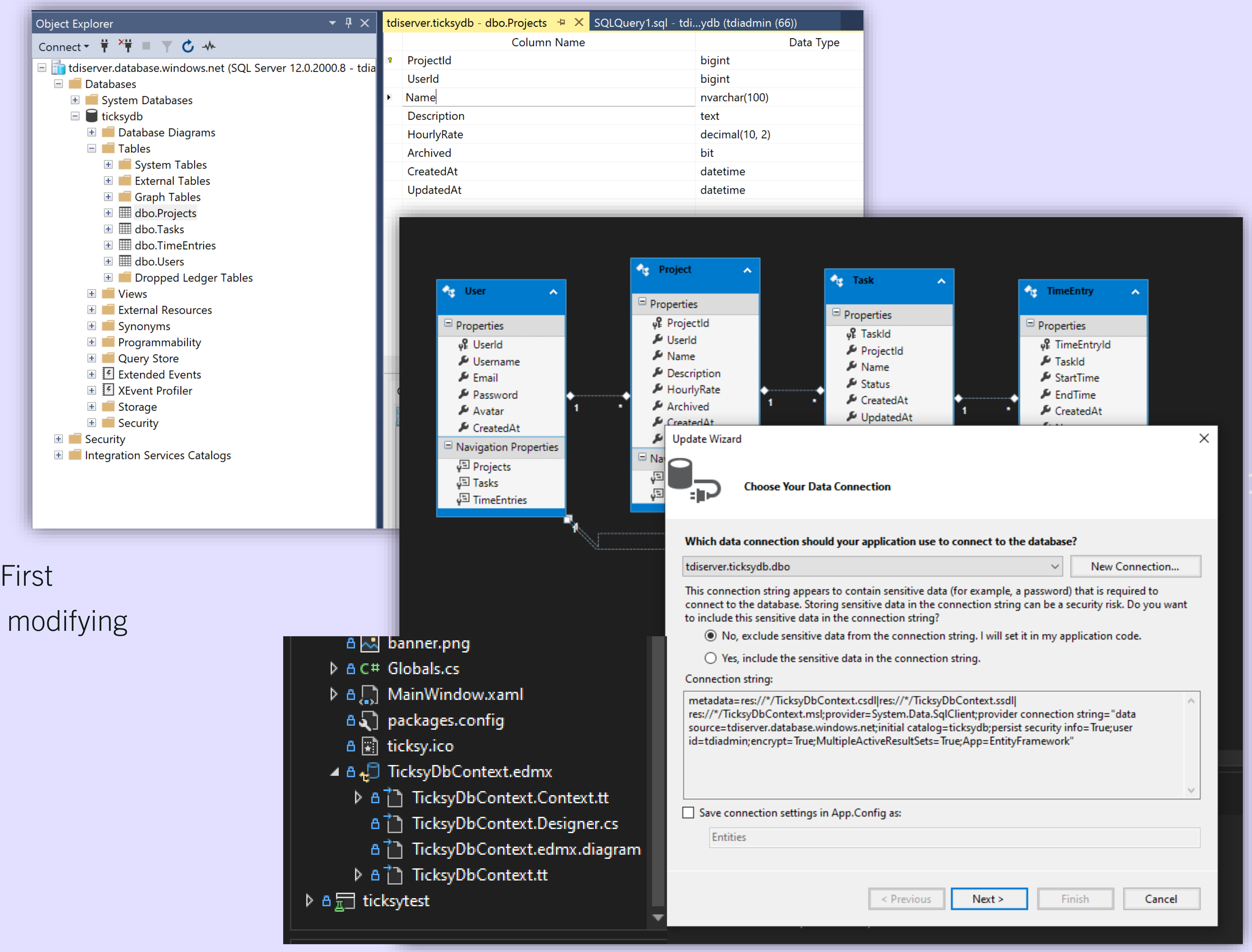


```
<DataGrid
    VerticalScrollBarVisibility="Auto"
    MaxHeight="300"
    ItemsSource="{Binding Tasks}"
    HorizontalAlignment="Stretch"
    CanUserAddRows="False"
    AutoGenerateColumns="False">
    <DataGrid.Columns>
        <DataGridTextColumn
            Width="*"
            Header="Name"
            Binding="{Binding Name}"
            EditingElementStyle="{Static
    </DataGrid.Columns>
</DataGrid>
```



```
public class AViewModel : INotifyPropertyChanged
{
    public event PropertyChangedEventHandler PropertyChanged;

    0 references
    public void OnPropertyChanged(object sender, PropertyChangedEventArgs e)
    {
        if (PropertyChanged != null)
        {
            PropertyChanged(sender, e);
        }
    }
}
```

# WHAT WE LEARNED



Object Explorer

Connect ▾

- tdiserver.database.windows.net (SQL Server 12.0.2000.8 - tdia
  - Databases
    - System Databases
    - ticksydb
      - Database Diagrams
      - Tables
        - System Tables
        - External Tables
        - Graph Tables
        - dbo.Projects
        - dbo.Tasks
        - dbo.TimeEntries
        - dbo.Users
        - Dropped Ledger Tables
      - Views
      - External Resources
      - Synonyms
      - Programmability
      - Query Store
      - Extended Events
      - XEvent Profiler
      - Storage
      - Security
  - Security
  - Integration Services Catalogs

tdiserver.ticksydb - dbo.Projects | SQLQuery1.sql - tdi...ydb (tdiadmin (66))

| Column Name | Data Type |
|---|---|
| ProjectId | bigint |
| UserId | bigint |
| Name | nvarchar(100) |
| Description | text |
| HourlyRate | decimal(10, 2) |
| Archived | bit |
| CreatedAt | datetime |
| UpdatedAt | datetime |

Update Wizard

**Choose Your Data Connection**

**Which data connection should your application use to connect to the database?**

tdiserver.ticksydb.dbo | New Connection...

This connection string appears to contain sensitive data (for example, a password) that is required to connect to the database. Storing sensitive data in the connection string can be a security risk. Do you want to include this sensitive data in the connection string?

● No, exclude sensitive data from the connection string. I will set it in my application code.

○ Yes, include the sensitive data in the connection string.

Connection string:

```
metadata=res://*/TicksyDbContext.csdl|res://*/TicksyDbContext.ssdl|
res://*/TicksyDbContext.msl;provider=System.Data.SqlClient;provider connection string="data
source=tdiserver.database.windows.net;initial catalog=ticksydb;persist security info=True;user
id=tdiadmin;encrypt=True;MultipleActiveResultSets=True;App=EntityFramework"
```

□ Save connection settings in App.Config as:

Entities

< Previous | Next > | Finish | Cancel

- banner.png
- Globals.cs
- MainWindow.xaml
- packages.config
- ticksy.ico
- TicksyDbContext.edmx
  - TicksyDbContext.Context.tt
  - TicksyDbContext.Designer.cs
  - TicksyDbContext.edmx.diagram
  - TicksyDbContext.tt
- ticksytest

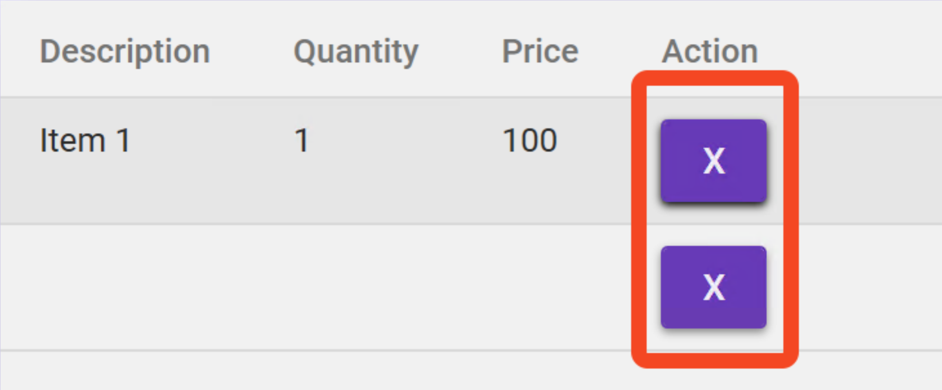
Technologies:

Updating Database First generated files after modifying the database

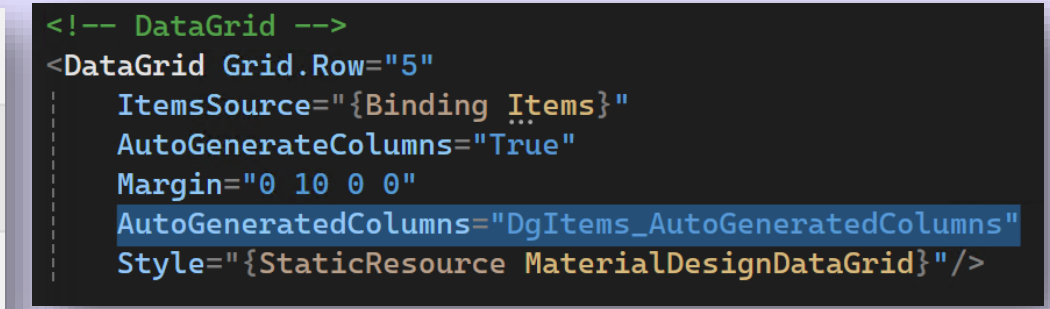
# WHAT WE LEARNED

Technologies:

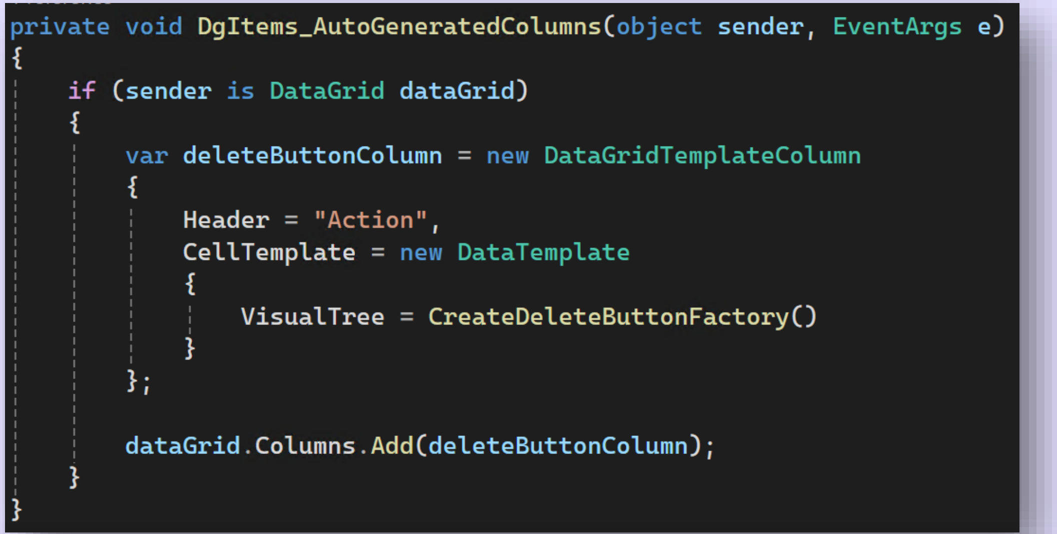
DataGrid custom columns



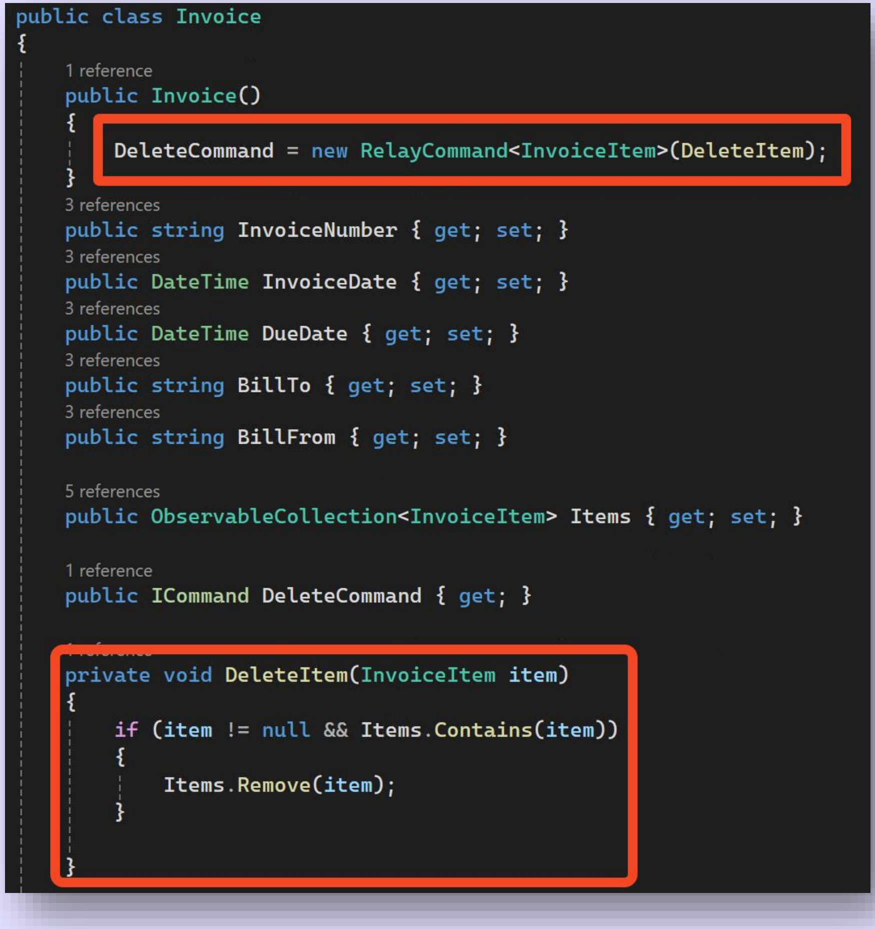
| Description | Quantity | Price | Action |
|---|---|---|---|
| Item 1 | 1 | 100 | X |
| | | | X |



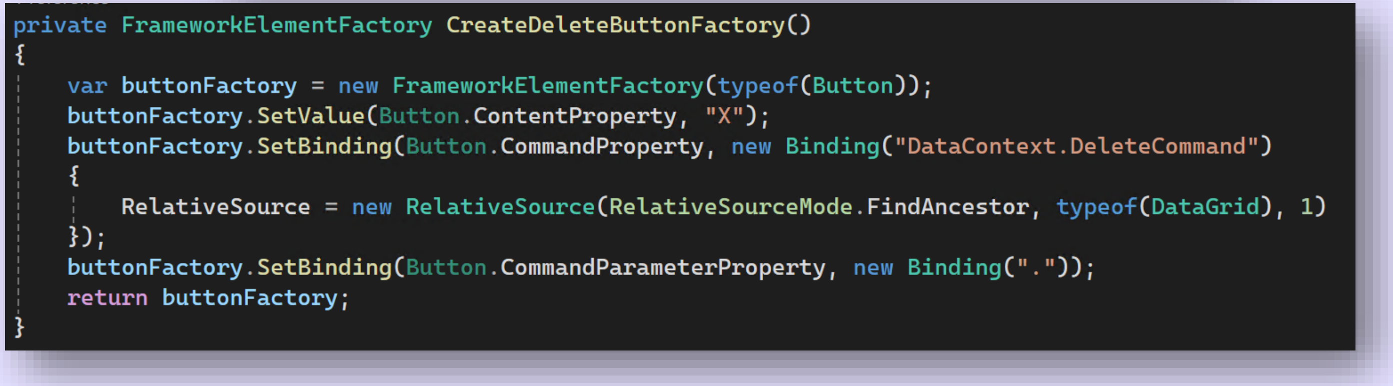
```xml
<!-- DataGrid -->
<DataGrid Grid.Row="5"
    ItemsSource="{Binding Items}"
    AutoGenerateColumns="True"
    Margin="0 10 0 0"
    AutoGeneratedColumns="DgItems_AutoGeneratedColumns"
    Style="{StaticResource MaterialDesignDataGrid}"/>
```



```csharp
private void DgItems_AutoGeneratedColumns(object sender, EventArgs e)
{
    if (sender is DataGrid dataGrid)
    {
        var deleteButtonColumn = new DataGridTemplateColumn
        {
            Header = "Action",
            CellTemplate = new DataTemplate
            {
                VisualTree = CreateDeleteButtonFactory()
            }
        };

        dataGrid.Columns.Add(deleteButtonColumn);
    }
}
```



```csharp
public class Invoice
{
    1 reference
    public Invoice()
    {
        DeleteCommand = new RelayCommand<InvoiceItem>(DeleteItem);
    }
    3 references
    public string InvoiceNumber { get; set; }
    3 references
    public DateTime InvoiceDate { get; set; }
    3 references
    public DateTime DueDate { get; set; }
    3 references
    public string BillTo { get; set; }
    3 references
    public string BillFrom { get; set; }

    5 references
    public ObservableCollection<InvoiceItem> Items { get; set; }

    1 reference
    public ICommand DeleteCommand { get; }

    private void DeleteItem(InvoiceItem item)
    {
        if (item != null && Items.Contains(item))
        {
            Items.Remove(item);
        }

    }
```

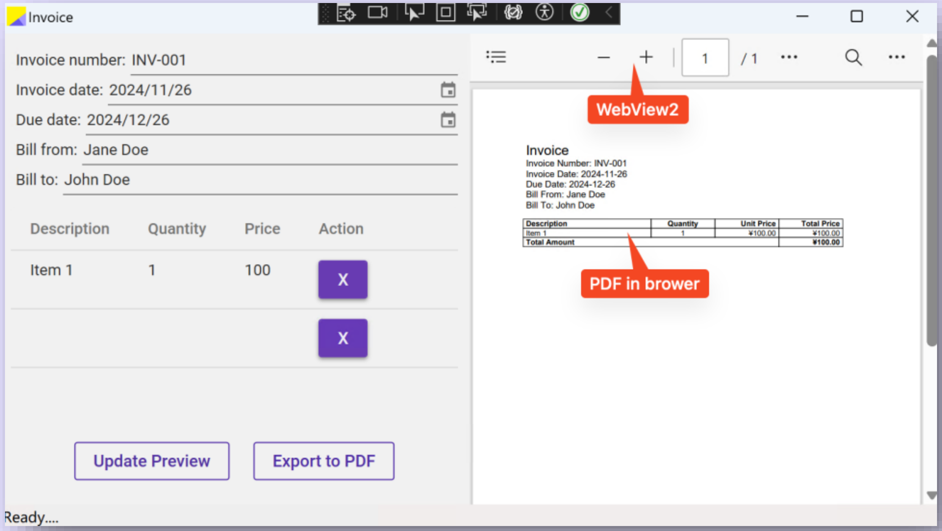


```csharp
private FrameworkElementFactory CreateDeleteButtonFactory()
{
    var buttonFactory = new FrameworkElementFactory(typeof(Button));
    buttonFactory.SetValue(Button.ContentProperty, "X");
    buttonFactory.SetBinding(Button.CommandProperty, new Binding("DataContext.DeleteCommand")
    {
        RelativeSource = new RelativeSource(RelativeSourceMode.FindAncestor, typeof(DataGrid), 1)
    });
    buttonFactory.SetBinding(Button.CommandParameterProperty, new Binding("."));
    return buttonFactory;
}
```

# WHAT WE LEARNED

Technologies:

PDF & WebView2



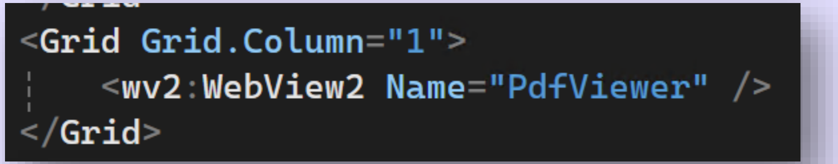
Invoice number: INV-001
Invoice date: 2024/11/26
Due date: 2024/12/26
Bill from: Jane Doe
Bill to: John Doe

| Description | Quantity | Price | Action |
|---|---|---|---|
| Item 1 | 1 | 100 | X |
| | | | X |

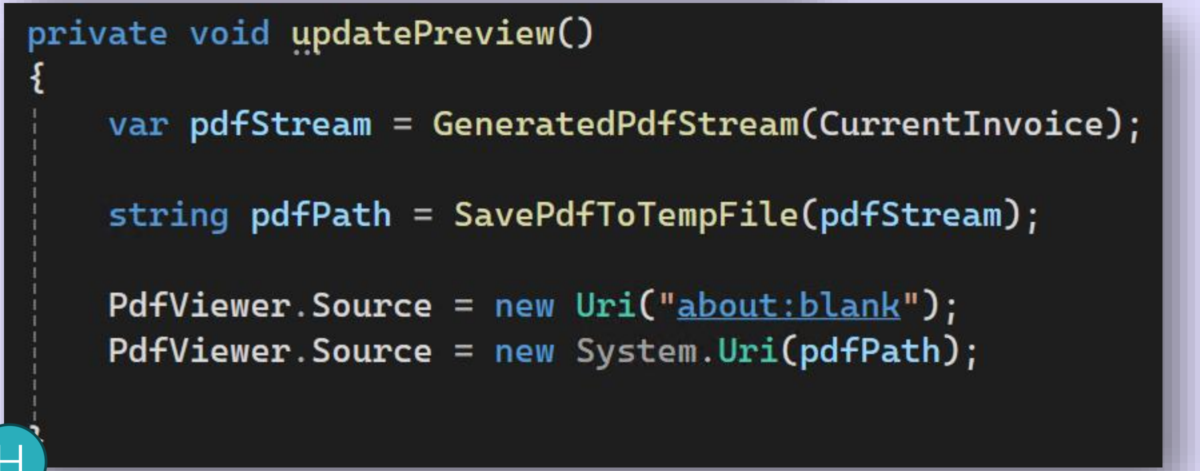
Ready....

Invoice
Invoice Number: INV-001
Invoice Date: 2024-11-26
Due Date: 2024-12-26
Bill From: Jane Doe
Bill To: John Doe

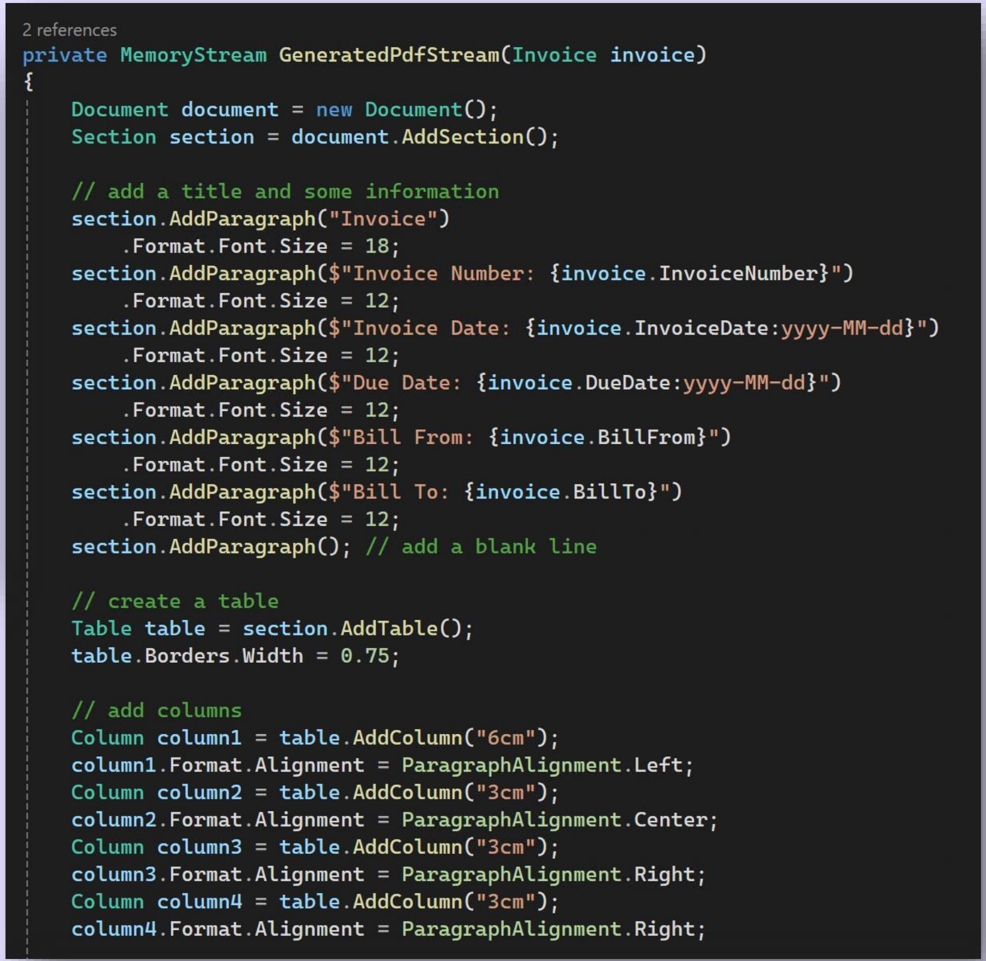
| Description | Quantity | Unit Price | Total Price |
|---|---|---|---|
| Item 1 | 1 | ¥100.00 | ¥100.00 |
| **Total Amount** | | | **¥100.00** |



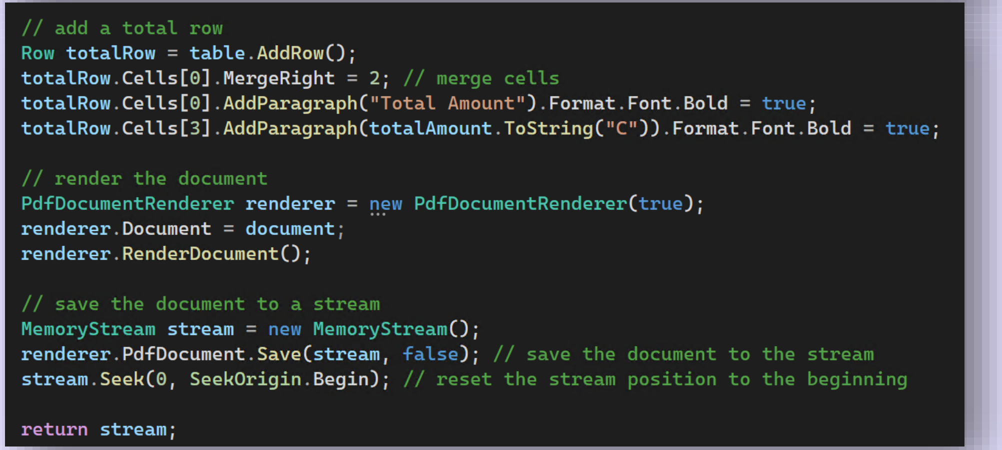
```xml
<Grid Grid.Column="1">
    <wv2:WebView2 Name="PdfViewer" />
</Grid>
```



```csharp
private void updatePreview()
{
    var pdfStream = GeneratedPdfStream(CurrentInvoice);

    string pdfPath = SavePdfToTempFile(pdfStream);

    PdfViewer.Source = new Uri("about:blank");
    PdfViewer.Source = new System.Uri(pdfPath);
}
```



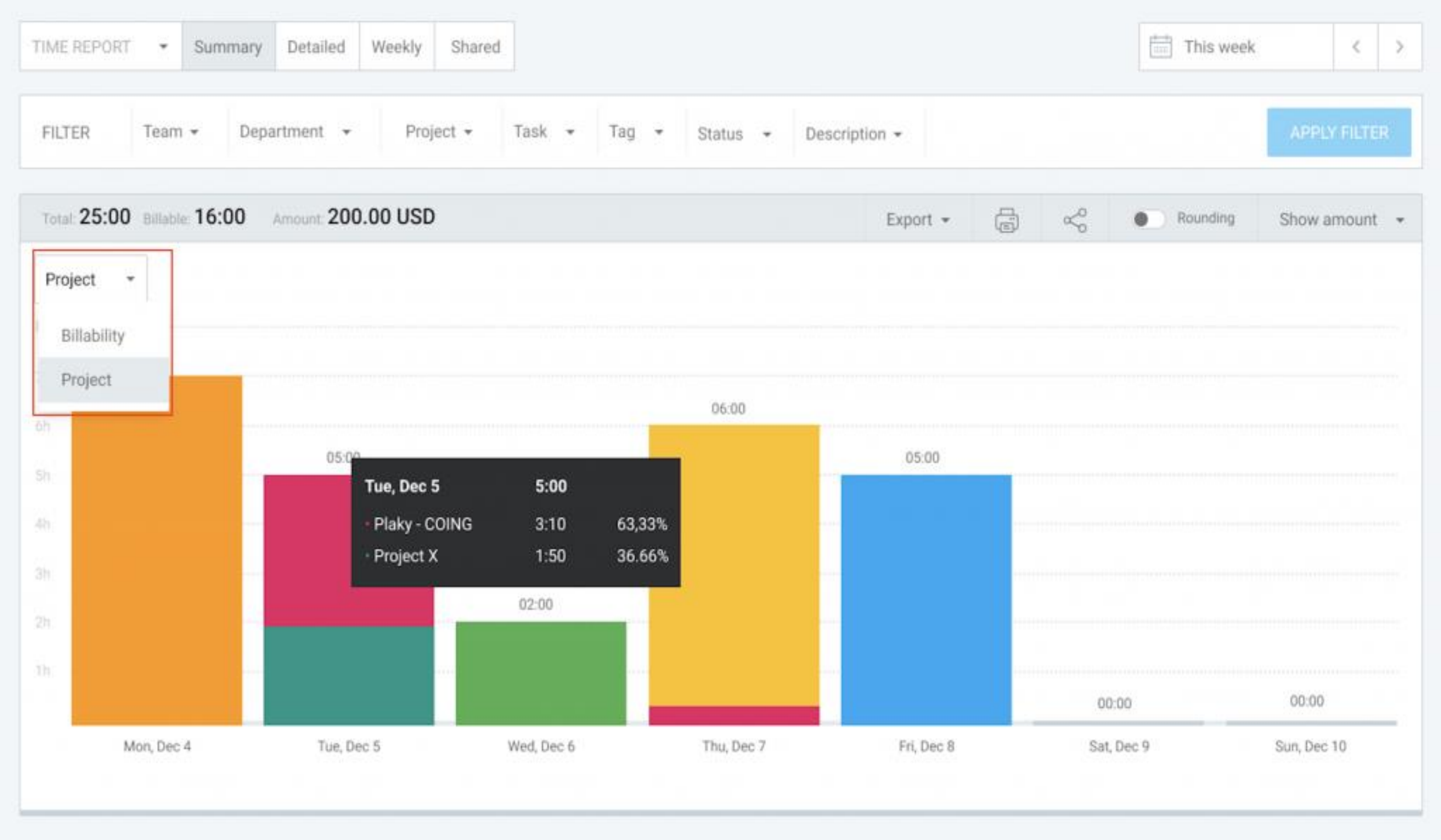
```csharp
2 references
private MemoryStream GeneratedPdfStream(Invoice invoice)
{
    Document document = new Document();
    Section section = document.AddSection();

    // add a title and some information
    section.AddParagraph("Invoice")
        .Format.Font.Size = 18;
    section.AddParagraph($"Invoice Number: {invoice.InvoiceNumber}")
        .Format.Font.Size = 12;
    section.AddParagraph($"Invoice Date: {invoice.InvoiceDate:yyyy-MM-dd}")
        .Format.Font.Size = 12;
    section.AddParagraph($"Due Date: {invoice.DueDate:yyyy-MM-dd}")
        .Format.Font.Size = 12;
    section.AddParagraph($"Bill From: {invoice.BillFrom}")
        .Format.Font.Size = 12;
    section.AddParagraph($"Bill To: {invoice.BillTo}")
        .Format.Font.Size = 12;
    section.AddParagraph(); // add a blank line

    // create a table
    Table table = section.AddTable();
    table.Borders.Width = 0.75;

    // add columns
    Column column1 = table.AddColumn("6cm");
    column1.Format.Alignment = ParagraphAlignment.Left;
    Column column2 = table.AddColumn("3cm");
    column2.Format.Alignment = ParagraphAlignment.Center;
    Column column3 = table.AddColumn("3cm");
    column3.Format.Alignment = ParagraphAlignment.Right;
    Column column4 = table.AddColumn("3cm");
    column4.Format.Alignment = ParagraphAlignment.Right;
```



```csharp
// add a total row
Row totalRow = table.AddRow();
totalRow.Cells[0].MergeRight = 2; // merge cells
totalRow.Cells[0].AddParagraph("Total Amount").Format.Font.Bold = true;
totalRow.Cells[3].AddParagraph(totalAmount.ToString("C")).Format.Font.Bold = true;

// render the document
PdfDocumentRenderer renderer = new PdfDocumentRenderer(true);
renderer.Document = document;
renderer.RenderDocument();

// save the document to a stream
MemoryStream stream = new MemoryStream();
renderer.PdfDocument.Save(stream, false); // save the document to the stream
stream.Seek(0, SeekOrigin.Begin); // reset the stream position to the beginning

return stream;
```

# FUTURE WORK

- Google authentication
- Generating charts
- Summary reports
- Invoice load database directly
- Search bar for the project
- Projects filters - active vs. archived



Total: 25:00 Billable: 16:00 Amount: 200.00 USD

| Tue, Dec 5 | 5:00 | |
|---|---|---|
| Plaky - COING | 3:10 | 63,33% |
| Project X | 1:50 | 36.66% |

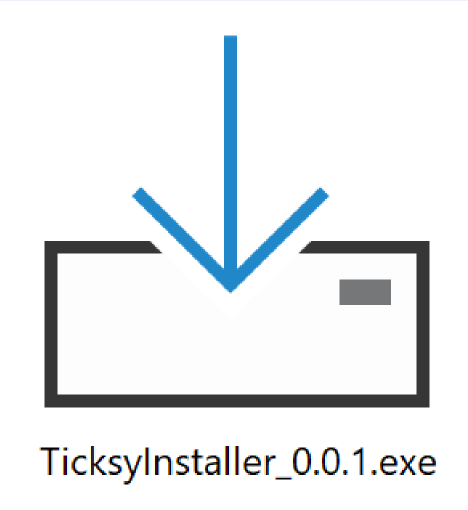
# SUMMARY

ticksy

Fully functional application for

- Managing projects, tasks, and track productivity
- Track hours worked and monitor task progress
- Generate invoices
- Essential tool for improving efficiency  and financial management
- Continuous Integration, Testing and Automated Version Compiling and Packaging Releases

**Projects exceeding expectations**



TicksyInstaller_0.0.1.exe