

Getting Started

Adding the NuGet package to your project

▼ Filter by title

You need to pull BP.AdventureFramework into your project. The easiest way to do this is to add the NuGet package. The latest package and installation instructions are available here

(<https://github.com/benpollarduk/BP.AdventureFramework/pkgs/nuget/BP.AdventureFramework>).

First Game

Locations
Items (items.html)

Once the package has been installed it's time to jump in and start building your first game.

+ Characters

Setup

Conditional Descriptions

To start with create a new Console application. Regardless of target framework, it should look something like this:

(conditional-descriptions.html)

Commands BP.AdventureFramework.GettingStarted

{
(commands.html)

internal class Program

Frame Builders (frame-

builders.html)
private static void Main(string[] args)
{

End Conditions (end-

conditions.html)
}

}

Adding a PlayableCharacter

Every game requires a character to play as, lets add that next:

```
private static PlayableCharacter CreatePlayer()  
{  
    return new PlayableCharacter("Dave", "A young boy on a quest to find the meaning  
of life.");  
}
```

In this example whenever **CreatePlayer** is called a new **PlayableCharacter** will be created. The character is called "Dave" and has a description that describes him as "A young boy on a quest to find the meaning of life.".

Creating the game world

The game world consists of a hierarchy of three tiers: **Overworld**, **Region** and **Room**. We will create a simple **Region** with two **Rooms**. We can do this directly in the **Main** function for simplicity. To start with lets make the **Rooms**:

```
private static void Main(string[] args)
{
    var cavern = new Room("Cavern", "A dark cavern set in to the base of the mountain.", new Exit(Direction.North));
    var tunnel = new Room("Tunnel", "A dark tunnel leading inside the mountain.", new Exit(Direction.South));
}
```

Although the **Rooms** haven't been added to a **Region** yet there are exits in place that will allow the player to move between them.

But if we want to add **Items** to interact with, let's add an item to the tunnel:

```
var holyGrail = new Item("Holy Grail", "A dull golden cup, looks pretty old.", true);
tunnel.AddItem(holyGrail);
```

Looking good, but the **Rooms** need to be contained within a **Region**. **RegionMaker** simplifies this process, but sometimes creating a **Region** directly may be more appropriate if more control is needed. Here we will use **RegionMaker**:

```
var regionMaker = new RegionMaker("Mountain", "An imposing volcano just East of town.")
{
    [0, 0, 0] = cavern,
    [0, 1, 0] = tunnel
};
```

This needs more breaking down. The **RegionMaker** will create a region called "Mountain" with a description of "An imposing volcano just East of town.". The region will contain two rooms, the cavern and the tunnel. The cavern will be added at position x 0, y 0, z 0. The tunnel will be added at position x 0, y 1, z 0, north of the cavern.

The game world is nearly complete, but the **Region** needs to exist within an **Overworld** for it to be finished. We will use **OverworldMaker** to achieve this:

```
var overworldMaker = new OverworldMaker("Daves World", "An ancient kingdom.", regionMaker);
```

This will create an **Overworld** called "Daves World" which is described as "An ancient kingdom" and contains a single **Region**.

All together the code looks like this:

```
var cavern = new Room("Cavern", "A dark cavern set in to the base of the mountain.",
new Exit(Direction.North));

var tunnel = new Room("Tunnel", "A dark tunnel leading inside the mountain.", new Exit(Direction.South));

var holyGrail = new Item("Holy Grail", "A dull golden cup, looks pretty old.", true);
tunnel.AddItem(holyGrail);

var regionMaker = new RegionMaker("Mountain", "An imposing volcano just East of town.");
[0, 1, 0] = tunnel

var overworldMaker = new OverworldMaker("Daves World", "An ancient kingdom.", regionMaker);
```

Getting Started (getting-started.html)

+ Locations

Items (items.html)

+ Characters

Conditional Descriptions (conditional-descriptions.html)

Commands (commands.html)

Frame Builders (frame-builders.html)

End Conditions (end-conditions.html)

Checking if the game is complete

For a game to come to an end it needs to reach either a game over state or a completion state.

Firstly lets look at the logic that determines if the game is complete. An **EndCheck** is required, which returns an **EndCheckResult** that determines if the game is complete.

In this example lets make a method that determines if the game is complete. The game is complete if the player has the holy grail:

```
private static EndCheckResult IsGameComplete(Game game)
{
    if (!game.Player.FindItem("Holy Grail", out _))
        return EndCheckResult.NotEnded;

    return new EndCheckResult(true, "Game Complete", "You have the Holy Grail!");
}
```

If the player has the holy grail then the **EndCheckResult** will return that the game has ended, and have a title that will read "Game Complete" and a description that reads "You have the Holy Grail!".

A common game over state may be if the player dies:

```
private static EndCheckResult IsGameOver(Game game)
{
    if (game.Player.IsAlive)
        return EndCheckResult.NotEnded;

    return new EndCheckResult(true, "Game Over", "You died!");
}
```

Getting Started (getting-started.html)

The game now has all the required assets and logic it just needs some boilerplate to tie everything together before it is ready to play.

Locations (locations.html)
Items (items.html)
GameCreationCallback is required to instantiate an instance of a **Game**. This is so that new instances of the **Game** can be created as required.

Characters (characters.html)
Conditional Descriptions (conditional-descriptions.html)
Commands (commands.html)
Frame Builders (frame-builders.html)

```
var gameCreator = Game.Create(
    "The Life Of Dave",
    "Dave awakes to find himself in a cavern...",
    "A very low budget adventure.",
    x => overworldMaker.Make(),
    CreatePlayer,
    IsGameComplete,
    IsGameOver);
```

End Conditions (end-conditions.html)
This requires some breaking down. The **Game** class has a **Create** method that can be used to create instances of **Game**. This takes the following arguments:

- **Name** - the name of the game.
- **Introduction** - an introduction to the game.
- **Description** - a description of the game.
- **OverworldGenerator** - a callback for generating instances of the overworld.
- **PlayerGenerator** - a callback for generating instances of the player.
- **CompletionCondition** - a callback for determining if the game is complete.
- **GameOverCondition** - a callback for determining if the game is over.

Executing the game

The game is executed simply by calling the static **Execute** method on **Game** and passing in the game creation callback.

```
Game.Execute(gameCreator);
```

Bringing it all together

The full example code should look like this:

```

using BP.AdventureFramework.Assets;
using BP.AdventureFramework.Assets.Characters;
using BP.AdventureFramework.Assets.Locations;
using BP.AdventureFramework.Logic;
using BP.AdventureFramework.Utilities;

```



```

namespace BP.AdventureFramework.GettingStarted

```

Getting Started (getting-started.html)

```

{
    internal class Program
    {

```

```

        private static EndCheckResult IsGameComplete(Game game)
        {

```

+ Locations

```

            if (!game.Player.FindItem("Holy Grail", out _))
                return EndCheckResult.NotEnded;

```

Items (items.html)

+ Characters

```

                return new EndCheckResult(true, "Game Complete", "You have the Holy Grai

```

Conditional Descriptions

(conditional-

descriptions.html)

```

        private static EndCheckResult IsGameOver(Game game)

```

Commands

(commands.html)

```

            if (game.Player.IsAlive)
                return EndCheckResult.NotEnded;

```

Frame Builders (frame-

builders.html)

```

                return new EndCheckResult(true, "Game Over", "You died!");
            }

```

End Conditions (end-

conditions.html)

```

        private static PlayableCharacter CreatePlayer()
        {

```

```

            return new PlayableCharacter("Dave", "A young boy on a quest to find the
meaning of life.");
        }

```

```

        private static void Main(string[] args)

```

```

        {

```

```

            var cavern = new Room("Cavern", "A dark cavern set in to the base of the
mountain.", new Exit(Direction.North));

```

```

            var tunnel = new Room("Tunnel", "A dark tunnel leading inside the mounta
in.", new Exit(Direction.South));

```

```

            var holyGrail = new Item("Holy Grail", "A dull golden cup, looks pretty
old.", true);

```

```

            tunnel.AddItem(holyGrail);

```

```

            var regionMaker = new RegionMaker("Mountain", "An imposing volcano just
East of town.")

```

```

            {

```

```

                [0, 0, 0] = cavern,

```

```

                [0, 1, 0] = tunnel

```

```

            };

```

```
var overworldMaker = new OverworldMaker("Daves World", "An ancient kingdom.", regionMaker);
```

```
var gameCreator = Game.Create(  
    "The Life Of Dave",  
    "Dave awakes to find himself in a cavern...",  
    "A very low budget adventure.",  
    x => overworldMaker.Make(),  
    CreatePlayer,  
    IsGameComplete,  
    IsGameOver);
```

Getting Started (getting-started.html)

+ Locations

Items (items.html)

+ Characters

Conditional Descriptions

(conditional-descriptions.html)
Simply build and run the application and congratulations, you have a working BP.AdventureFramework game!

Commands

(commands.html)

Frame Builders (frame-builders.html)

End Conditions (end-conditions.html)

Overworld

Overview

An Overworld is the top level location in a game. A game can only contain a single Overworld. An Overworld can contain multiple Regions.

Getting Started (getting-started.html)

```

graph TD
    OW[Overworld] --> R1[Region]
    R1 --> OWRoom[Overworld Room]
    R1 --> R2[Region]
    R2 --> R2Room[Room]
    R2Room --> R2Exit[Exit]
    R2Exit --> R2Room
    R2Exit --> R3[Room]
    R3 --> R3Room[Room]
    R3Room --> R3Exit[Exit]
    R3Exit --> R3Room
    R3Exit --> R4[Room]
    R4 --> R4Room[Room]
    R4Room --> R4Exit[Exit]
    R4Exit --> R4Room
    R4Exit --> R5[Room]
    R5 --> R5Room[Room]
    R5Room --> R5Exit[Exit]
    R5Exit --> R5Room
    R5Exit --> R6[Room]
    R6 --> R6Room[Room]
    R6Room --> R6Exit[Exit]
    R6Exit --> R6Room
    R6Exit --> R7[Room]
    R7 --> R7Room[Room]
    R7Room --> R7Exit[Exit]
    R7Exit --> R7Room
    R7Exit --> R8[Room]
    R8 --> R8Room[Room]
    R8Room --> R8Exit[Exit]
    R8Exit --> R8Room
    R8Exit --> R9[Room]
    R9 --> R9Room[Room]
    R9Room --> R9Exit[Exit]
    R9Exit --> R9Room
    R9Exit --> R10[Room]
    R10 --> R10Room[Room]
    R10Room --> R10Exit[Exit]
    R10Exit --> R10Room
    R10Exit --> R11[Room]
    R11 --> R11Room[Room]
    R11Room --> R11Exit[Exit]
    R11Exit --> R11Room
    R11Exit --> R12[Room]
    R12 --> R12Room[Room]
    R12Room --> R12Exit[Exit]
    R12Exit --> R12Room
    R12Exit --> R13[Room]
    R13 --> R13Room[Room]
    R13Room --> R13Exit[Exit]
    R13Exit --> R13Room
    R13Exit --> R14[Room]
    R14 --> R14Room[Room]
    R14Room --> R14Exit[Exit]
    R14Exit --> R14Room
    R14Exit --> R15[Room]
    R15 --> R15Room[Room]
    R15Room --> R15Exit[Exit]
    R15Exit --> R15Room
    R15Exit --> R16[Room]
    R16 --> R16Room[Room]
    R16Room --> R16Exit[Exit]
    R16Exit --> R16Room
    R16Exit --> R17[Room]
    R17 --> R17Room[Room]
    R17Room --> R17Exit[Exit]
    R17Exit --> R17Room
    R17Exit --> R18[Room]
    R18 --> R18Room[Room]
    R18Room --> R18Exit[Exit]
    R18Exit --> R18Room
    R18Exit --> R19[Room]
    R19 --> R19Room[Room]
    R19Room --> R19Exit[Exit]
    R19Exit --> R19Room
    R19Exit --> R20[Room]
    R20 --> R20Room[Room]
    R20Room --> R20Exit[Exit]
    R20Exit --> R20Room
    R20Exit --> R21[Room]
    R21 --> R21Room[Room]
    R21Room --> R21Exit[Exit]
    R21Exit --> R21Room
    R21Exit --> R22[Room]
    R22 --> R22Room[Room]
    R22Room --> R22Exit[Exit]
    R22Exit --> R22Room
    R22Exit --> R23[Room]
    R23 --> R23Room[Room]
    R23Room --> R23Exit[Exit]
    R23Exit --> R23Room
    R23Exit --> R24[Room]
    R24 --> R24Room[Room]
    R24Room --> R24Exit[Exit]
    R24Exit --> R24Room
    R24Exit --> R25[Room]
    R25 --> R25Room[Room]
    R25Room --> R25Exit[Exit]
    R25Exit --> R25Room
    R25Exit --> R26[Room]
    R26 --> R26Room[Room]
    R26Room --> R26Exit[Exit]
    R26Exit --> R26Room
    R26Exit --> R27[Room]
    R27 --> R27Room[Room]
    R27Room --> R27Exit[Exit]
    R27Exit --> R27Room
    R27Exit --> R28[Room]
    R28 --> R28Room[Room]
    R28Room --> R28Exit[Exit]
    R28Exit --> R28Room
    R28Exit --> R29[Room]
    R29 --> R29Room[Room]
    R29Room --> R29Exit[Exit]
    R29Exit --> R29Room
    R29Exit --> R30[Room]
    R30 --> R30Room[Room]
    R30Room --> R30Exit[Exit]
    R30Exit --> R30Room
    R30Exit --> R31[Room]
    R31 --> R31Room[Room]
    R31Room --> R31Exit[Exit]
    R31Exit --> R31Room
    R31Exit --> R32[Room]
    R32 --> R32Room[Room]
    R32Room --> R32Exit[Exit]
    R32Exit --> R32Room
    R32Exit --> R33[Room]
    R33 --> R33Room[Room]
    R33Room --> R33Exit[Exit]
    R33Exit --> R33Room
    R33Exit --> R34[Room]
    R34 --> R34Room[Room]
    R34Room --> R34Exit[Exit]
    R34Exit --> R34Room
    R34Exit --> R35[Room]
    R35 --> R35Room[Room]
    R35Room --> R35Exit[Exit]
    R35Exit --> R35Room
    R35Exit --> R36[Room]
    R36 --> R36Room[Room]
    R36Room --> R36Exit[Exit]
    R36Exit --> R36Room
    R36Exit --> R37[Room]
    R37 --> R37Room[Room]
    R37Room --> R37Exit[Exit]
    R37Exit --> R37Room
    R37Exit --> R38[Room]
    R38 --> R38Room[Room]
    R38Room --> R38Exit[Exit]
    R38Exit --> R38Room
    R38Exit --> R39[Room]
    R39 --> R39Room[Room]
    R39Room --> R39Exit[Exit]
    R39Exit --> R39Room
    R39Exit --> R40[Room]
    R40 --> R40Room[Room]
    R40Room --> R40Exit[Exit]
    R40Exit --> R40Room
    R40Exit --> R41[Room]
    R41 --> R41Room[Room]
    R41Room --> R41Exit[Exit]
    R41Exit --> R41Room
    R41Exit --> R42[Room]
    R42 --> R42Room[Room]
    R42Room --> R42Exit[Exit]
    R42Exit --> R42Room
    R42Exit --> R43[Room]
    R43 --> R43Room[Room]
    R43Room --> R43Exit[Exit]
    R43Exit --> R43Room
    R43Exit --> R44[Room]
    R44 --> R44Room[Room]
    R44Room --> R44Exit[Exit]
    R44Exit --> R44Room
    R44Exit --> R45[Room]
    R45 --> R45Room[Room]
    R45Room --> R45Exit[Exit]
    R45Exit --> R45Room
    R45Exit --> R46[Room]
    R46 --> R46Room[Room]
    R46Room --> R46Exit[Exit]
    R46Exit --> R46Room
    R46Exit --> R47[Room]
    R47 --> R47Room[Room]
    R47Room --> R47Exit[Exit]
    R47Exit --> R47Room
    R47Exit --> R48[Room]
    R48 --> R48Room[Room]
    R48Room --> R48Exit[Exit]
    R48Exit --> R48Room
    R48Exit --> R49[Room]
    R49 --> R49Room[Room]
    R49Room --> R49Exit[Exit]
    R49Exit --> R49Room
    R49Exit --> R50[Room]
    R50 --> R50Room[Room]
    R50Room --> R50Exit[Exit]
    R50Exit --> R50Room
    R50Exit --> R51[Room]
    R51 --> R51Room[Room]
    R51Room --> R51Exit[Exit]
    R51Exit --> R51Room
    R51Exit --> R52[Room]
    R52 --> R52Room[Room]
    R52Room --> R52Exit[Exit]
    R52Exit --> R52Room
    R52Exit --> R53[Room]
    R53 --> R53Room[Room]
    R53Room --> R53Exit[Exit]
    R53Exit --> R53Room
    R53Exit --> R54[Room]
    R54 --> R54Room[Room]
    R54Room --> R54Exit[Exit]
    R54Exit --> R54Room
    R54Exit --> R55[Room]
    R55 --> R55Room[Room]
    R55Room --> R55Exit[Exit]
    R55Exit --> R55Room
    R55Exit --> R56[Room]
    R56 --> R56Room[Room]
    R56Room --> R56Exit[Exit]
    R56Exit --> R56Room
    R56Exit --> R57[Room]
    R57 --> R57Room[Room]
    R57Room --> R57Exit[Exit]
    R57Exit --> R57Room
    R57Exit --> R58[Room]
    R58 --> R58Room[Room]
    R58Room --> R58Exit[Exit]
    R58Exit --> R58Room
    R58Exit --> R59[Room]
    R59 --> R59Room[Room]
    R59Room --> R59Exit[Exit]
    R59Exit --> R59Room
    R59Exit --> R60[Room]
    R60 --> R60Room[Room]
    R60Room --> R60Exit[Exit]
    R60Exit --> R60Room
    R60Exit --> R61[Room]
    R61 --> R61Room[Room]
    R61Room --> R61Exit[Exit]
    R61Exit --> R61Room
    R61Exit --> R62[Room]
    R62 --> R62Room[Room]
    R62Room --> R62Exit[Exit]
    R62Exit --> R62Room
    R62Exit --> R63[Room]
    R63 --> R63Room[Room]
    R63Room --> R63Exit[Exit]
    R63Exit --> R63Room
    R63Exit --> R64[Room]
    R64 --> R64Room[Room]
    R64Room --> R64Exit[Exit]
    R64Exit --> R64Room
    R64Exit --> R65[Room]
    R65 --> R65Room[Room]
    R65Room --> R65Exit[Exit]
    R65Exit --> R65Room
    R65Exit --> R66[Room]
    R66 --> R66Room[Room]
    R66Room --> R66Exit[Exit]
    R66Exit --> R66Room
    R66Exit --> R67[Room]
    R67 --> R67Room[Room
```

+ Characters

Use Conditional Descriptions (conditional-

`descriptions.html`) simply instantiated with a name and description.

Commands

```
var overworld = new Overworld("Name", "Description.");
```

Frame Builders (frame-builders.html)

Regions can be added to the Overworld with the **AddRegion** method.

End Conditions (end-conditions.html)

Regions can be removed from an Overworld with the **RemoveRegion** method.

```
overworld.RemoveRegion(region);
```

The Overworld can be traversed with the **Move** method.

```
overworld.Move(region);
```

OverworldMaker

The OverworldMaker simplifies the creation of the Overworld, when used in conjunction with RegionMakers.

```
var overworldMaker = new OverworldMaker("Name", "Description.", regionMakers);
```

However, the main benefit of using an OverworldMaker is that it allows multiple instances of an Overworld to be created from a single definition of an Overworld.



```
var overworld = overworldMaker.Make();;
```

Getting Started (getting-started.html)

- Locations

Overworld (overworld.html)

Region (region.html)

Room (room.html)

Exit (exit.html)

Items (items.html)

+ Characters

**Conditional Descriptions
(conditional-descriptions.html)**

**Commands
(commands.html)**

Frame Builders (frame-builders.html)

End Conditions (end-conditions.html)

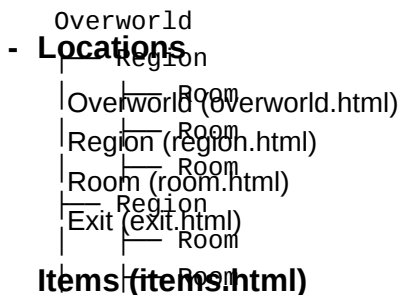
Region

Overview

Filter by title

A Region is the intermediate level location in a game. An Overworld can contain multiple Regions. A Region can contain multiple Rooms.

Getting Started (getting-started.html)



+ Characters

A Region represents a 3D space.

Conditional Descriptions

The **x** location always refers to the horizontal axis, with lower values being west and higher values being east.

Descriptions (descriptions.html)

- The **y** location always refers to the vertical axis, with lower values being south and higher values being north.

Commands

- The **z** location always refers to the depth axis, with lower values being down and higher values being up.

Frame Builders (frame-builders.html)

A Region can be simply instantiated with a name and description.

End Conditions (end-conditions.html)

```
var region = new Region("Name", "Description.");
```

Rooms can be added to the Region with the **AddRoom** method. The x, y and z location within the Region must be specified.

```
region.AddRoom(room, 0, 0, 0);
```

Rooms can be removed from a Region with the **RemoveRoom** method.

```
region.RemoveRoom(room);
```

The Region can be traversed with the **Move** method.

```
region.Move(Direction.North);
```

The Region can be traversed with the **Move** method.

```
region.Move(Direction.North);
```

Getting Started (getting-started.html)

The start position, that is the position that the Player will start in when entering a Region, can be specified with **SetStartPosition**.

- Locations

```
Overworld(overworld.html)
region.SetStartPosition(0, 0, 0);
Region(region.html)
Room(room.html)
```

The **UnlockDoorPair** method can be used to unlock an **Exit** in the current Room, which will also unlock the corresponding Exit in the adjoining **Room**.

Items (items.html)

+ Characters

```
region.UnlockDoorPair(Direction.East);
```

Conditional Descriptions

Like conditional objects, Regions can be assigned custom commands.

(conditional descriptions.html)

Commands

(commands.html)

```
region.Commands =
    new CustomCommand(new CommandHelp("Warp", "Warp to the start."), true, (game, ar
```

Frame Builders (frame-

builders.html)

```
region.JumpToRoom(0, 0, 0);
```

End Conditions (end-

conditions.html)

```
return new Reaction(ReactionResult.OK, "You warped to the start.");
    }
};
```

RegionMaker

The RegionMaker simplifies the creation of a Region. Rooms are added to the Region with a specified **x**, **y** and **z** position within the Region.

```
var regionMaker = new RegionMaker("Region", "Description.")
{
    [0, 0, 0] = new Room("Room 1", "Description of room 1."),
    [1, 0, 0] = new Room("Room 2", "Description of room 2."),
};
```

The main benefit of using a RegionMaker is that it allows multiple instances of a Region to be created from a single definition of a Region.

```
var region = regionMaker.Make();
```



Getting Started (getting-started.html)

- Locations

- Overworld (overworld.html)
- Region (region.html)
- Room (room.html)
- Exit (exit.html)

Items (items.html)

+ Characters

Conditional Descriptions (conditional-descriptions.html)

Commands (commands.html)

Frame Builders (frame-builders.html)

End Conditions (end-conditions.html)

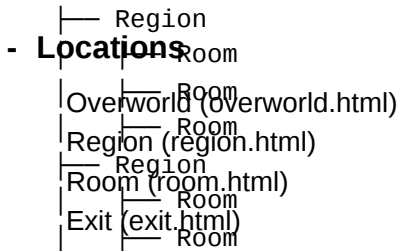
Room

Overview

▼ Filter by title

A Room is the lowest level location in a game. A Region can contain multiple Rooms.

Getting Started (getting-started.html)



Items (items.html)

A Room can contain up to six Exits, one for each of the directions **north**, **east**, **south**, **west**, **up** and **down**.

Conditional Descriptions

Use

Conditional-descriptions.html

A Region can be simply instantiated with a name and description.

Commands

(commands.html)

Frame Builders (frame-

builders.html) Exits can be added to the Room with the **AddExit** method.

End Conditions (end-

conditions.html)

```
room.AddExit(new Exit(Direction.East));
```

Exits can be removed from a Room with the **RemoveExit** method.

```
region.RemoveExit(exit);
```

Items can be added to the Room with the **AddItem** method.

```
room.AddItem(new Item("Name", "Description."));
```

Items can be removed from a Room with the **RemoveItem** method.

```
region.RemoveItem(item);
```

Characters can be added to the Room with the **AddCharacter** method.

```
room.AddCharacter(new Character("Name", "Description."));
```

Characters can be removed from a Room with the **RemoveCharacter** method.

```
region.RemoveCharacter(character);
```

Getting Started (getting-started.html)

Rooms can contain custom commands that allow the user to directly interact with the Room.

- Locations

```
room.Commands =  
[Overworld (overworld.html)  
Region (region.html)  
Room (room.html)  
Exit (exit.html)  
room.FindExit(Direction.East, true, out var exit);  
Exit.Unlock();  
return new Reaction(ReactionResult.OK, "The exit was unlocked.");  
}]
```

Items (items.html)

+ Characters

Conditional Descriptions

(conditional-descriptions.html)

Commands

(commands.html)

Frame Builders (frame-builders.html)

End Conditions (end-conditions.html)

Exit

Overview

Filter by title

An Exit is essentially a connector between to adjoining rooms.

Getting Started (getting-started.html)

Locations

An Exit can be simply instantiated with a direction.

```
Overworld (overworld.html)
Region (region.html)
var exit = new Exit(Direction.North);
Room (room.html)
Exit (exit.html)
```

An Exit can be hidden from the player by setting its **IsPlayerVisible** property to false, this can be set in the constructor.

Items (items.html)

+ Characters

```
var exit = new Exit(Direction.North, false);
```

Conditional Descriptions

(conditional-

descriptions.html)

Commands

```
exit.IsPlayerVisible = false;
```

(commands.html)

Frame Builders (frame-

Optionally, a description of the Exit can be specified.

builders.html)

End Conditions (end-

```
var exit = new Exit(Direction.North, true, new Description("A door covered in ivy."));
```

conditions.html)

This will be returned if the player examines the Exit.

Like all Examinable objects, an Exit can be assigned custom commands.

```
exit.Commands =
[
    new CustomCommand(new CommandHelp("Shove", "Shove the door."), true, (game, args) =>
    {
        exit.Unlock();
        return new Reaction(ReactionResult.OK, "The door swung open.");
    })
];
```



Getting Started (getting-started.html)

- Locations

Overworld (overworld.html)

Region (region.html)

Room (room.html)

Exit (exit.html)

Items (items.html)

+ Characters

Conditional Descriptions (conditional-descriptions.html)

Commands (commands.html)

Frame Builders (frame-builders.html)

End Conditions (end-conditions.html)

Item

Overview

▼ Filter by title

Items can be used to add interactivity with a game. Items can be something that a player can take with them, or they may be static in a Room.

Getting Started (getting-started.html)

Use

+ Locations

An Item can be simply instantiated with a name and description.

Items (items.html)

+ Characters

```
var sword = new Item("Sword", "A heroes sword.");
```

Conditional Descriptions

By default, an Item is not takeable and is tied to a Room. If it is takeable this can be specified in the constructor.

(conditional-descriptions.html)

```
var sword = new Item("Sword", "A heroes sword.", true);
```

Commands (commands.html)

An Item can be made into a Morphable Item. This is useful in situations where the Item changes state. Morphing is invoked with the Morph method. The Item that Morph is invoked on takes on the properties of the Item being morphed into.

End Conditions (end-conditions.html)

```
var brokenSword = new Item("Broken Sword", "A broken sword");
sword.Morph(brokenSword);
```

Like all Examinable objects, an Item can be assigned custom commands.

```
bomb.Commands =
[
    new CustomCommand(new CommandHelp("Cut wire", "Cut the red wire."), true, (game,
args) =>
    {
        game.Player.Kill();
        return new Reaction(ReactionResult.Fatal, "Boom!");
    })
];
```

Interaction

Interactions can be set up between different assets in the game. The **InteractionResult** contains the result of the interaction, and allows the game to react to the interaction.


```
var dartsBoard = new Item("Darts board", "A darts board.");
```

```
var dart = new Item("Dart", "A dart")  
{
```

```
    Interaction = item =>
```



```
    {
```

```
        if (item == dartsBoard)
```

Getting Started (getting-started.html)

```
            return new InteractionResult(InteractionEffect.SelfContained, item, "The  
            dart stuck in the darts board.");
```

+ Locations

```
            return new InteractionResult(InteractionEffect.NoEffect, item);
```

```
        }
```

```
    };
```

Items (items.html)

+ Characters

**Conditional Descriptions
(conditional-
descriptions.html)**

**Commands
(commands.html)**

**Frame Builders (frame-
builders.html)**

**End Conditions (end-
conditions.html)**

PlayableCharacter

Overview

Filter by title

A PlayableCharacter represents the character that the player plays as throughout the game. Each game has only a single PlayableCharacter.

Getting Started (getting-started.html)

Use

+ Locations

A PlayableCharacter can be simply instantiated with a name and description.

Items (items.html)

- Characters

```
var player = new PlayableCharacter("Ben", "A 39 year old man.");
PlayableCharacter (playable-character.html)
```

A PlayableCharacter can also be instantiated with a list of Items.

```
NonPlayableCharacter (non-playable-character.html)
```

Conditional Descriptions

(Conditional-

descriptions.html)

```
new Item("Guitar", "A PRS Custom 22, in whale blue, of course."),
new Item("Mallet", "An empty wallet, of course.")
```

```
]);
```

Commands

(commands.html)

A PlayableCharacter can be given items with the **AcquireItem** method.

Frame Builders (frame-builders.html)

```
player.AcquireItem(new Item("Mallet", "A large mallet."));
```

End Conditions (end-conditions.html)

A PlayableCharacter can lose an item with the **DequireItem** method.

```
player.DequireItem(mallet);
```

A PlayableCharacter can use an item on another asset:

```
var trapDoor = new Exit(Direction.Down);
var mallet = new Item("Mallet", "A large mallet.");
player.UseItem(mallet, trapDoor);
```

A PlayableCharacter can give an item to a non-playable character.

```
var goblin = new NonPlayableCharacter("Goblin", "A vile goblin.");
var daisy = new Item("Daisy", "A beautiful daisy that is sure to cheer up even the most miserable creature.");
player.Give(daisy, goblin);
```

PlayableCharacters can contain custom commands that allow the user to directly interact with the character or other assets.

```
player.Commands =  
[  
  new CustomCommand(new CommandHelp("Punch wall", "Punch the wall."), true, (game,  
    args) =>  
    {  
      return Reaction(ReactionResult.OK, "You punched the wall.");  
    }  
  )  
];
```

+ Locations

Items (items.html)

- Characters

PlayableCharacter (playable-character.html)

NonPlayableCharacter (non-playable-character.html)

Conditional Descriptions (conditional-descriptions.html)

Commands (commands.html)

Frame Builders (frame-builders.html)

End Conditions (end-conditions.html)

NonPlayableCharacter

Overview

Filter by title

A NonPlayableCharacter represents any character that the player may meet throughout the game.

Getting Started (getting-started.html)

Locations

A NonPlayableCharacter can be simply instantiated with a name and description.

Items (items.html)

```
var goblin = new NonPlayableCharacter("Goblin", "A vile goblin.");
```

Characters

PlayableCharacter (playable-character.html)

A NonPlayableCharacter can give an item to another NonPlayableCharacter.

NonPlayableCharacter (non-playable-character.html)

```
var daisy = new Item("Daisy", "A beautiful daisy that is sure to cheer up even the most miserable creature.");  
npc.Give(daisy, goblin);
```

Conditional Descriptions

(conditional-descriptions.html)

NonPlayableCharacters can contain custom commands that allow the user to directly interact with the character or other assets.

Commands

(commands.html)

Frame Builders (frame-builders.html)

```
new CustomCommand(new CommandHelp("Smile", "Crack a smile."), true, (game, args)
```

End Conditions (end-conditions.html)

(end-conditions.html)

```
return new Reaction(ReactionResult.OK, "Well that felt weird.");  
}))  
];
```

Conversations

A NonPlayableCharacter can hold a conversation with the player.

- A Conversation contains **Paragraphs**.
- A Paragraph can contain one or more **Responses**.
- A **Response** can contain a delta to shift the conversation by, which will cause the conversation to jump paragraphs by the specified value.
- A **Response** can also contain a callback to perform some action when the player selects that option.

```

goblin.Conversation = new Conversation(
    new Paragraph("This is a the first line."),
    new Paragraph("This is a question.")
    {

```

```

        Responses =

```

```

        [
            new Response("This is the first response." 1),
            new Response("This is the second response.", 2),
            new Response("This is the third response.", 2)
        ]
    }
}

```

Getting Started (getting-started.html)

+ Locations

```

new Paragraph("You picked first response, return to start of conversation.", -

```

Items (items.html)

```

new Paragraph("You picked second response, return to start of conversation., -

```

- Characters

```

new Paragraph("You picked third response, you are dead., game => game.Player.Kil
    PlayableCharacter (playable-
1( ))
    character.html)
    NonPlayableCharacter (non-
    playable-character.html)

```

Conditional Descriptions (conditional-descriptions.html)

Commands (commands.html)

Frame Builders (frame-builders.html)

End Conditions (end-conditions.html)

Conditional Descriptions

Overview

Filter by title

Normally assets are assigned a **Description** during the constructor. This is what is returned when the asset is examined.

Getting Started (getting-started.html)

Descriptions are usually specified as a string.

+ Locations

```
var item = new Item("The items name", "The items description.");
```

Items (items.html)

+ Characters

They can also be specified as a **Description**.

Conditional Descriptions

```
(new Item(new Identifier("The items name"), new Description("The items description"));
```

Descriptions (descriptions.html)

Commands

However, sometimes it may be desirable to have a conditional description that can change based on the state of the asset.

(commands.html)

Frame Builders (frame-builders.html)

Conditional descriptions can be specified with **ConditionalDescription** and contain a lambda which determines which one of two strings are returned when the asset is examined.

End Conditions (end-conditions.html)

just for demo purposes

```
var player = new PlayableCharacter("Ben", "A man.");
```

```
// the description to use when the condition is true
```

```
var trueString = "A gleaming sword, owned by Ben.";
```

```
// the string to use when the condition is false
```

```
var falseString = "A gleaming sword, without an owner.";
```

```
// a lambda that determines which string is returned
```

```
Condition condition = () => player.FindItem("Sword", out _);
```

```
// the conditional description itself
```

```
var conditionalDescription = new ConditionalDescription(trueString, falseString, condition);
```

```
// create the item with the conditional description
```

```
var sword = new Item(new Identifier("Sword"), conditionalDescription);
```



Getting Started (getting-started.html)

+ Locations

Items (items.html)

+ Characters

**Conditional Descriptions
(conditional-descriptions.html)**

**Commands
(commands.html)**

Frame Builders (frame-builders.html)

End Conditions (end-conditions.html)

Global Commands

Overview

▼ Filter by title

There are three main types of Command.

Getting Started (getting-started.html) are used to interact with the game.

Start Commands are used to interact with the program running the game.

- **Custom Commands** allow developers to add custom commands to the game without having to worry

+ **Locations** about extended the games interpreters.

Items (items.html)

Game Commands

+ **Characters**

Conditional Descriptions

Drop

(conditional-

descriptions.html) All players can drop an item. **R** can be used as a shortcut.

Commands

(drop sword
commands.html)

Frame Builders (frame-

builders.html) The player can also drop **all** items.

End Conditions (end-

(drop all
conditions.html)

Examine

Allows players to examine any asset. **X** can be used as a shortcut.

Examine will examine the current room.

```
examine
```

The player themselves can be examined with **me** or the players name.

```
examine me
```

or

```
examine ben
```

The same is true for Regions, Overworlds, Items and Exits.

Take

Allows the player to take an Item. **T** can be used as a shortcut.

```
take sword
```



Take **all** allows the player to take all takeables Items in the current Room.

Getting Started (getting-started.html)

```
take all
```

+ **Locations**

Items (items.html)

Talk

+ **Characters**

Talk allows the player to start a conversation with a NonPlayableCharacter. **L** can be used as a shortcut.

Conditional Descriptions

If only a single NonPlayableCharacter is in the current Room no argument needs to be specified.

(conditional-

descriptions.html)

```
talk
```

Commands

(commands.html)

However, if the current Room contains two or more NonPlayableCharacters then **to** and the

NonPlayableCharacter must be specified.

Frame Builders (frame-

builders.html)

```
talk to dave
```

End Conditions (end-conditions.html)

Use

Use allows the player to use the Items that the player has or that are in the current Room.

```
use sword
```

Items can be used on the Player, the Room, an Exit, a NonPlayableCharacter or another Item. The target must be specified with the **on** keyword.

```
use sword on me
```

Or

```
use sword on bush
```

Move

Regions are traversed with direction commands.

- **North** or **N** moves north.
- **East** or **E** moves east.
- ▼ • **South** or **S** moves south.
- **West** or **W** moves west.
- **Down** or **D** moves down.
- **Up** or **U** moves up.

Getting Started (getting-started.html)

End

On the **Locations** page, when in conversation with a `NonPlayableCharacter`, the `End` command will end the conversation.

Items (items.html)

+ Characters

end

Conditional Descriptions

(conditional-

descriptions.html)

Global Commands

Commands

(commands.html)

About

Frame Builders (frame-

Displays a screen containing information about the game.

builders.html)

End Conditions (end-

about

conditions.html)

CommandsOn / CommandsOff

Toggles the display of the contextual commands on the screen on and off.

commandson

Or

commandsoff

Exit

Exit the current game.

exit

Help

Displays a Help screen listing all available commands.

help

▼

Key On / Key Off

Getting started (getting-started.html)

Toggles the display of the map key on and off.

+ Locations

keyon

Items (items.html)

+ Characters

Or

Conditional Descriptions

(conditional-descriptions.html)

keyoff

Commands

Map (map-commands.html)

Frame Builders (frame-builders.html)

Display the regions map screen.

map

End Conditions (end-conditions.html)

New

Starts a new game.

new

Custom Commands

Custom commands can be added to many of the assets, including Room, PlayableCharacter, NonPlayableCharacter, Item and Exit.

Overview

In BP.AdventureFramework output is handled using the **FrameBuilders**. A **FrameBuilder** is essentially a class that builds a **Frame** that can render a specific state in the game. This **Frame** can then be rendered on a **TextWriter** by calling its **Render** method. Think of the **FrameBuilder** as the instructions that build the output display and the **Frame** as the output itself.

There are a few types of **FrameBuilder**, each responsible for rendering a specific game state.

- **SceneFrameBuilder** is responsible for building frames that render the scenes in a game.
- + **TitleFrameBuilder** is responsible for building the title screen frame.
- **RegionMapFrameBuilder** is responsible for building a frame that displays a map of a Region.
- + **Items (items.html)**
 - **TransitionFrameBuilder** is responsible for building frames that display transitions.
- + **Characters**
 - **AboutFrameBuilder** is responsible for building a frame to display the about information.
 - **HelpFrameBuilder** is responsible for building frames to display the help.
- + **Conditional Descriptions**
 - **GameOverFrameBuilder** is responsible for building a frame to display the game over screen.
 - **CompletionFrameBuilder** is responsible for building a frame to display the completion screen.
 - **ConversationFrameBuilder** is responsible for building a frame that can render a conversation.

A game accepts a **FrameBuilderCollection**. A **FrameBuilderCollection** is a collection of all of the different **FrameBuilders** required to render a game. All **FrameBuilders** are extensible, so the output for all parts of the game can be fully customised.

Frame Builders (frame-builders.html)

End Conditions (end-conditions.html)

End Conditions

Overview

▼ Filter by title

The **EndCheck** class allows the game to determine if it has come to an end. Each game has two end conditions

GameOverCondition when the game is over, but has not been won.

CompletionCondition when the game is over because it has been won.

+ Locations

Use

Items (items.html)

When an **EndCheck** is invoked it returns an **EndCheckResult**. The **EndCheckResult** details the result of the check to see if the game has ended.

+ Characters

Conditional Descriptions

(conditional-descriptions.html)

```
private static EndCheckResult IsGameOver(Game game)
```

if (game.Player.IsAlive)

return EndCheckResult.NotEnded;

return new EndCheckResult(true, "Game Over", "You died!");

(commands.html)

Frame Builders (frame-builders.html)

This EndCondition uses an **EndCheck**:

(conditions.html)

```
EndCheck gameOverCheck = IsGameOver;
```

The **GameOverCondition** and **CompletionCondition** are passed in to the game as arguments when a game is created.