



Cooles Sportspiel

Project Presentation

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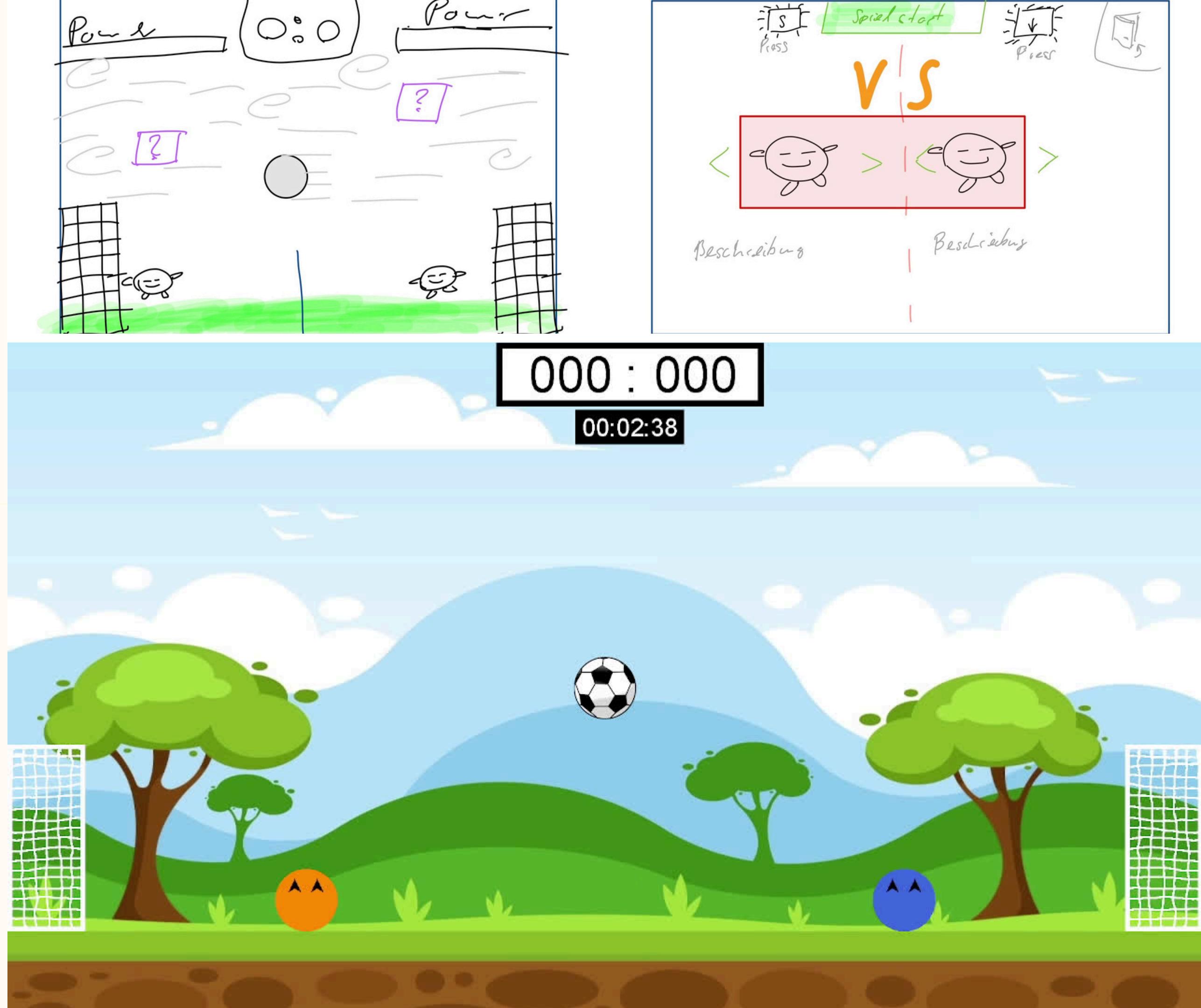
Today's Agenda



Key takeaways:

- Spieltrailer & Spielidee
- Architektur
- Qualitätssicherung
- Projektverlauf

Spieldesigner



Architektur



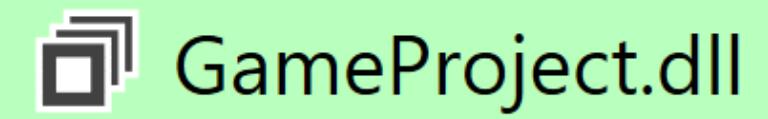
GameProject.dll

{ } GameProject

{ } GameProject.Field

{ } GameProject.UI





GameProject.dll

{ } GameProject

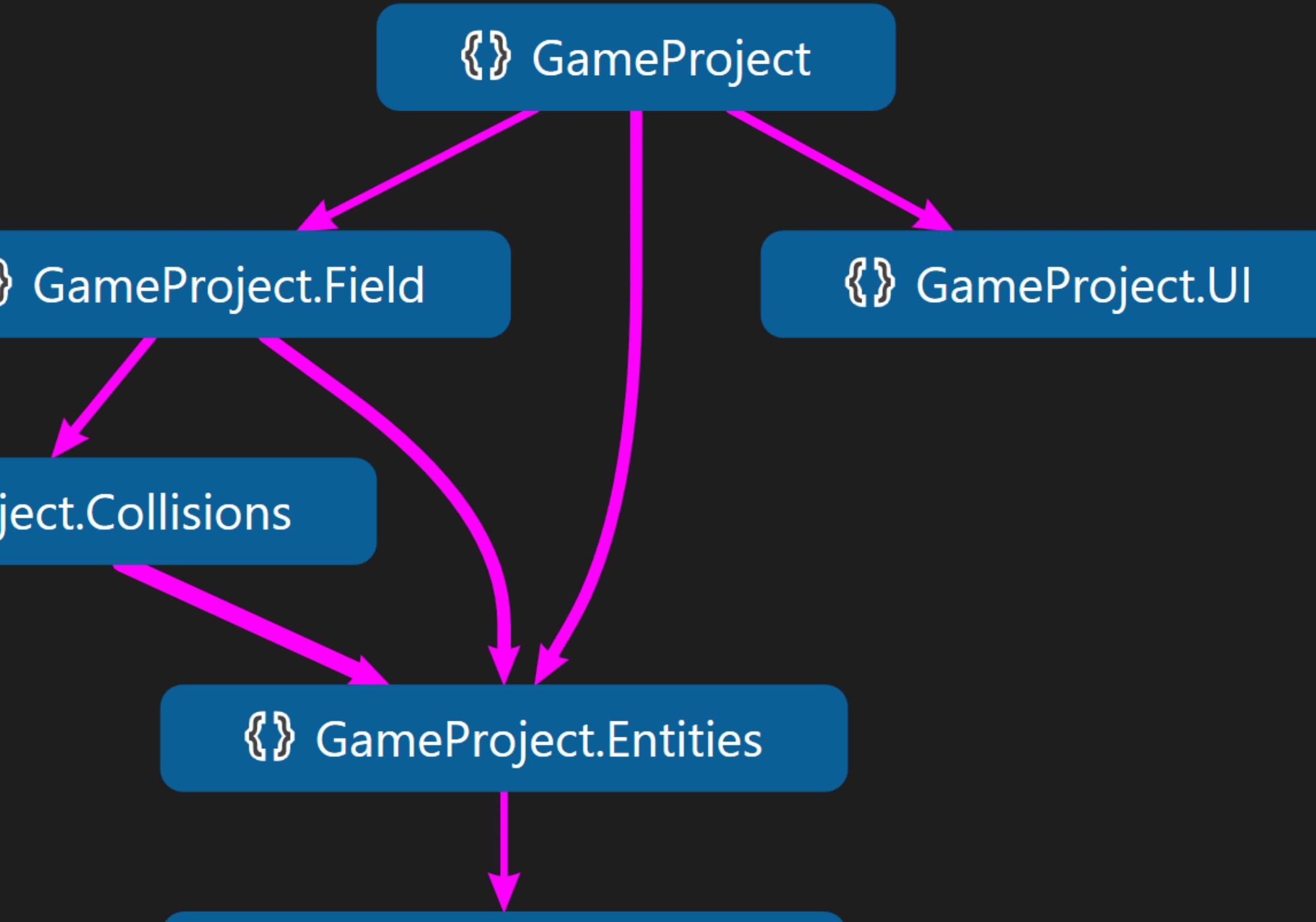
{ } GameProject.Field

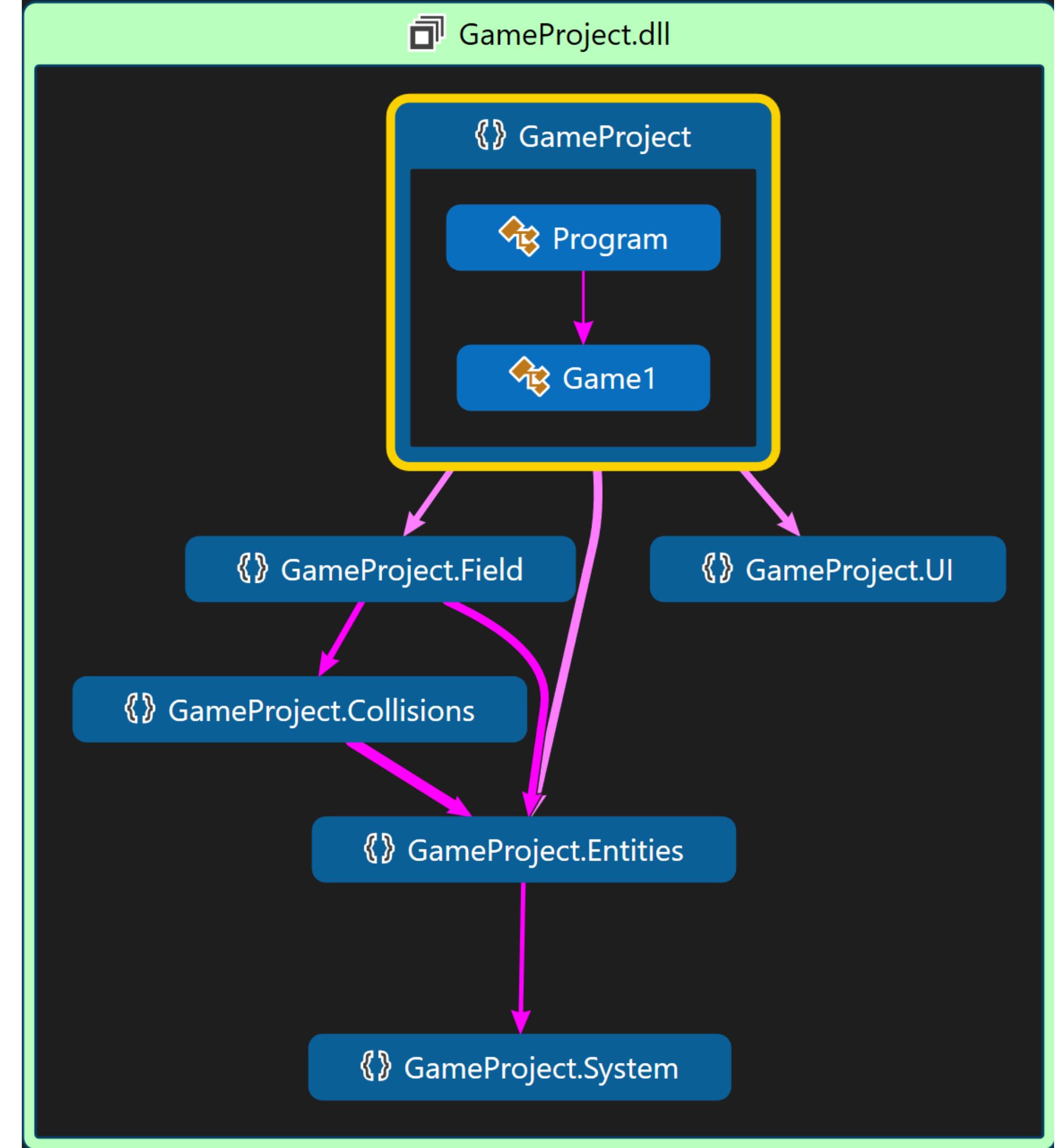
{ } GameProject.UI

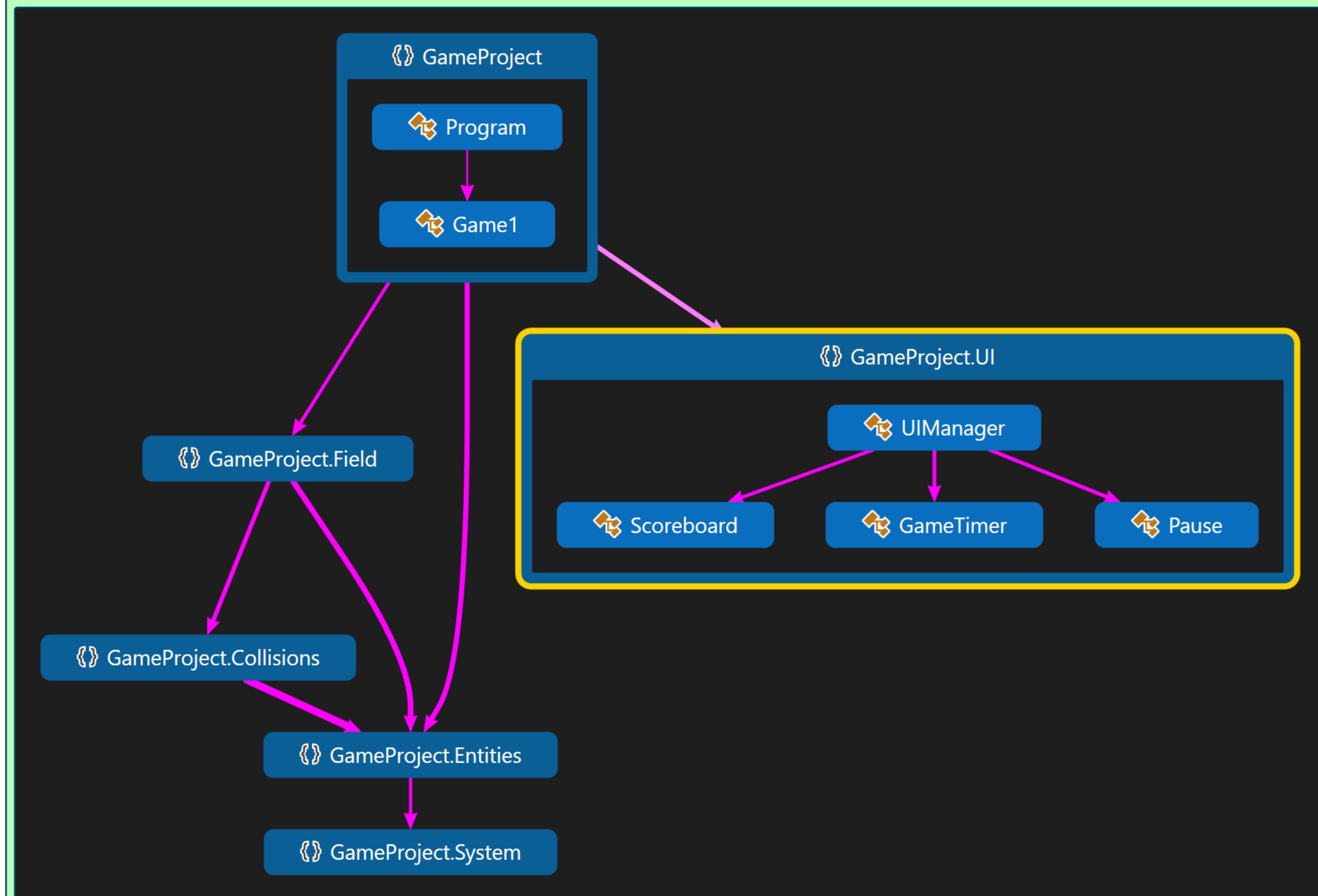
{ } GameProject.Collisions

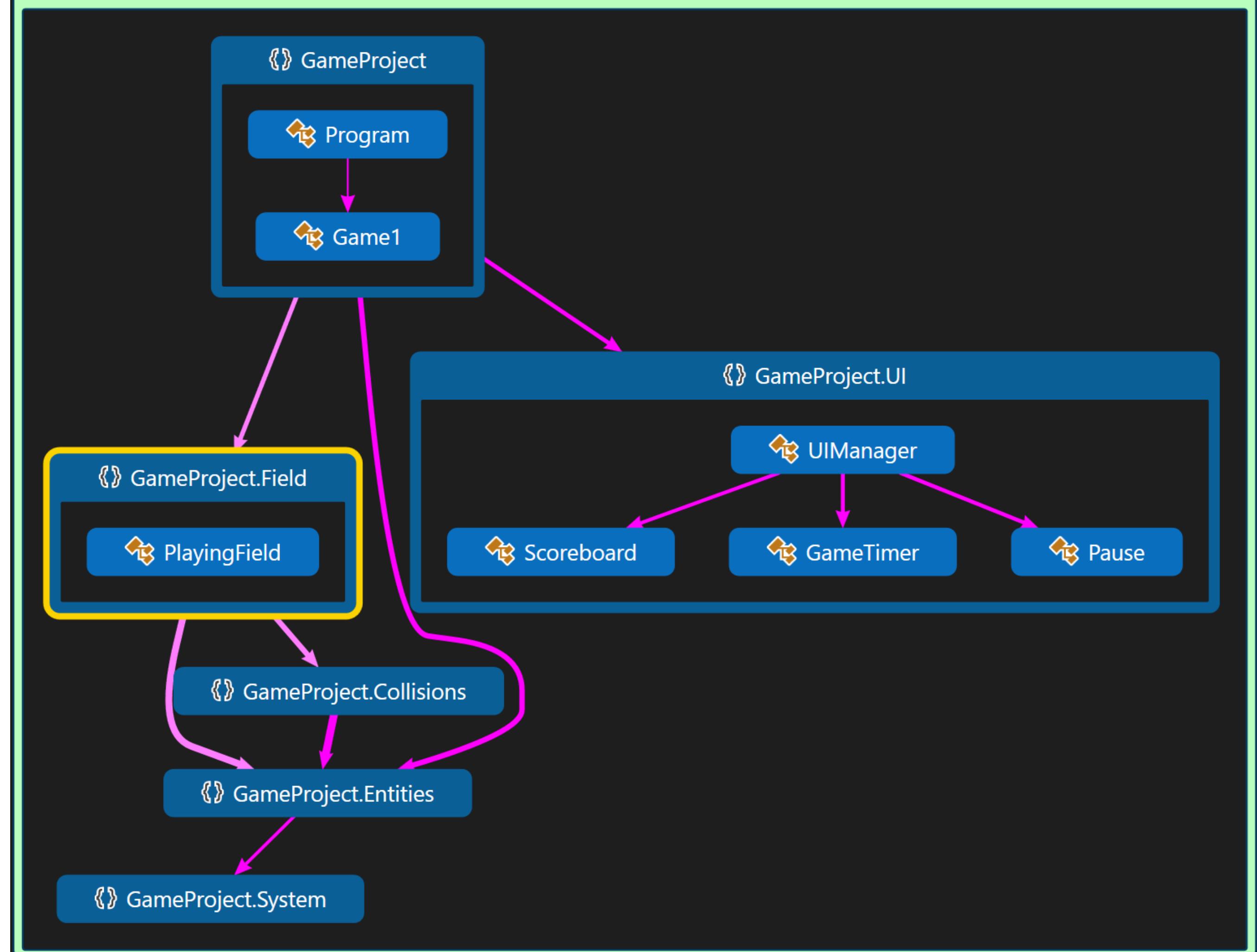
{ } GameProject.Entities

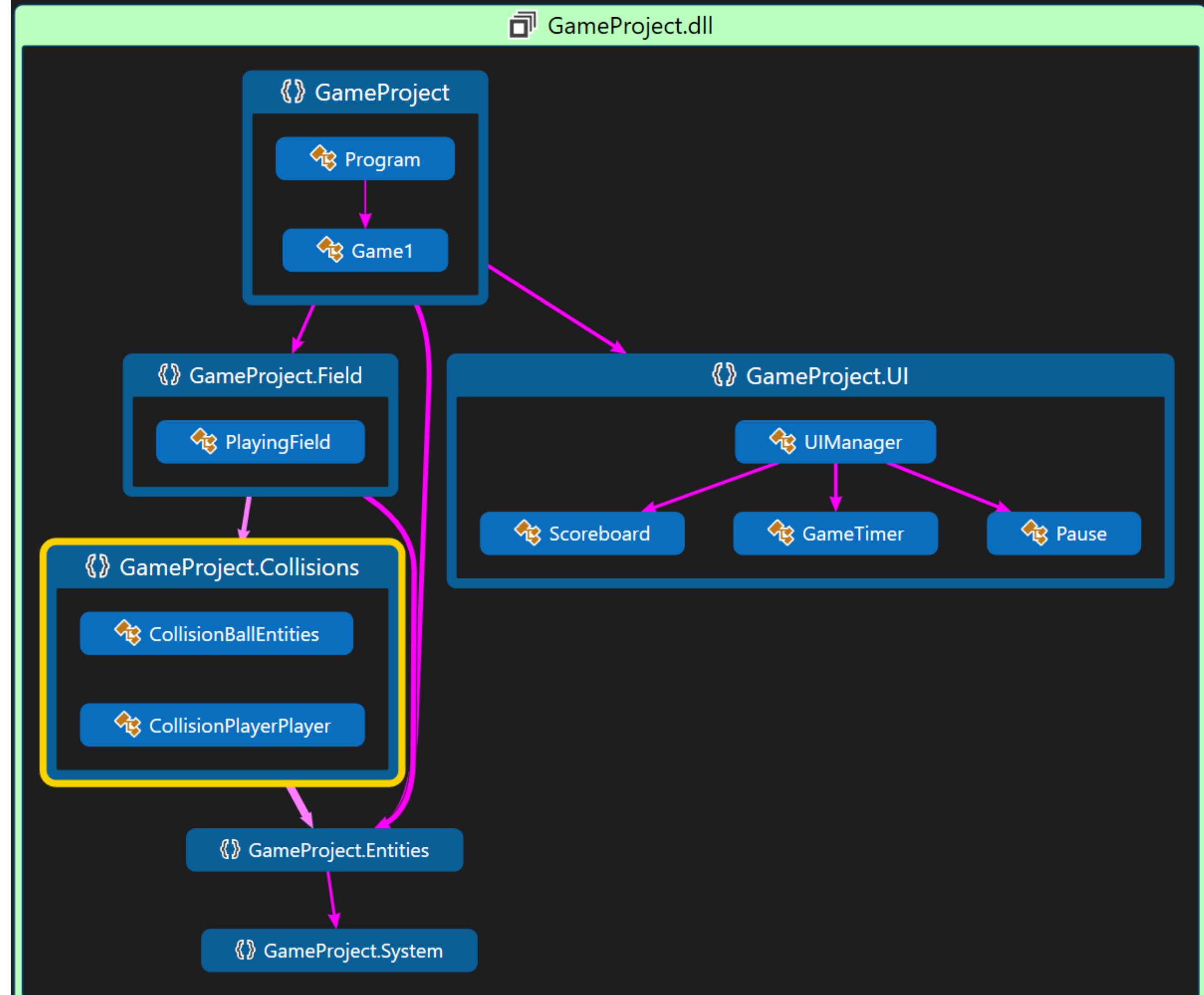
{ } GameProject.System

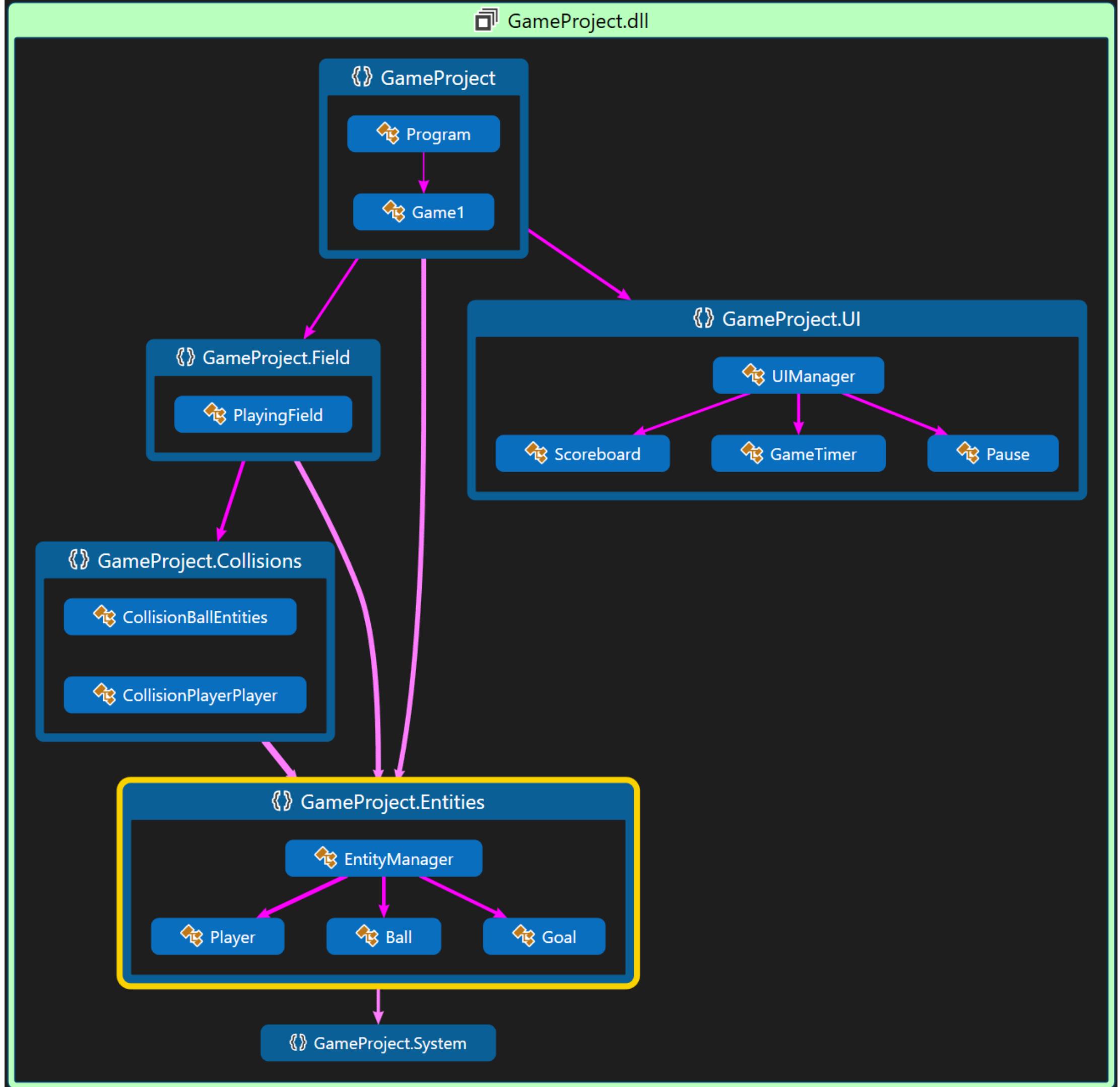


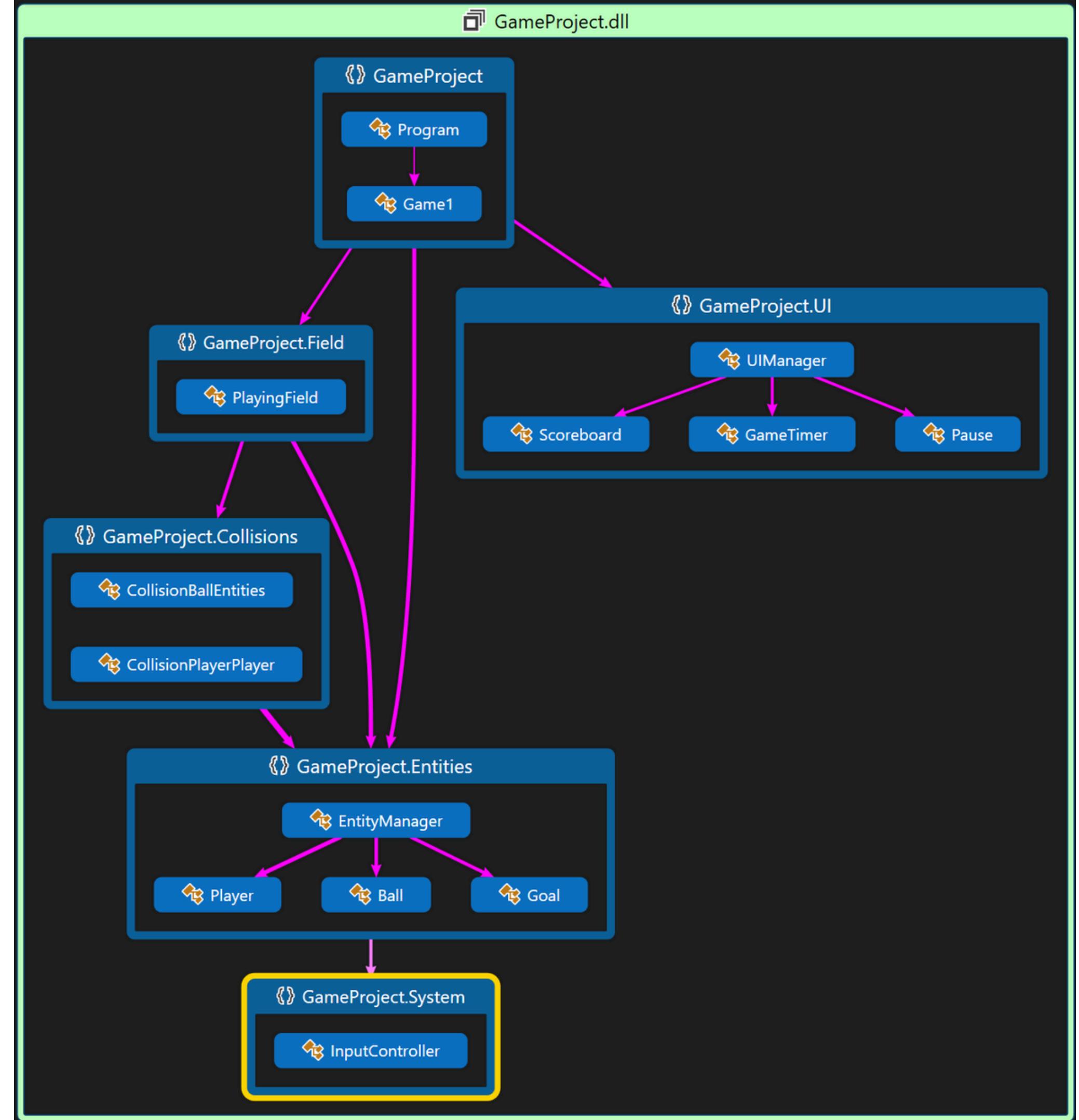












Qualitätssicherung



UNITTESTS

Name	Covered	Uncovered	Coverable	Total	Line coverage	Branch coverage
GameProject	313	65	378	1074	82.8%	
GameProject.Collisions.CollisionBallEntities	22	0	22	49	100%	
GameProject.Collisions.CollisionPlayerPlayer	35	0	35	75	100%	
GameProject.Entities.Ball	39	0	39	100	100%	
GameProject.Entities.EntityManager	31	29	60	140	51.6%	
GameProject.Entities.Goal	17	0	17	56	100%	
GameProject.Entities.Player	28	3	31	81	90.3%	
GameProject.Field.PlayingField	36	0	36	93	100%	
GameProject.Game1	22	19	41	109	53.6%	
GameProject.System.InputController	34	0	34	101	100%	
GameProject.UI.GameTimer	10	0	10	50	100%	
GameProject.UI.Pause	23	0	23	110	100%	
GameProject.UI.Scoreboard	9	0	9	39	100%	
GameProject.UI.UIManager	7	14	21	71	33.3%	

Qualitätssicherung

QUALITÄTSDOKUMENTATION

 **Burndown(-Diagramm) Dokumentation**

 **Bug- und Fehlersammlung**

 **Checkliste Sprintende**

 **Unit-Tests**

 **Code-Qualität**

```
<Project Sdk="Microsoft.NET.Sdk">
  <PropertyGroup>
    <OutputType>WinExe</OutputType>
    <TargetFramework>net6.0</TargetFramework>
    <RollForward>Major</RollForward>
    <PublishReadyToRun>false</PublishReadyToRun>
    <TieredCompilation>false</TieredCompilation>
  </PropertyGroup>
  <PropertyGroup>
    <ApplicationManifest>app.manifest</ApplicationManifest>
    <ApplicationIcon>Icon.ico</ApplicationIcon>
  </PropertyGroup>
  <ItemGroup>
    <None Remove="Icon.ico" />
    <None Remove="Icon.bmp" />
  </ItemGroup>
  <ItemGroup>
    <EmbeddedResource Include="Icon.ico" />
    <EmbeddedResource Include="Icon.bmp" />
  </ItemGroup>
  <ItemGroup>
    <PackageReference Include="MonoGame.Framework" Version="4.20.0" />
    <PackageReference Include="MonoGame.Content.Binaries" Version="4.20.0" />
    <PackageReference Include="Moq" Version="4.20.1" />
    <PackageReference Include="StyleCop.Analyzers" Version="1.3.1" />
      <PrivateAssets>all</PrivateAssets>
      <IncludeAssets>runtime; build; native; content; project</IncludeAssets>
    </PackageReference>
  </ItemGroup>
  <Target Name="RestoreDotnetTools" BeforeTargets="Build" />
  <Message Text="Restoring dotnet tools" Importance="High" />
  <Exec Command="dotnet tool restore" />
</Target>
  <ItemGroup>
    <EditorConfigFiles Remove="C:\Users\marce\source\repos\Content\EditorConfig\*.editorconfig" />
  </ItemGroup>
  <ItemGroup>
    <None Include="C:\Users\marce\source\repos\Content\*.ico" />
    <None Include="C:\Users\marce\source\repos\Content\*.bmp" />
  </ItemGroup>
</Project>
```

Branching Strategie



ISOLIERUNG VON FEATURES

- Für jede neue Funktion ein separater Branch

CODE-REVIEW

- Jedes Feature wird überprüft bevor es übernommen wird
- Überprüfung und Feedback durch Teammitglieder

UNABHÄNGIGE ENTWICKLUNG

- Jedes Mitglied hat eigenen Branch
- Unabhängige Entwicklung
- Konflikte werden minimiert

INTEGRATION UND ZUSAMMENFÜHRUNG

- Feature Branch wird auf dem Hauptentwicklungszweig übernommen
- Pull requests werden nochmal überprüft

Stylecop

```
# SA1200: Using directives should be placed correctly
dotnet_diagnostic.SA1200.severity = none

# SA1600: Elements should be documented
dotnet_diagnostic.SA1600.severity = none

# SA1633: File should have header
dotnet_diagnostic.SA1633.severity = none

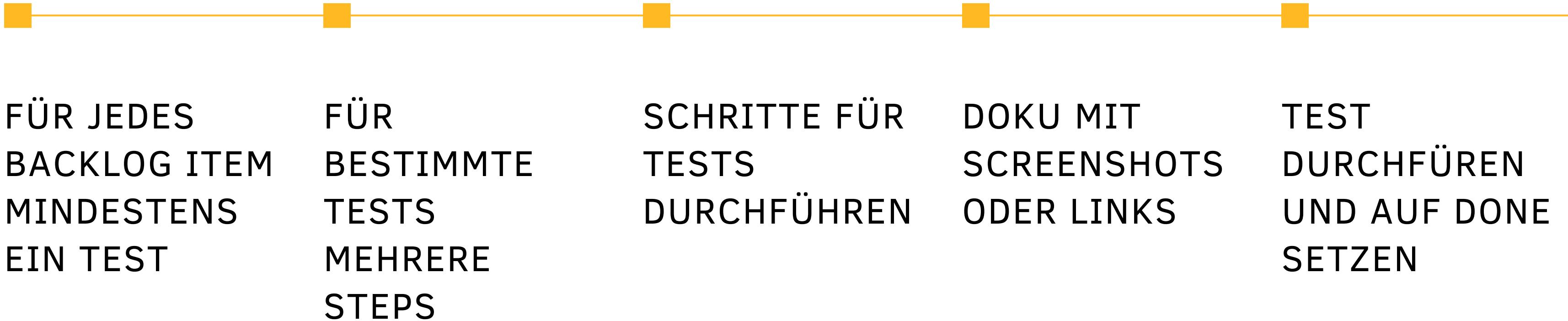
# SA1401: Fields should be private
dotnet_diagnostic.SA1401.severity = none

# SA0001: XML Documentation
dotnet_diagnostic.SA0001.severity = none

# SA1201: Elements should appear in the correct order
dotnet_diagnostic.SA1201.severity = none
csharp_style_allow_embedded_statements_on_same_line_experimental = true:silent

# SA1602: Enumeration items should be documented
dotnet_diagnostic.SA1602.severity = none
```

Manuelle Tests





Projektverlauf

- Wie begann das Projekt
- Produktinkremmente
- Retrospektive

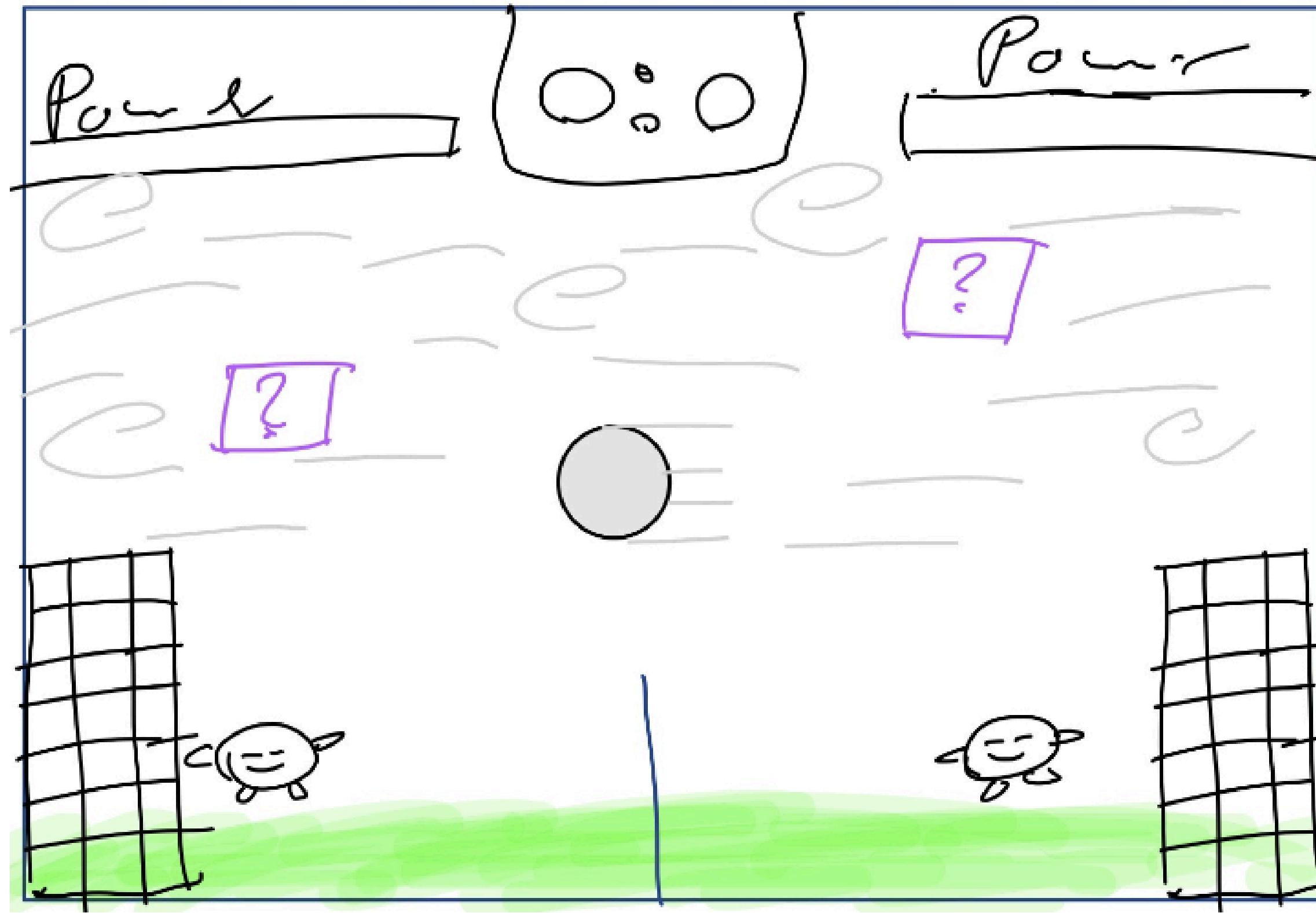
```
12 references
public Goal(Texture2D goal, Vector2 goalPos)
{
    this.GoalPos = goalPos;
    this.goalTexture = goal;
    if (this.goalTexture != null)
    {
        this.GoalBounds = new Rectangle((int)goalPos.X, (int)g
        this.GoalBoundsCountGoal = new Rectangle((int)goalPos.
    }
    else
    {
        this.GoalBounds = new Rectangle((int)goalPos.X, (int)g
        this.GoalBoundsCountGoal = new Rectangle((int)goalPos.
    }
}
```

```
[ExcludeFromCodeCoverage]
2 references
public void Draw(SpriteBatch spriteBatch, GameTime gameTime)
{
    spriteBatch.Draw(this.goalTexture, this.GoalPos, Color.White);
}
```

```
6 references
public bool PointScored(Rectangle ballBounds, int ballSize)
{
    if (this.GoalBoundsCountGoal.Intersects(ballBounds) && !th
    {
        this.InGoal = true;
        return true;
    }
    else if (!this.GoalBoundsCountGoal.Intersects(ballBounds))
    {
        this.InGoal = false;
    }

    return false;
}
```

Erste Idee



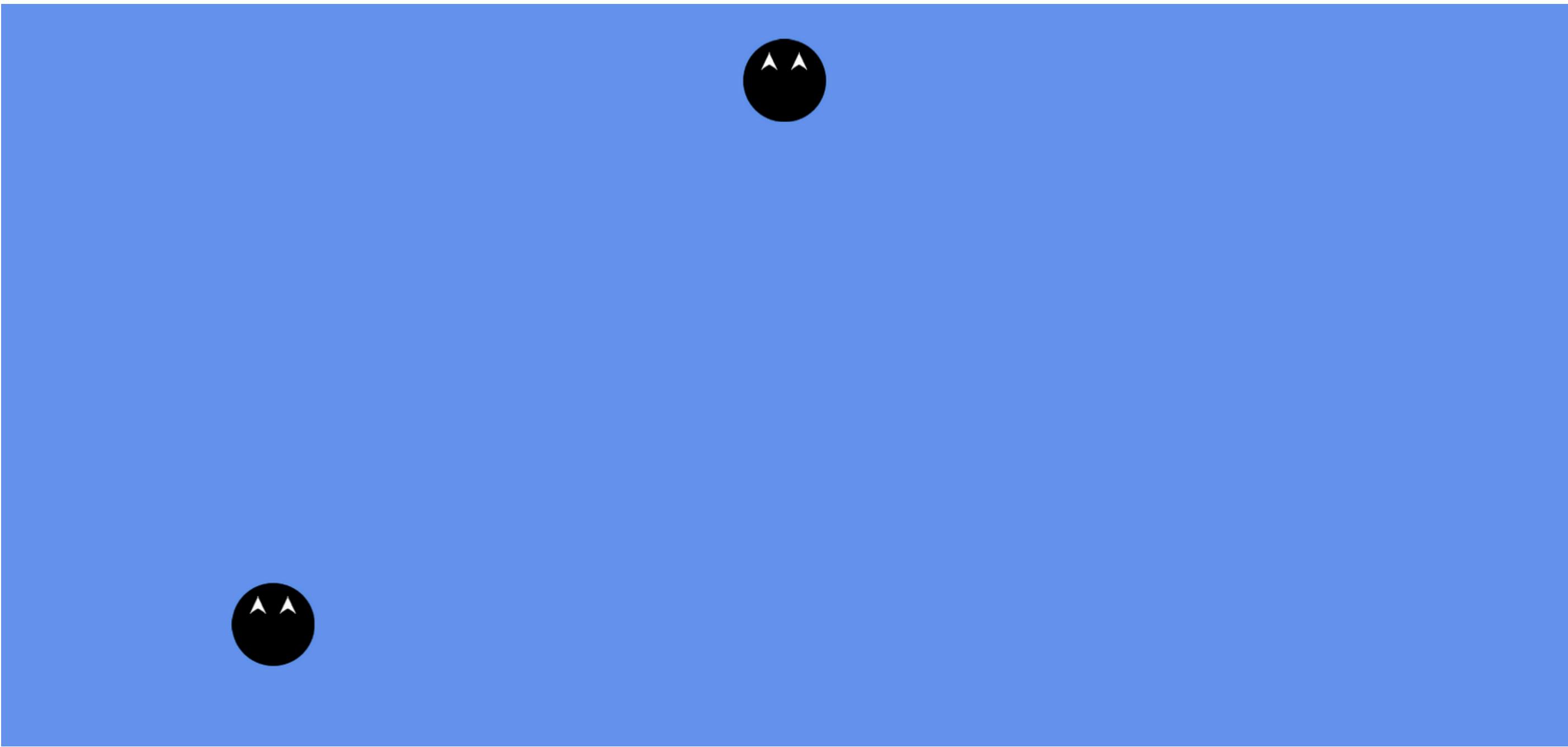
Sprint I

Spieler wurden erstellt



Sprint 2

Spieler können springen



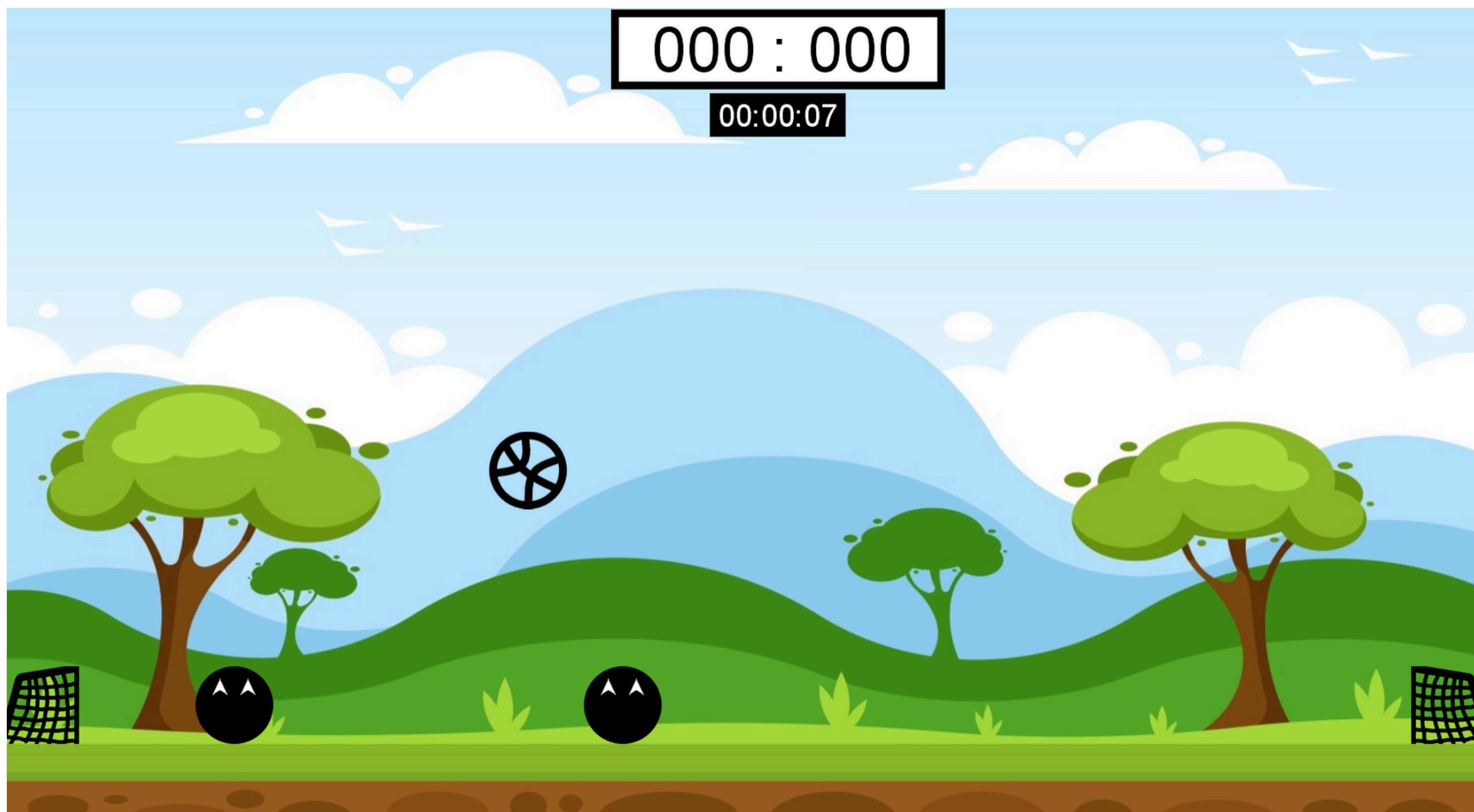
Sprint 3



Ball hat konstante geschwindigkeit & Tore schießen noch nicht möglich

000 : 000

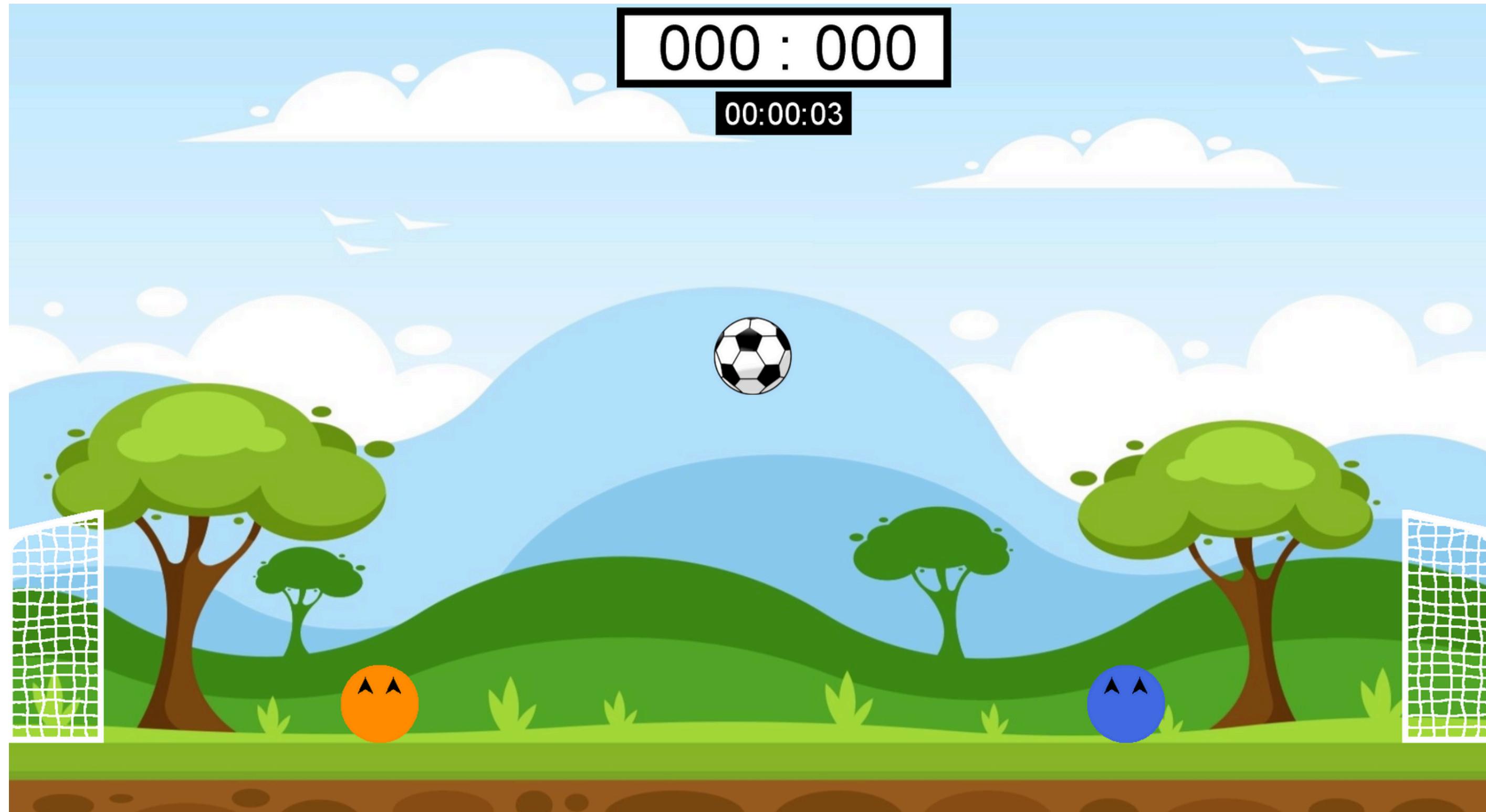
00:00:07



Sprint 4



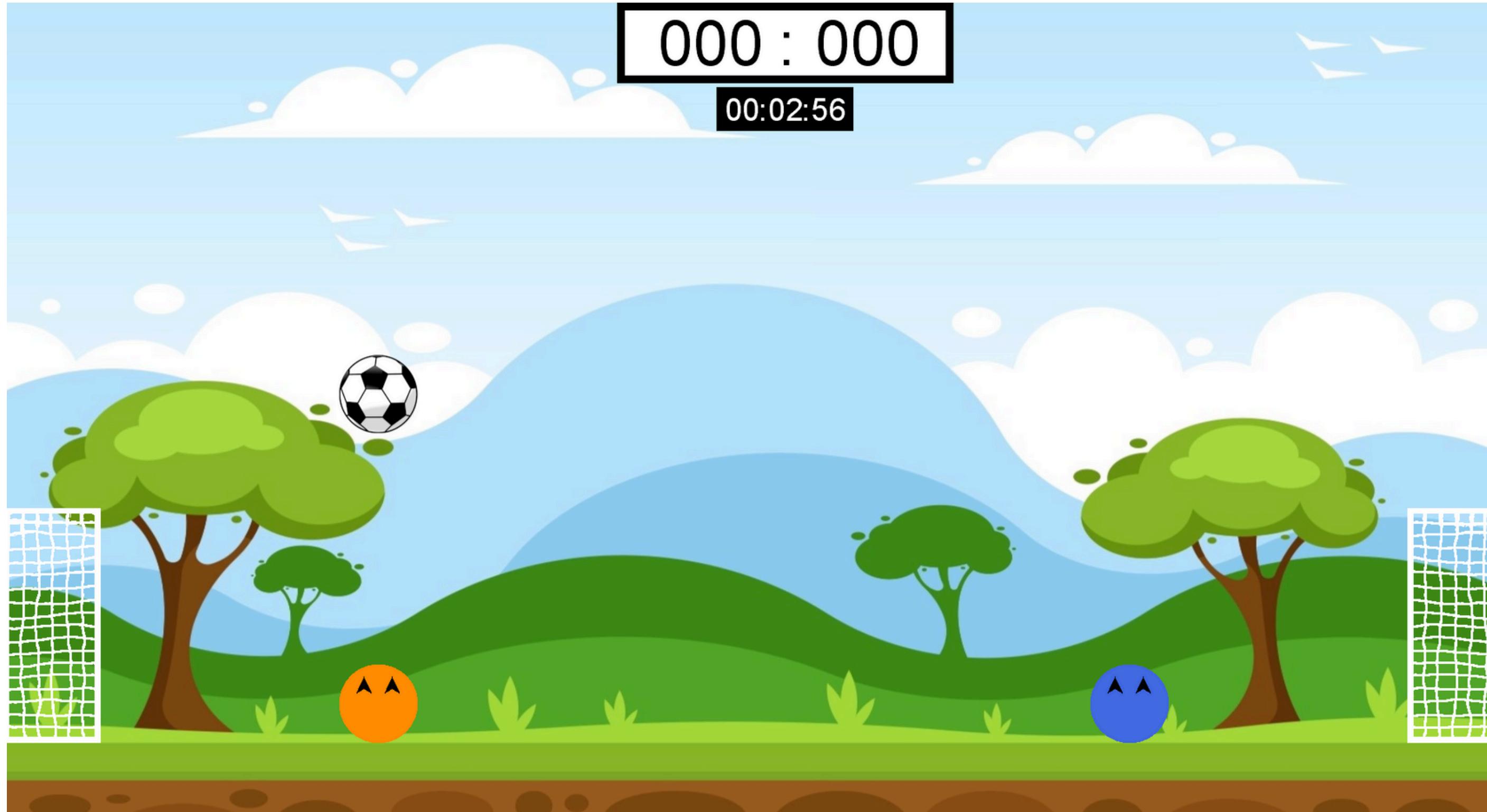
Tore schießen möglich



Sprint 5



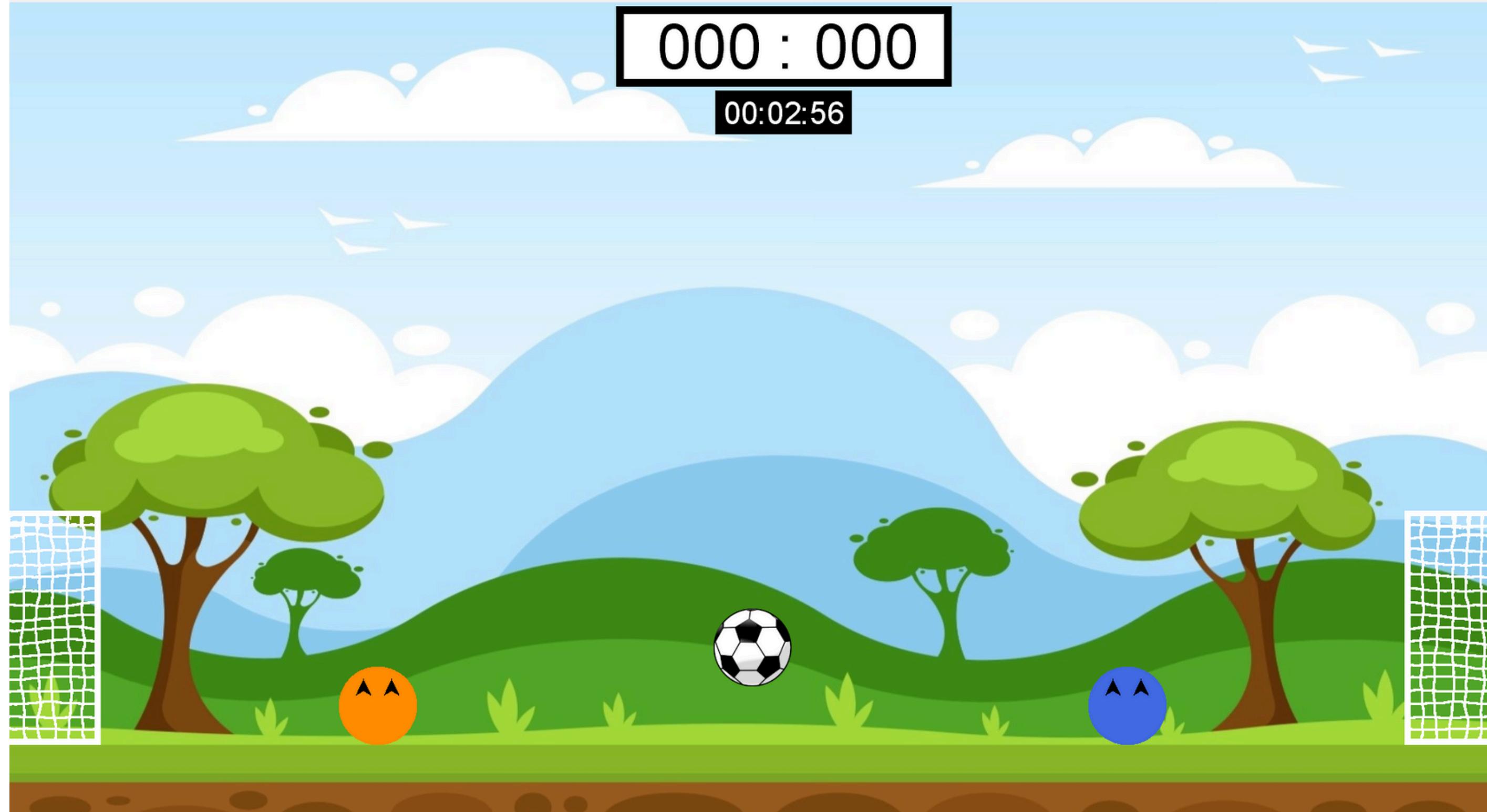
Tore angepasst und reset-Funktion implementiert



Sprint 6 ★



Finale Version von sprint 6



Retrospektive des gesamten Projektes



Schlechte Aspekte:

- Kommunikation und Inputcontroller-Probleme
- Kommunikation könnte allgemein besser sein
- Schlechter Burndown zu Beginn
- Probleme mit Visual Studio
- Verzögerungen bei Aufgabenerledigung