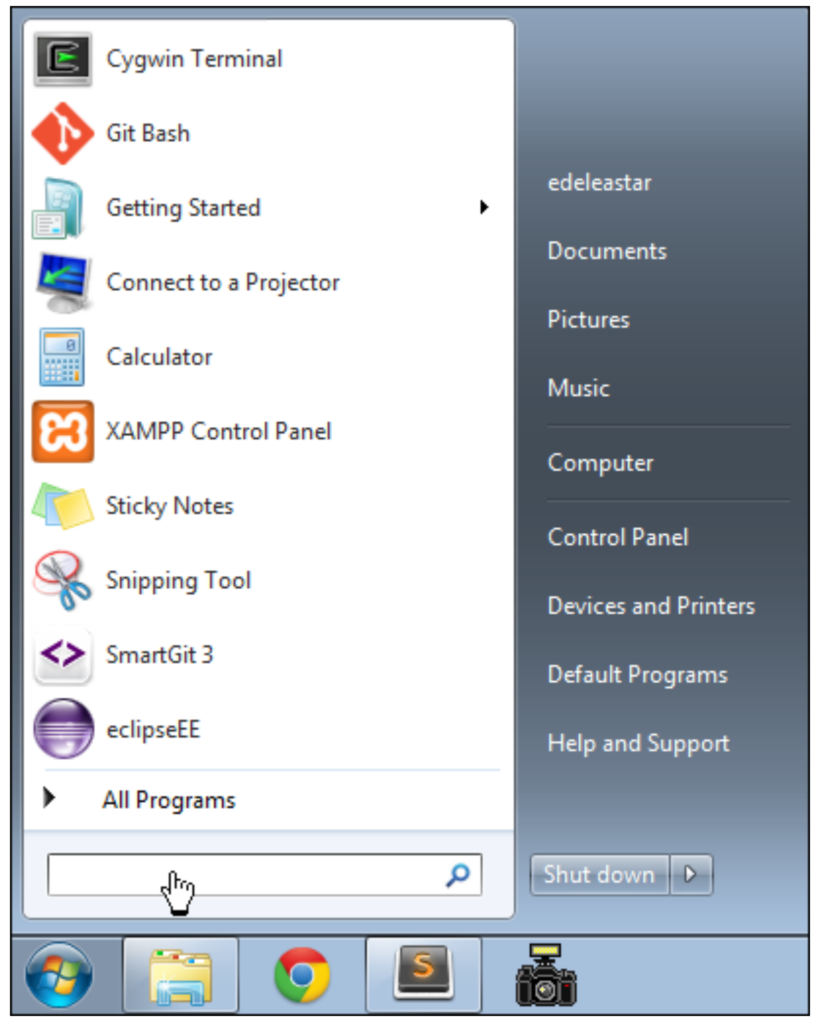
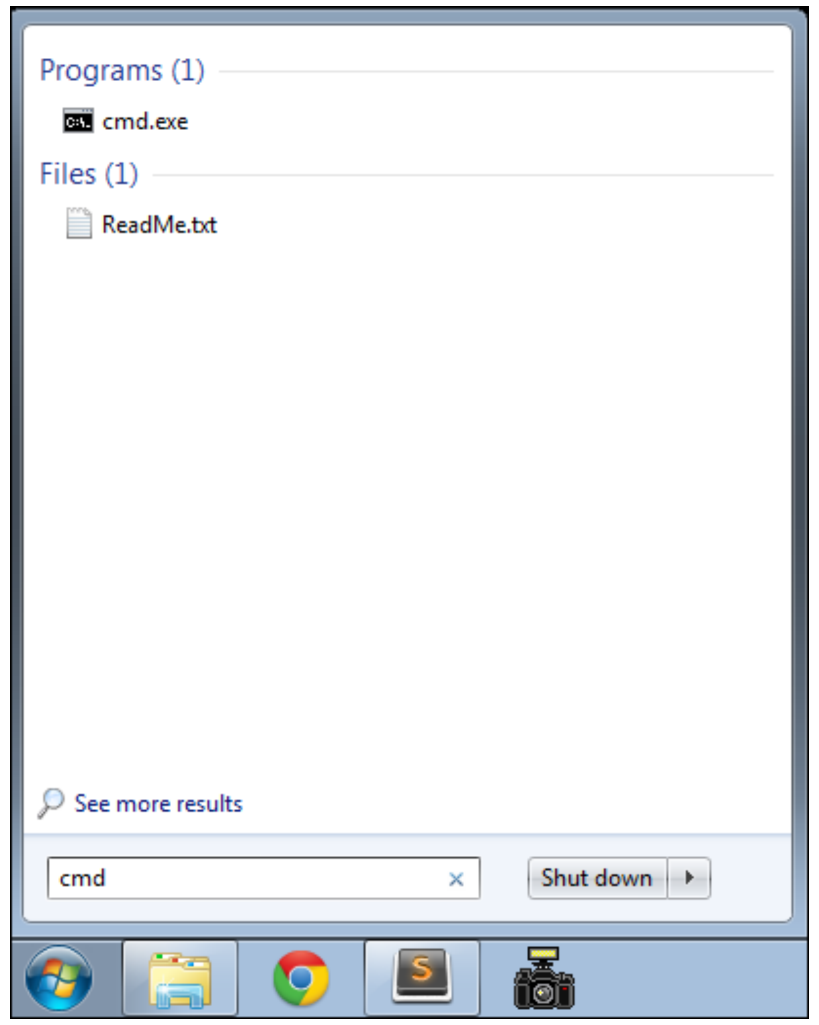
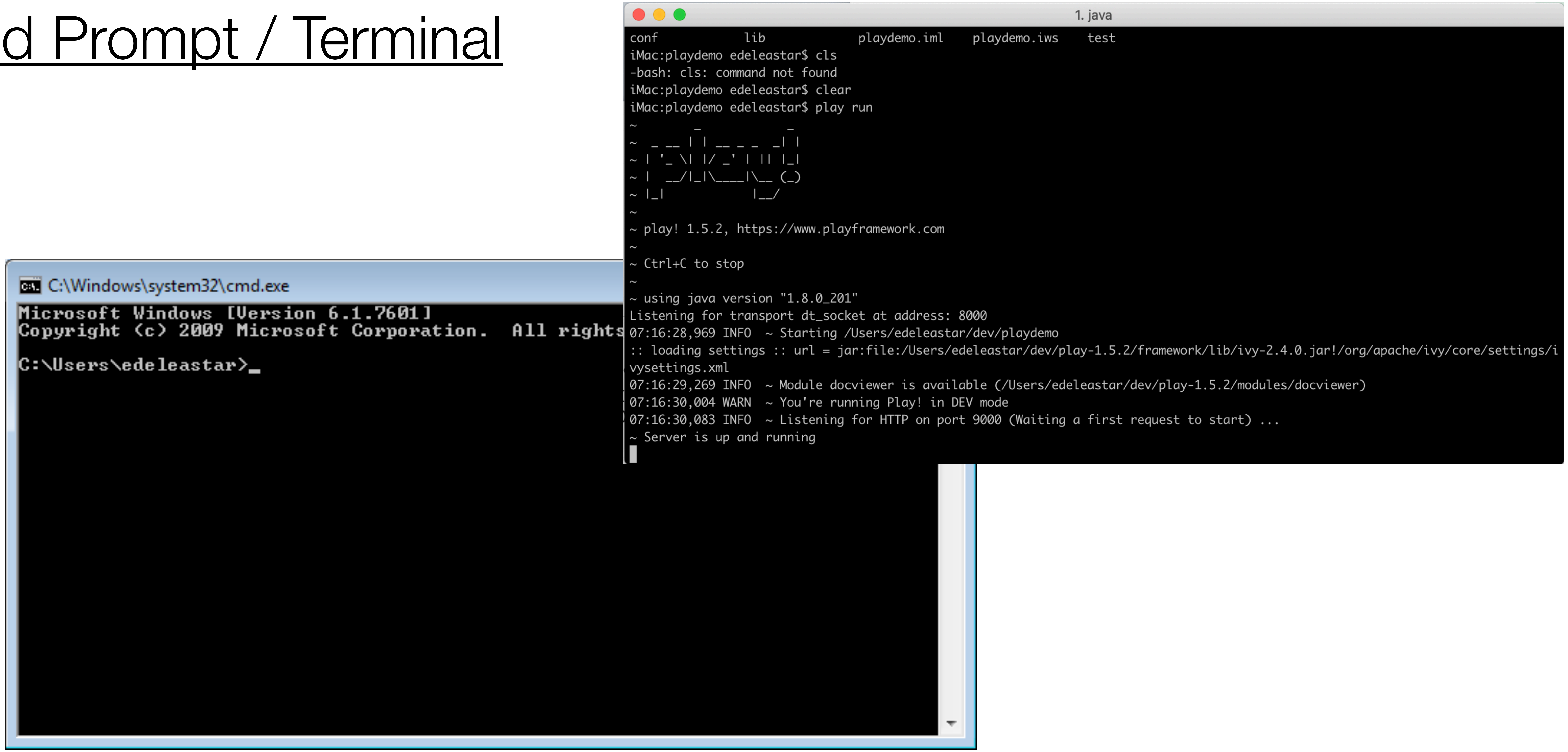
Getting Started with Play

Web Development

Command Prompt / Terminal







```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation.  All rights

C:\Users\edeleastar>_
```

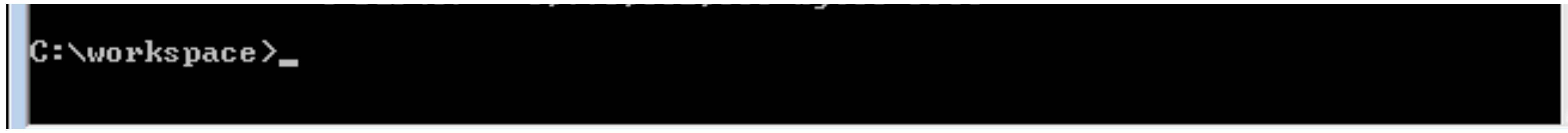
```
conf            lib             playdemo.iml    playdemo.iws    test
iMac:playdemo edeleastar$ cls
-bash: cls: command not found
iMac:playdemo edeleastar$ clear
iMac:playdemo edeleastar$ play run
~        _            _
~  _ __ | | __ _ _  _| |
~ | '_ \| |/ _' | || |_|
~ |  __/|_|\____|\__ (_)
~ |_|            |__/
~
~ play! 1.5.2, https://www.playframework.com
~
~ Ctrl+C to stop
~
~ using java version "1.8.0_201"
Listening for transport dt_socket at address: 8000
07:16:28,969 INFO  ~ Starting /Users/edeleastar/dev/playdemo
:: loading settings :: url = jar:file:/Users/edeleastar/dev/play-1.5.2/framework/lib/ivy-2.4.0.jar!/org/apache/ivy/core/settings/i
vysettings.xml
07:16:29,269 INFO  ~ Module docviewer is available (/Users/edeleastar/dev/play-1.5.2/modules/docviewer)
07:16:30,004 WARN  ~ You're running Play! in DEV mode
07:16:30,083 INFO  ~ Listening for HTTP on port 9000 (Waiting a first request to start) ...
~ Server is up and running
```

- This is the Command Line Interface for Windows (CLI)
- In Mac/Linux it is called “Terminal”
- Learning to use the CLI is an **essential** skill for a programmer

Example DOS Commands

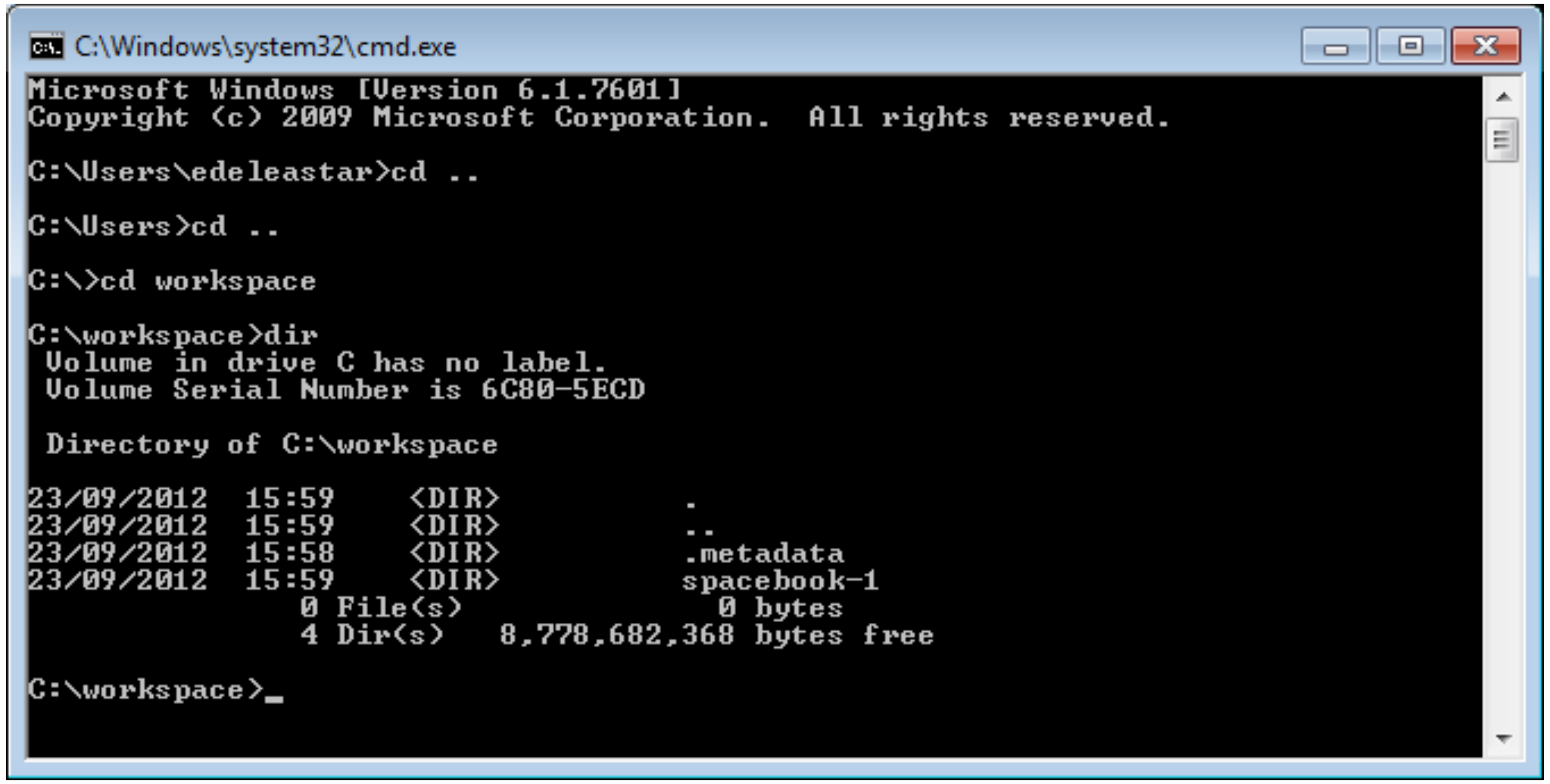
- **dir**
  - list all files in a directory
- **cd** ..
  - change to a parent directory
- **cd** <directory name>
  - change to a specific directory
- **mkdir** <directory name>
  - create a directory
- **rmdir** <directory name>
  - delete a directory
- On Mac/Linux:
  - use **ls** instead of **dir**

- These commands always have a 'current directory' in mind
- A directory is another name for a folder.
- On Windows, the current directory appears in the ‘prompt’



```
C:\workspace>_
```

- In Mac/Linux, type ‘**pwd**’ to find out the current directory.
- On Windows, ‘\’ or ‘/’ can be used to separate directory names
- On Mac/Linux, only ‘/’ is accepted
- So --> always is ‘/’ to avoid confusion



```
Microsoft Windows [Version 6.1.7601]
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C:\Users\edeleastar>cd ..

C:\Users>cd ..

C:\>cd workspace

C:\workspace>dir
 Volume in drive C has no label.
 Volume Serial Number is 6C80-5ECD

 Directory of C:\workspace

23/09/2012  15:59    <DIR>          .
23/09/2012  15:59    <DIR>          ..
23/09/2012  15:58    <DIR>          .metadata
23/09/2012  15:59    <DIR>          spacebook-1
               0 File(s)              0 bytes
               4 Dir(s)   8,778,682,368 bytes free

C:\workspace>_
```
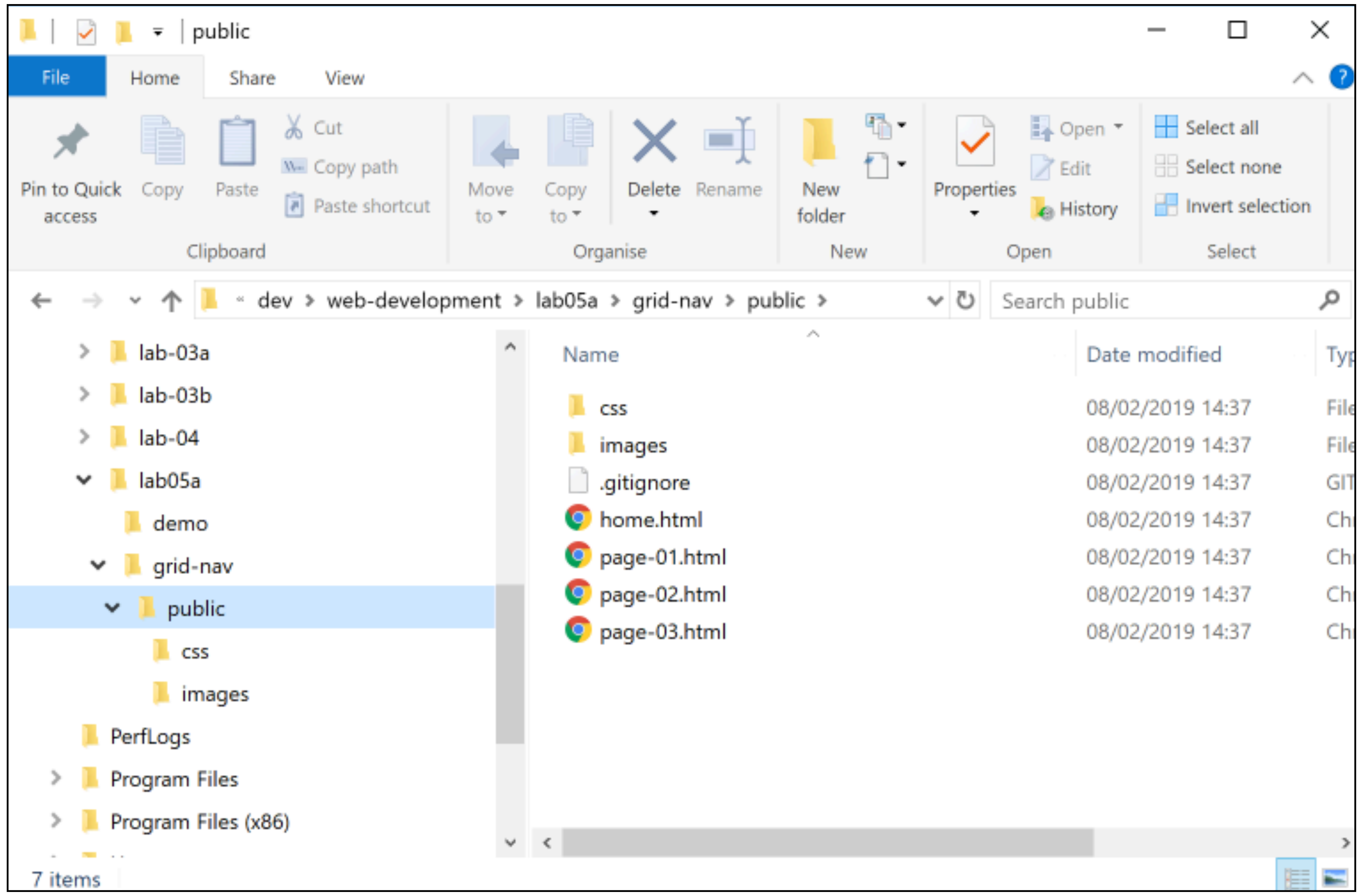



```
dev > web-development > lab05a > grid-nav > public >
```

```
> lab-03a
> lab-03b
> lab-04
v lab05a
    demo
  v grid-nav
    v public
        css
        images
  PerfLogs
> Program Files
> Program Files (x86)
```

Name	Date modified	Typ
css	08/02/2019 14:37	File
images	08/02/2019 14:37	File
.gitignore	08/02/2019 14:37	GIT
home.html	08/02/2019 14:37	Ch
page-01.html	08/02/2019 14:37	Ch
page-02.html	08/02/2019 14:37	Ch
page-03.html	08/02/2019 14:37	Ch

C:\Users\edeleastar>cd ..

C:\Users\>cd ..

C:\>cd workspace

C:\>workspace>dir

...

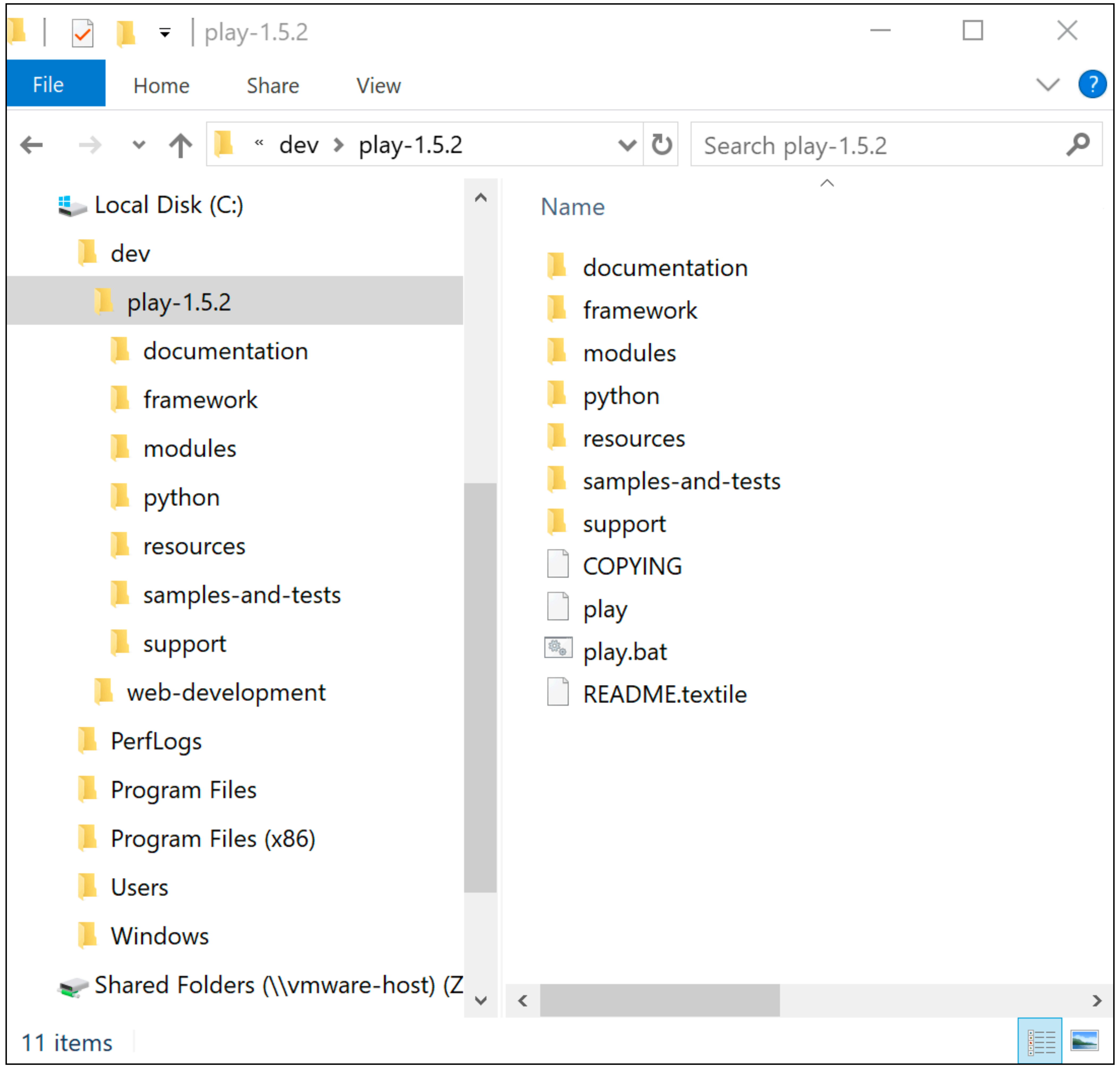
...

C:\>

- Never use spaces in directory or file names
- Never use upper case in directory or file names
- If you wish to use readable multiple words for a directory or file name, separate the words with '-'. e.g.
  - web-development
  - java-projects

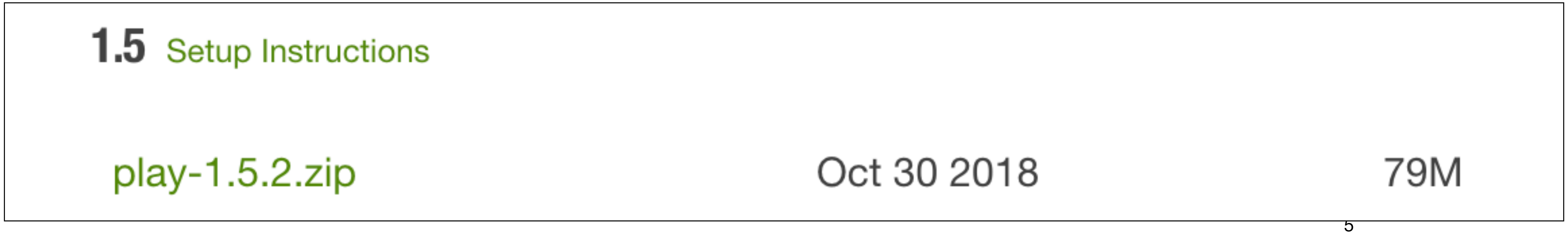
Installing Play

- Play must be downloaded and installed on your PC
  - www.playframework.org
  - Use version 1.5.2
- Installing Play on your PC is just expanding the zip archive into a folder
- This folder must be placed on the 'System Path'
- This will equip the PC with a new command



Local Disk (C:)
dev
play-1.5.2
documentation
framework
modules
python
resources
samples-and-tests
support
web-development
PerfLogs
Program Files
Program Files (x86)
Users
Windows
Shared Folders (\\vmware-host) (Z

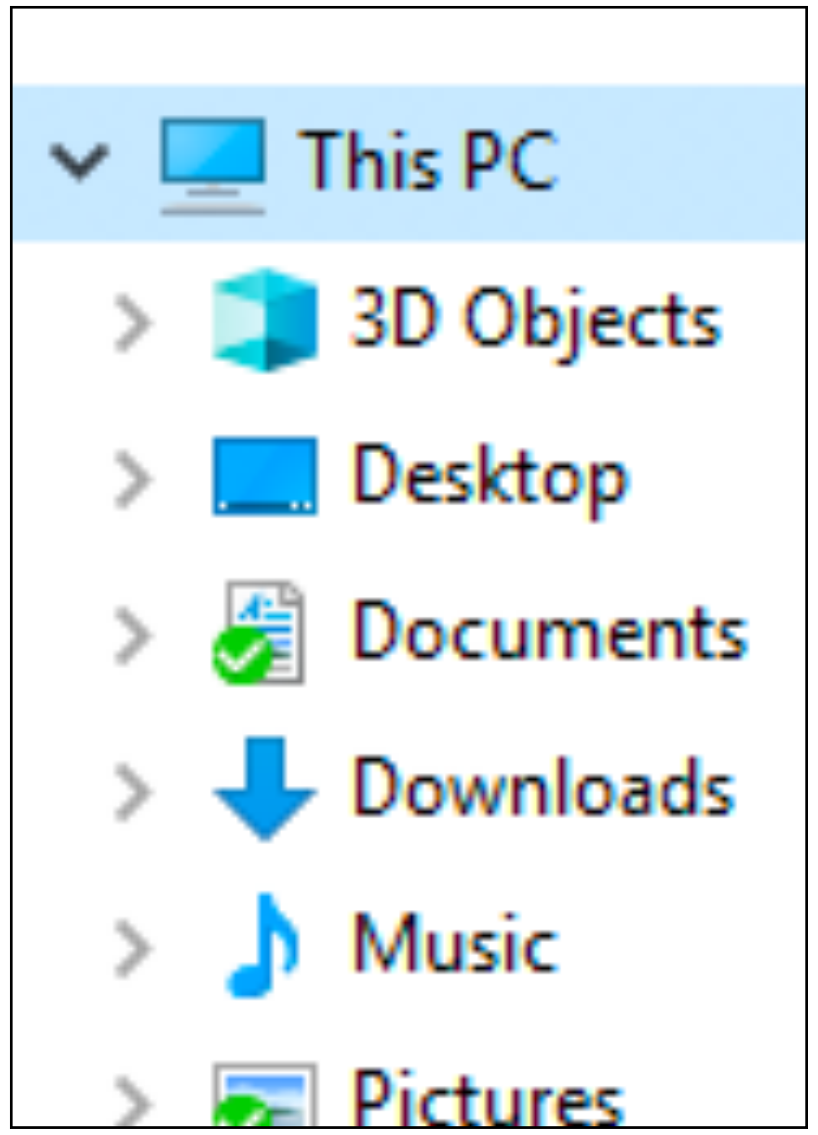
documentation
framework
modules
python
resources
samples-and-tests
support
COPYING
play
play.bat
README.textile

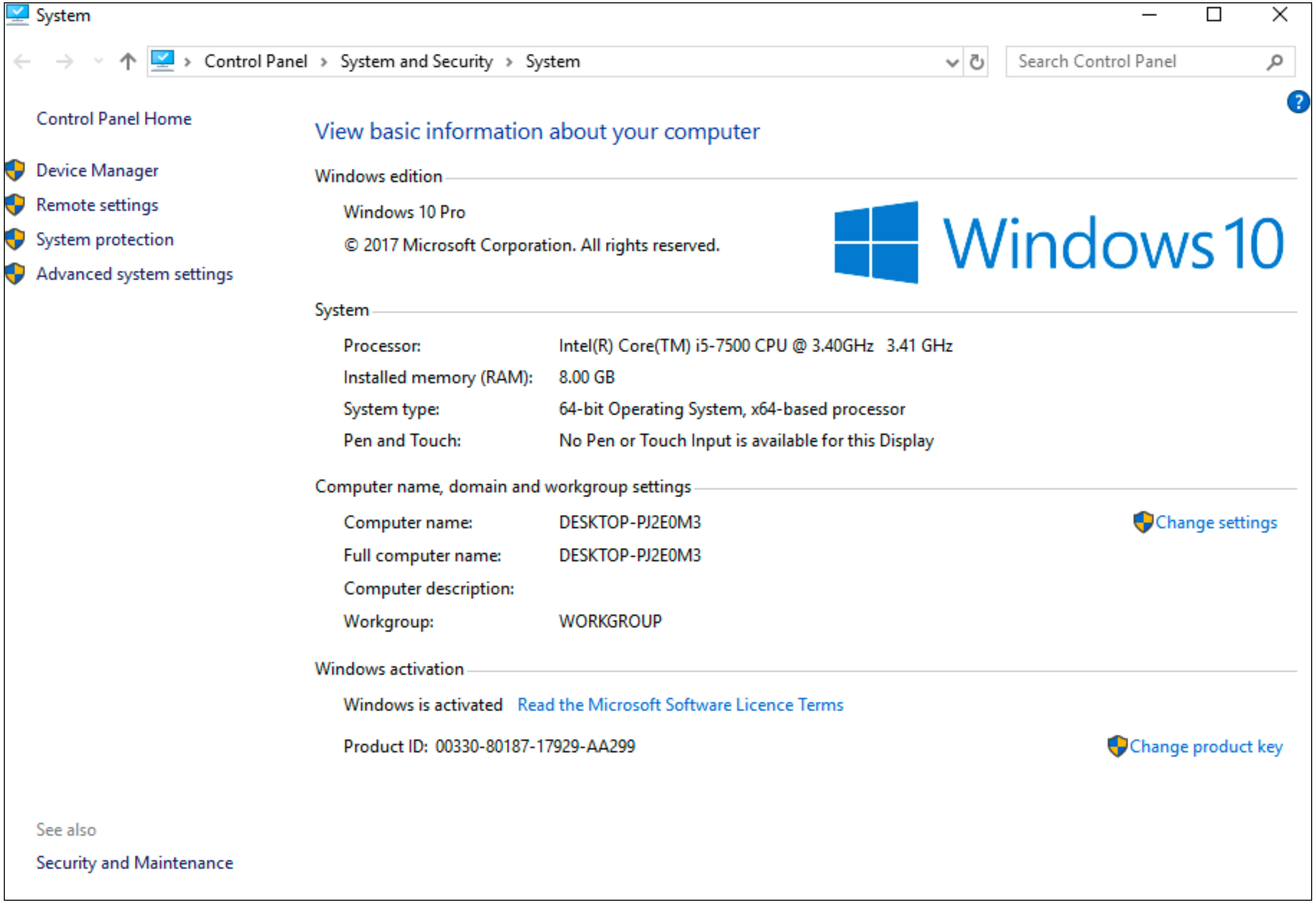


1.5 Setup Instructions

play-1.5.2.zip	Oct 30 2018	79M

Path Configuration





View basic information about your computer

Windows edition

Windows 10 Pro

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System

Processor: Intel(R) Core(TM) i5-7500 CPU @ 3.40GHz 3.41 GHz

Installed memory (RAM): 8.00 GB

System type: 64-bit Operating System, x64-based processor

Pen and Touch: No Pen or Touch Input is available for this Display

Computer name, domain and workgroup settings

Computer name: DESKTOP-PJ2E0M3

Full computer name: DESKTOP-PJ2E0M3

Computer description:

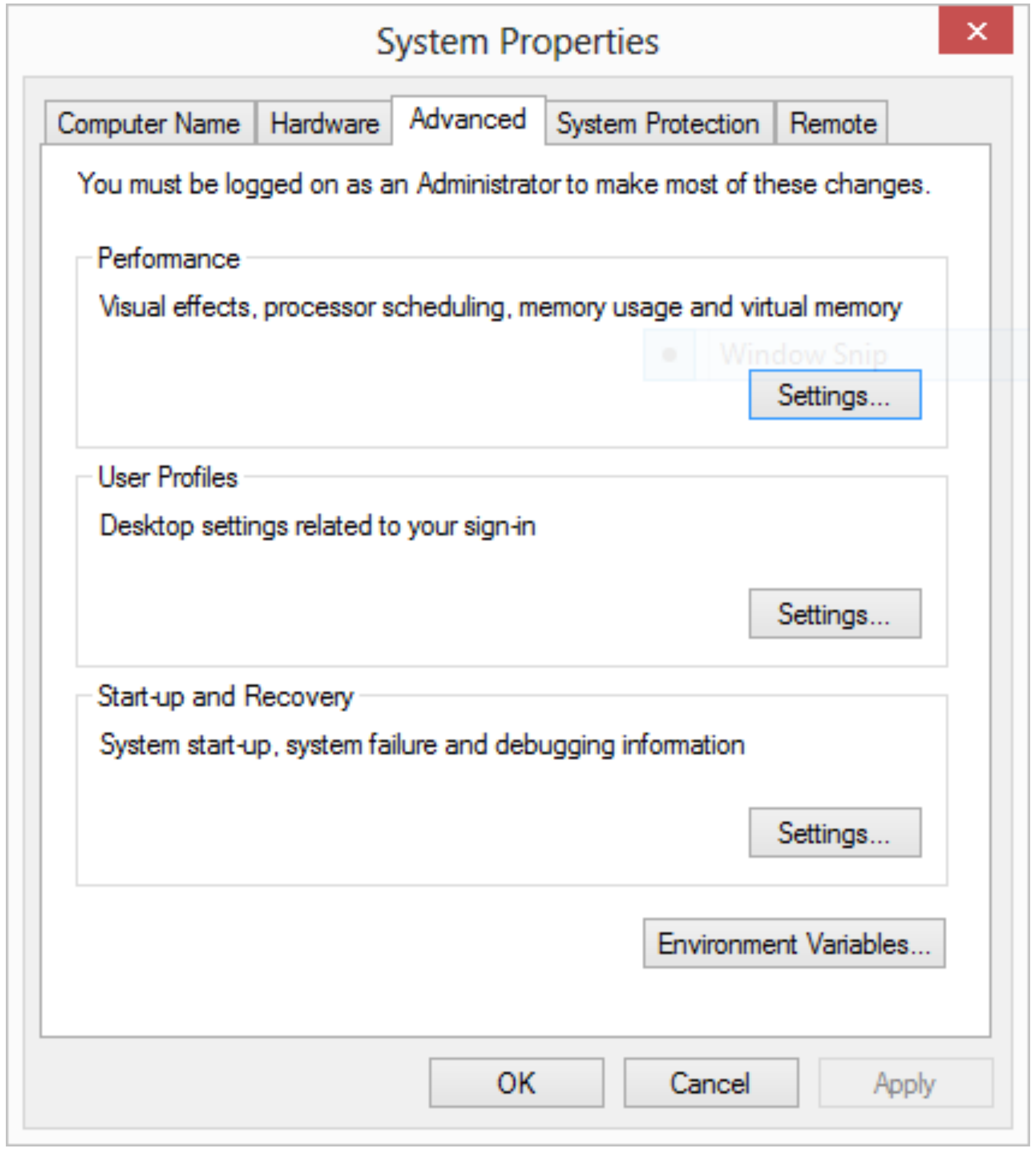
Workgroup: WORKGROUP

Windows activation

Windows is activated Read the Microsoft Software Licence Terms

Product ID: 00330-80187-17929-AA299

Path Configuration



You must be logged on as an Administrator to make most of these changes.

Performance

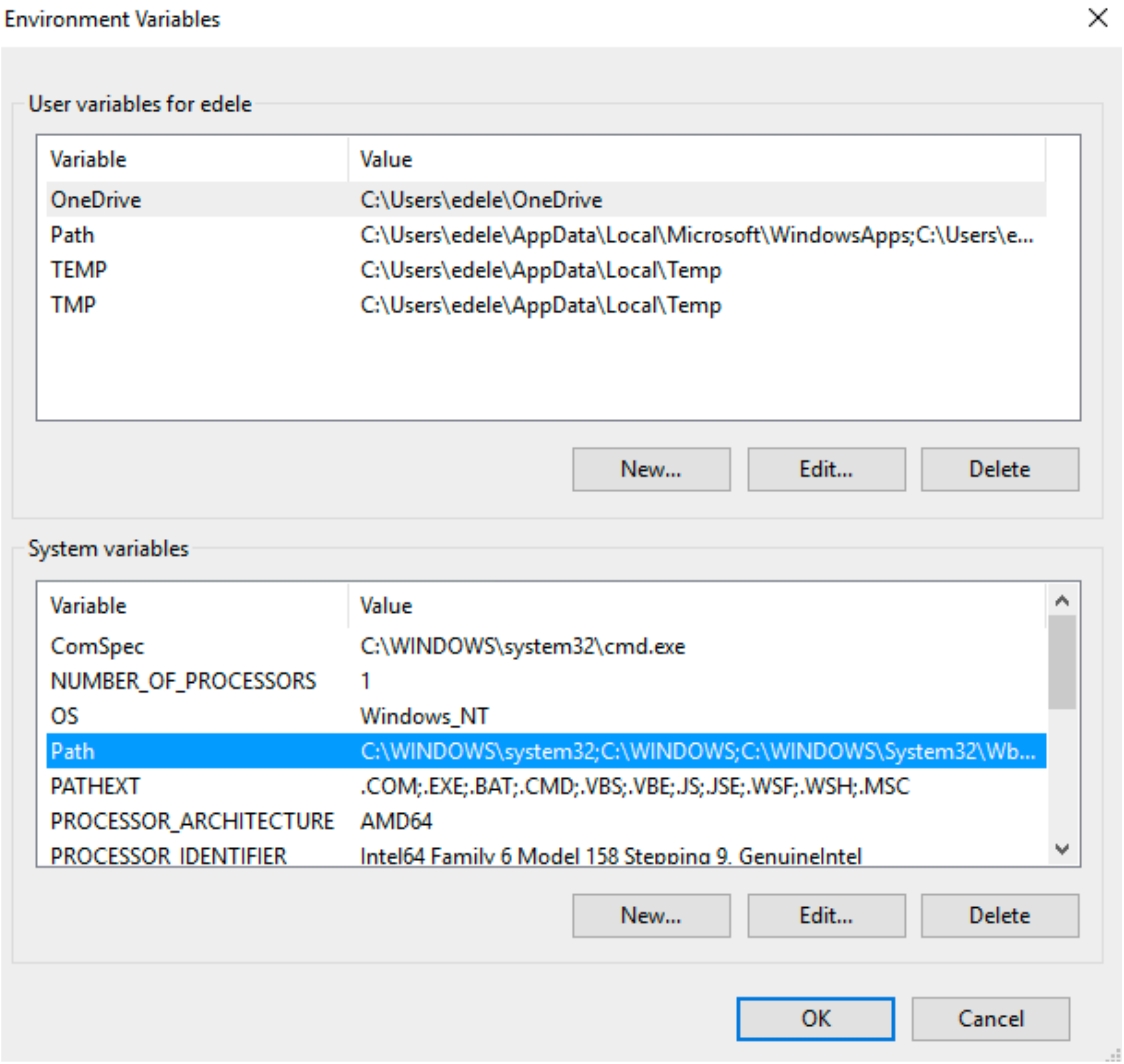
Visual effects, processor scheduling, memory usage and virtual memory

User Profiles

Desktop settings related to your sign-in

Start-up and Recovery

System start-up, system failure and debugging information

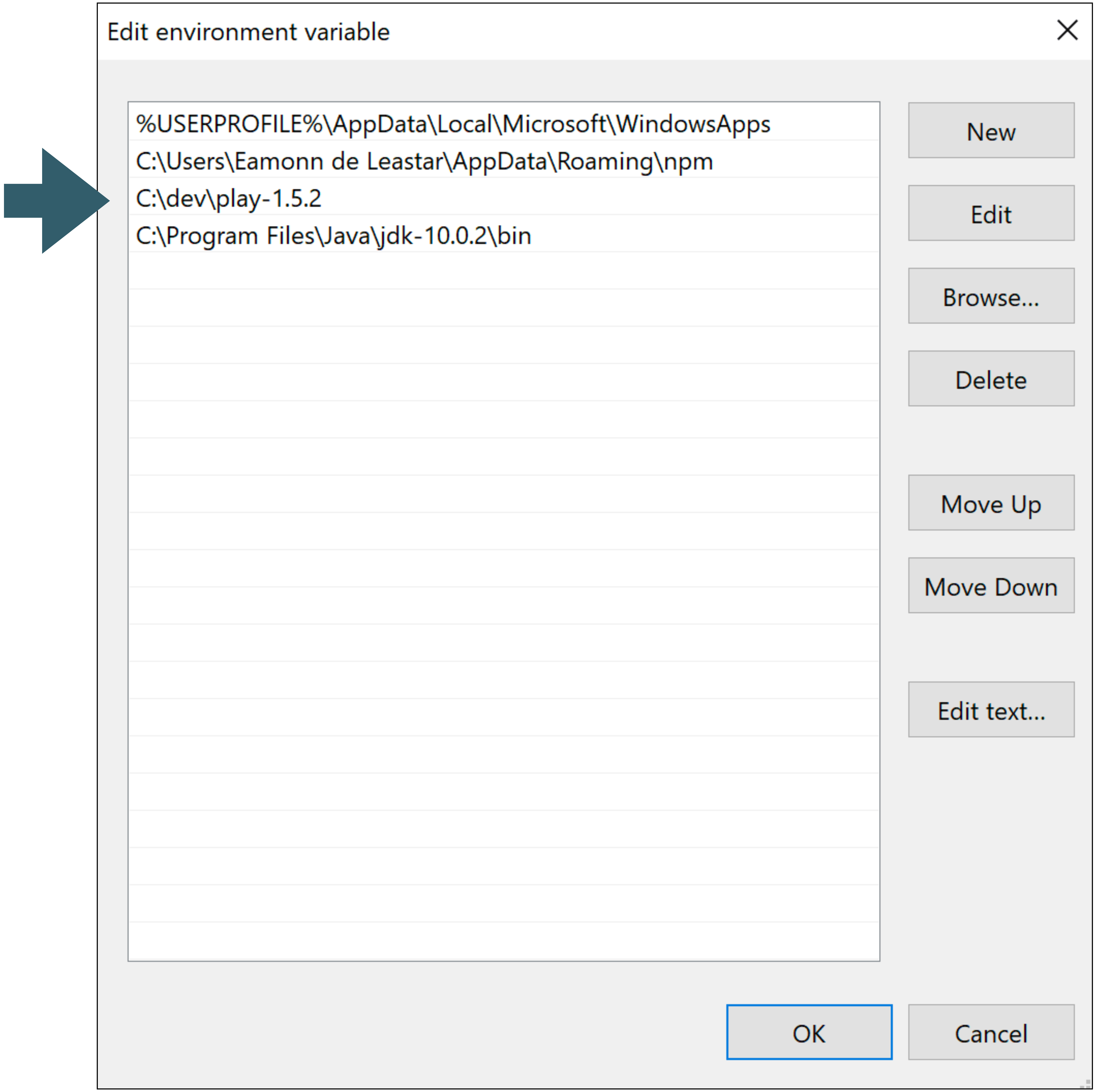


User variables for edele

Variable	Value
OneDrive	C:\Users\edele\OneDrive
Path	C:\Users\edele\AppData\Local\Microsoft\WindowsApps;C:\Users\e...
TEMP	C:\Users\edele\AppData\Local\Temp
TMP	C:\Users\edele\AppData\Local\Temp

System variables

Variable	Value
ComSpec	C:\WINDOWS\system32\cmd.exe
NUMBER_OF_PROCESSORS	1
OS	Windows_NT
Path	C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Wb...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
PROCESSOR_ARCHITECTURE	AMD64
PROCESSOR_IDENTIFIER	Intel64 Family 6 Model 158 Stepping 9, GenuineIntel



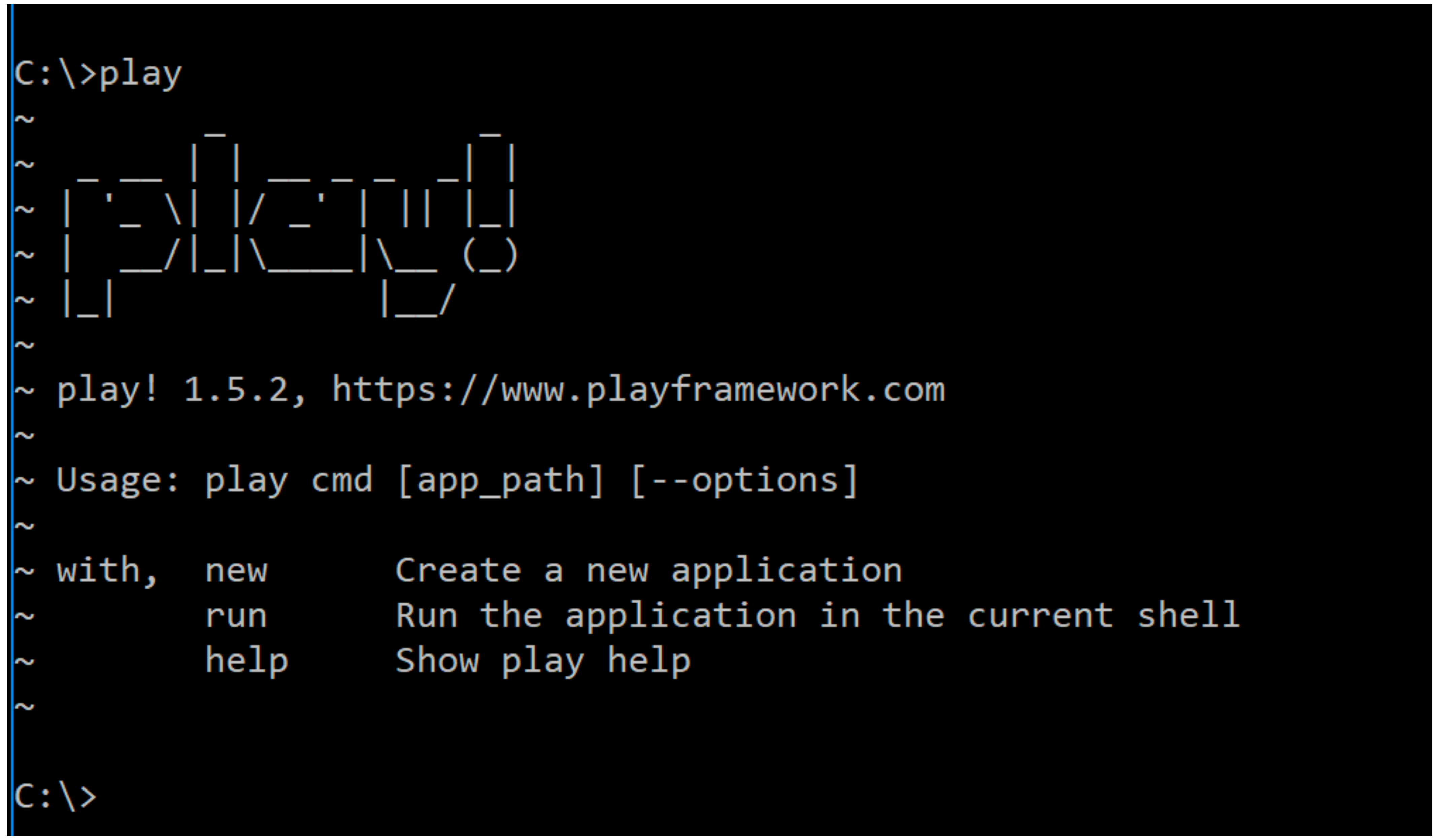
Edit environment variable

```
%USERPROFILE%\AppData\Local\Microsoft\WindowsApps
C:\Users\Eamonn de Leastar\AppData\Roaming\npm
C:\dev\play-1.5.2
C:\Program Files\Java\jdk-10.0.2\bin
```

- New entry in system path

Verifying Play

- Play applications are created and executed using the shell
- You must be able to navigate your folder structure using the shell
- To verify play, just type **play** on command line
  - This works if play is ‘on the path’
- If no response (error), then type
  - **c:\dev\play-1.5.3\play**
  - This is an ‘explicit path’ - ie. a fully qualified path to the play program

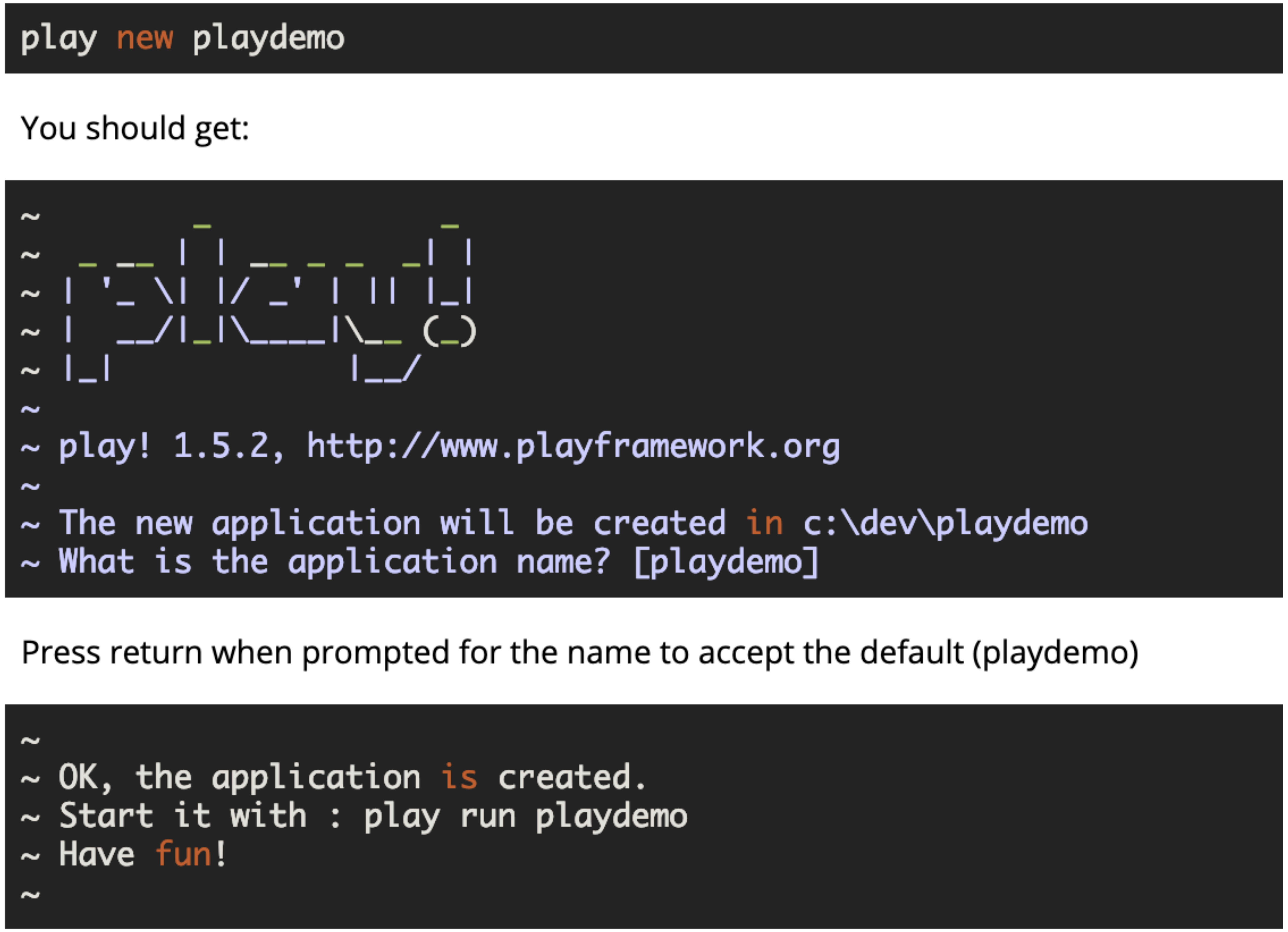


```
C:\>play
~        _            _
~  _ __ | | __ _ _  _| |
~ | '_ \| |/ _' | || |_|
~ |  __/|_|\____|\__ (_)
~ |_|            |__/
~
~ play! 1.5.2, https://www.playframework.com
~
~ Usage: play cmd [app_path] [--options]
~
~ with,  new      Create a new application
~        run      Run the application in the current shell
~        help     Show play help
~

C:\>
```

Create a Project

- This command creates a skeleton play application called ‘playdemo’ in the current directory
- Usually you will want to ‘change into’ this new directory for subsequent commands

```
c:\dev\>play new playdemo

c:\dev\>cd playdemo

c:\dev\playdemo>
```



```
play new playdemo
```

You should get:

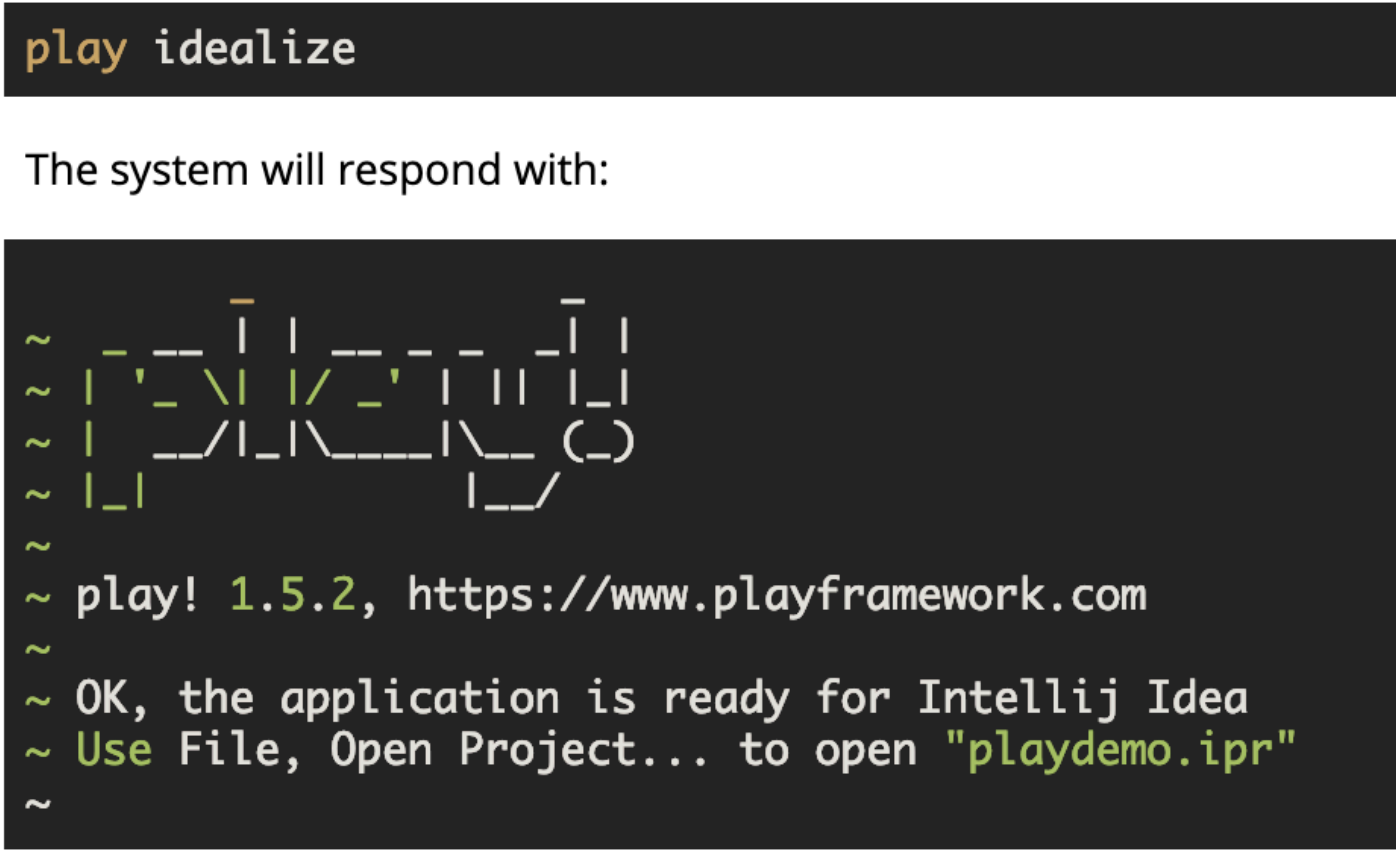
```
~        _            _
~  _ __ | | __ _ _  _| |
~ | '_ \| |/ _' | || |_|
~ |  __/|_|\____|\__ (_)
~ |_|            |__/
~
~ play! 1.5.2, http://www.playframework.org
~
~ The new application will be created in c:\dev\playdemo
~ What is the application name? [playdemo]
```

Press return when prompted for the name to accept the default (playdemo)

```
~
~ OK, the application is created.
~ Start it with : play run playdemo
~ Have fun!
~
```

Idealize

- Enable the project to be opened by Idea

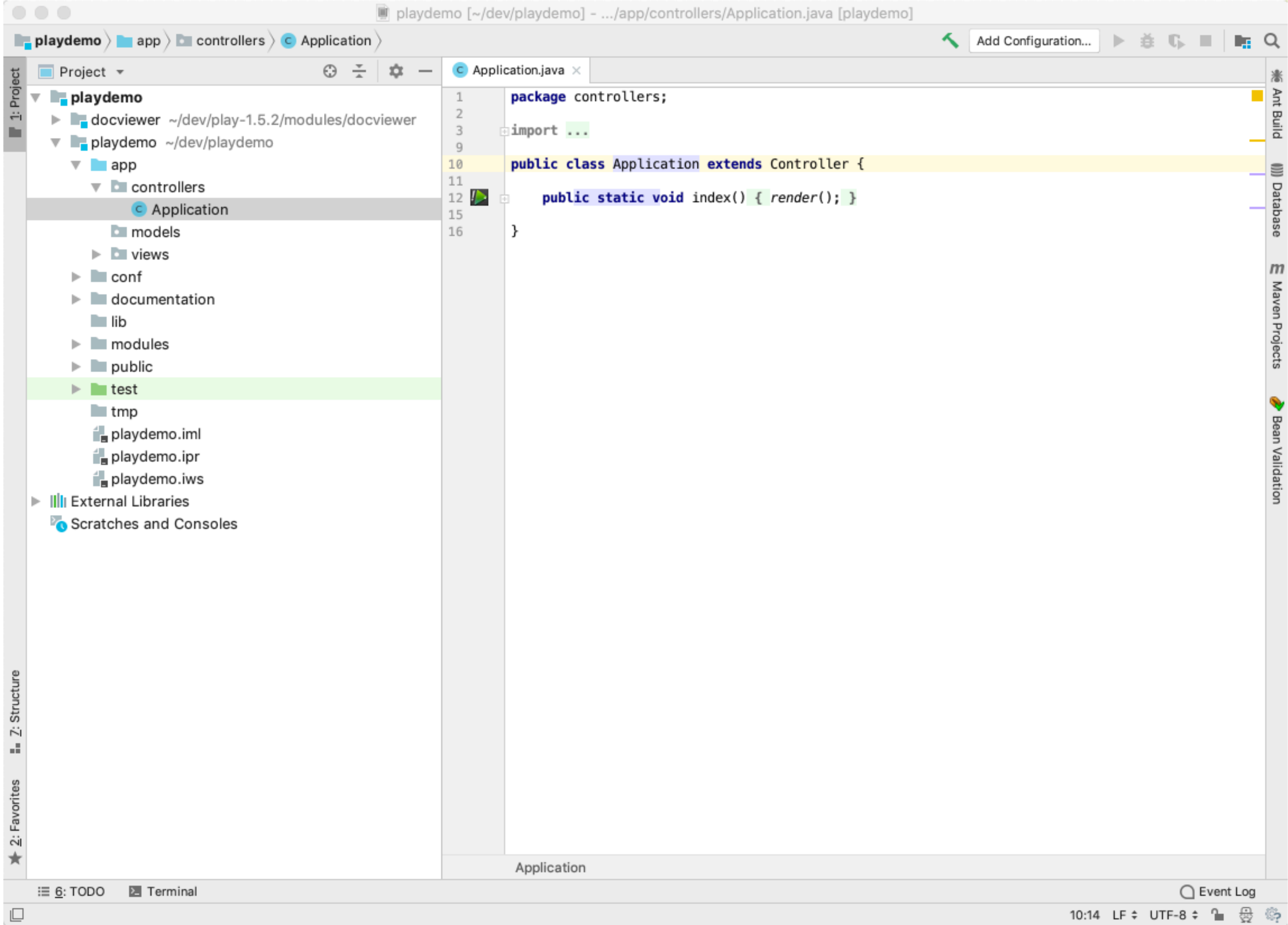


```
play idealize
```

The system will respond with:

```
~       _            _
~  _ __ | | __ _ _  _| |
~ | '_ \| |/ _' | || |_|
~ |  __/|_|\____|\__ (_)
~ |_|            |__/
~
~ play! 1.5.2, https://www.playframework.com
~
~ OK, the application is ready for Intellij Idea
~ Use File, Open Project... to open "playdemo.ipr"
~
```

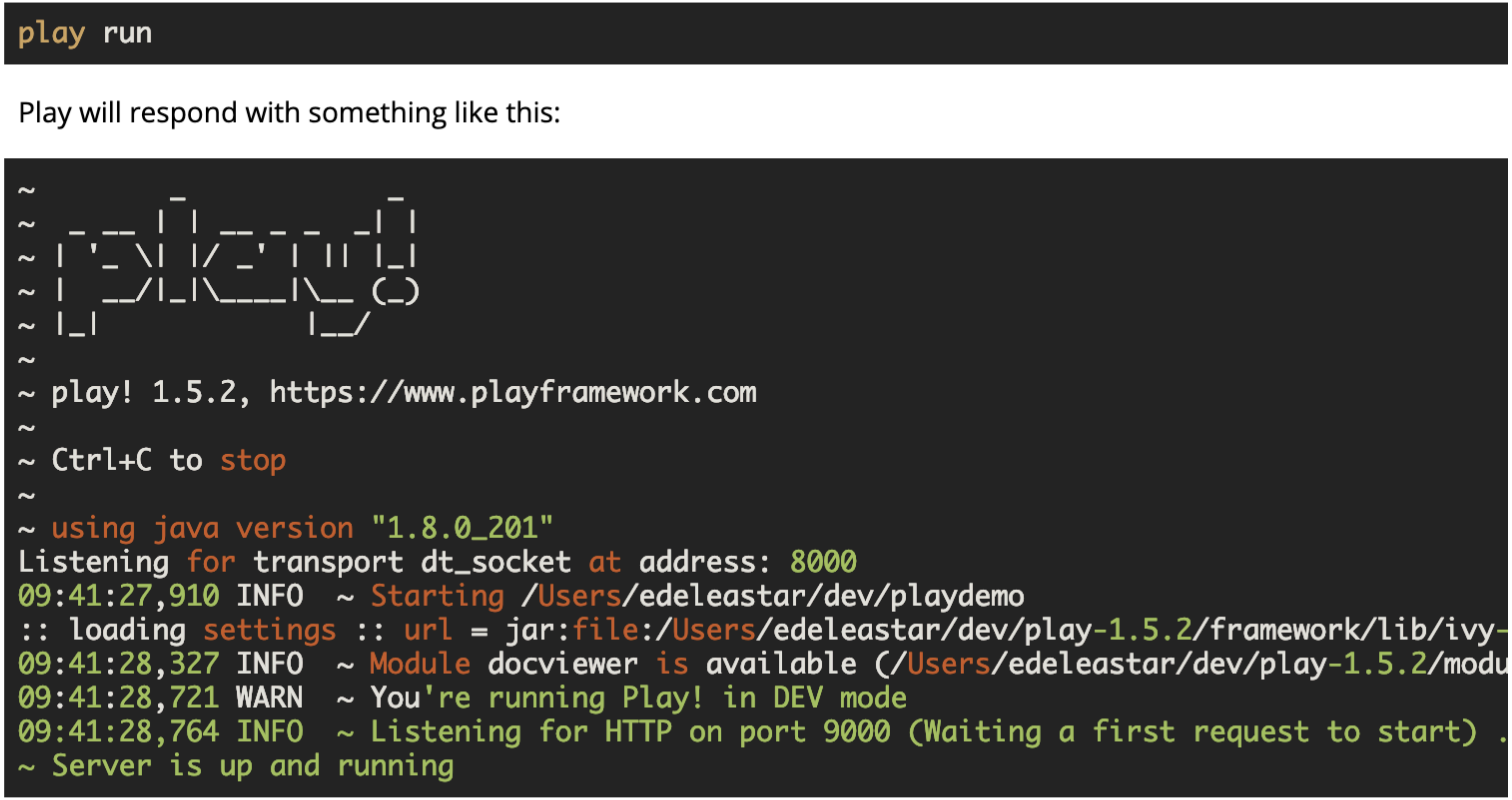
In Idea



```java
package controllers;

import ...

public class Application extends Controller {

    public static void index() { render(); }

}
```

Running the Play Application

- We have generated an “Web App” NOT at “Web Site”
- A Web App requires an ‘Application Server’ to run
- Play has one built-in, so running the server + the web app is a single command



```
play run
```

Play will respond with something like this:

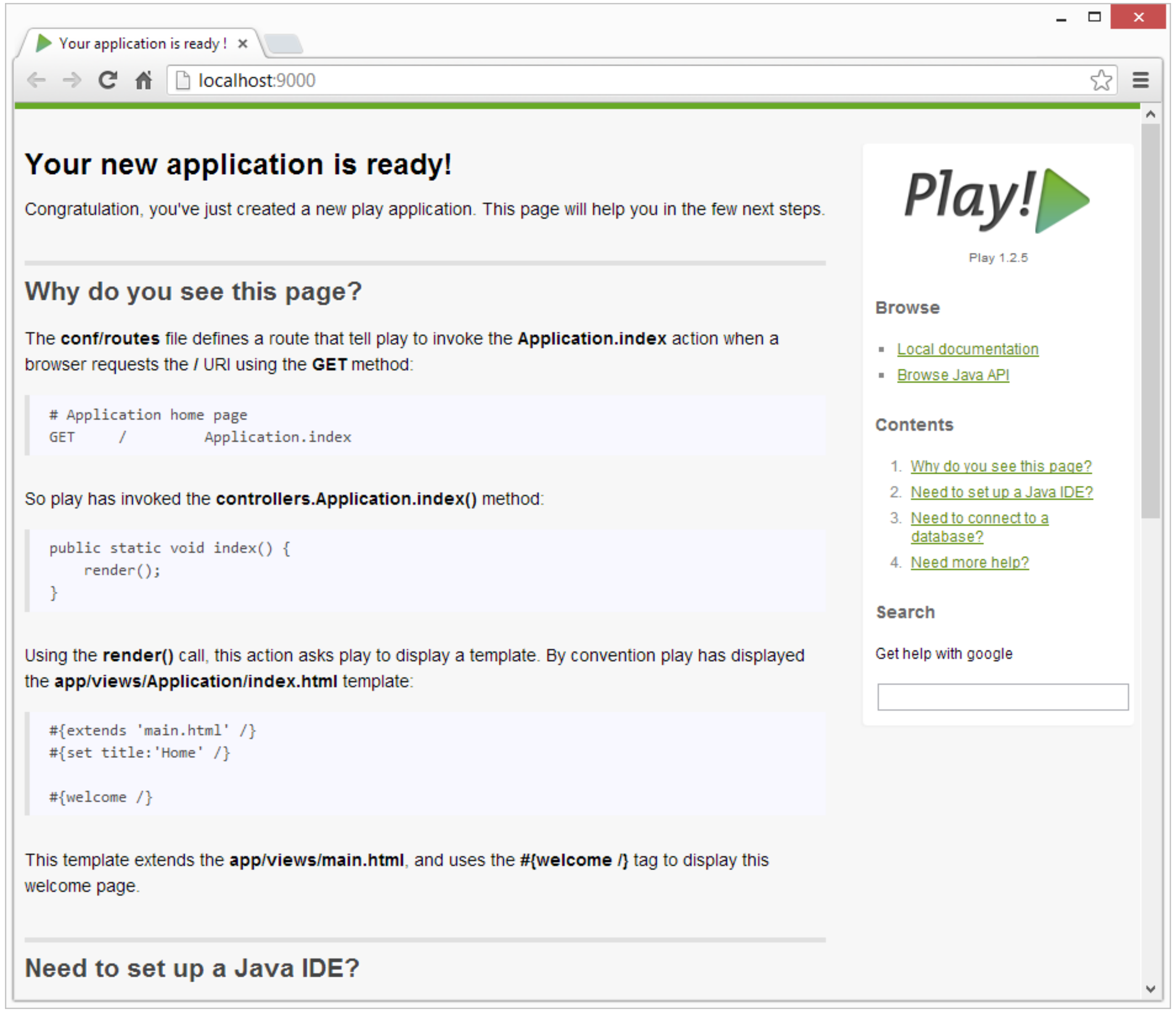
```
~        _            _
~  _ __ | | __ _ _  _| |
~ | '_ \| |/ _' | || |_|
~ |  __/|_|\____|\__ (_)
~ |_|            |__/
~
~ play! 1.5.2, https://www.playframework.com
~
~ Ctrl+C to stop
~
~ using java version "1.8.0_201"
Listening for transport dt_socket at address: 8000
09:41:27,910 INFO  ~ Starting /Users/edeleastar/dev/playdemo
:: loading settings :: url = jar:file:/Users/edeleastar/dev/play-1.5.2/framework/lib/ivy-
09:41:28,327 INFO  ~ Module docviewer is available (/Users/edeleastar/dev/play-1.5.2/modu
09:41:28,721 WARN  ~ You're running Play! in DEV mode
09:41:28,764 INFO  ~ Listening for HTTP on port 9000 (Waiting a first request to start) .
~ Server is up and running
```

The Skeleton App:

- The application is now ‘hosted’ on our local machine (localhost)
- To use it, we browse to:

  http://localhost:9000/

- 9000 is a random ‘port’ number in which the app is being ‘served’
- The ‘default’ app is documentation on play itself



Your new application is ready!

Congratulation, you've just created a new play application. This page will help you in the few next steps.

Why do you see this page?

The **conf/routes** file defines a route that tell play to invoke the **Application.index** action when a browser requests the **/** URI using the **GET** method:

```
# Application home page
GET     /         Application.index
```

So play has invoked the **controllers.Application.index()** method:

```
public static void index() {
    render();
}
```

Using the **render()** call, this action asks play to display a template. By convention play has displayed the **app/views/Application/index.html** template:

```
#{extends 'main.html' /}
#{set title:'Home' /}

#{welcome /}
```

This template extends the **app/views/main.html**, and uses the **#{welcome /}** tag to display this welcome page.

Need to set up a Java IDE?