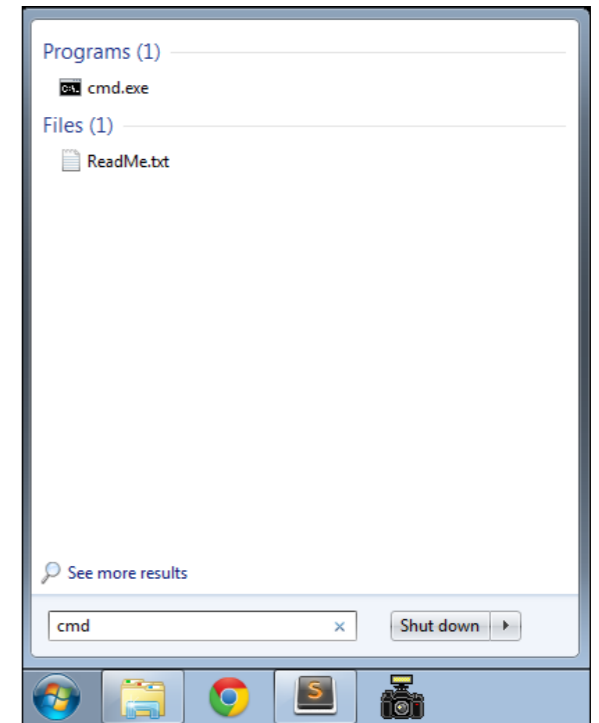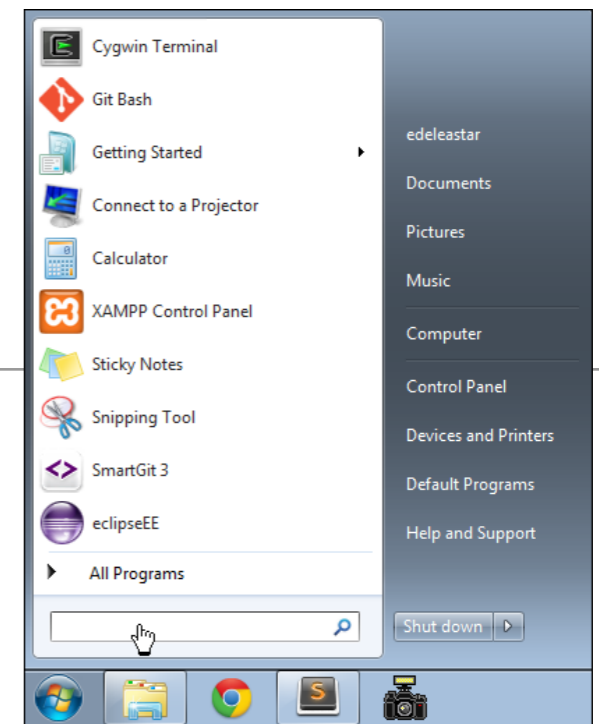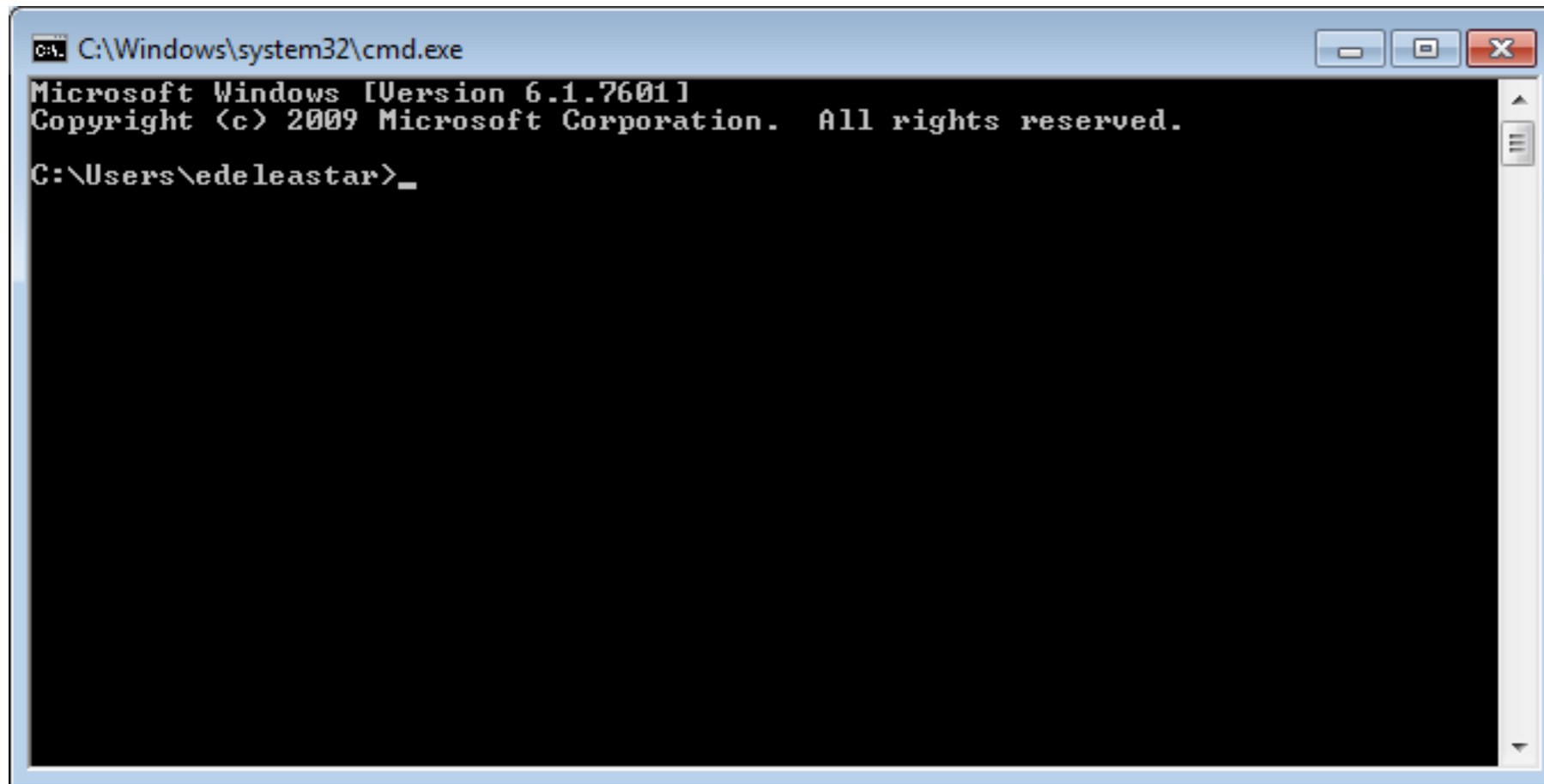# Getting Started with Play

Web Development

DOS Commands

- 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
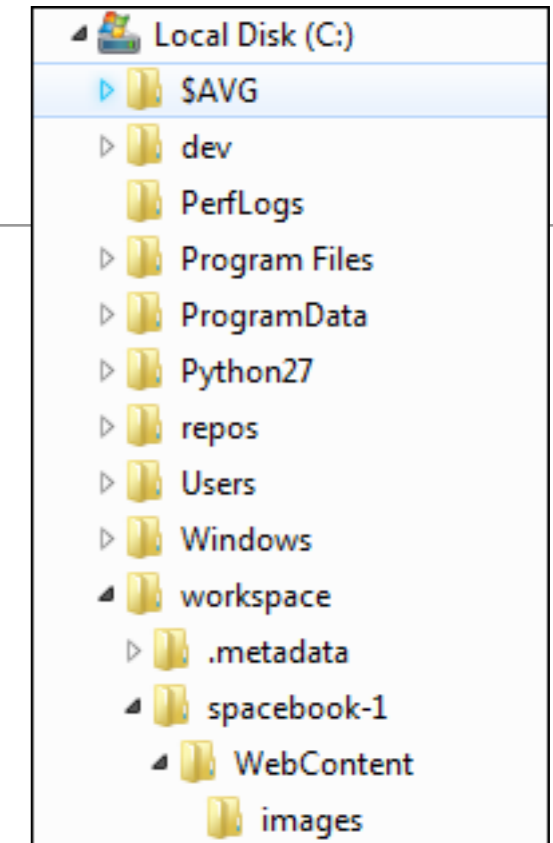- So --> always is '/' to avoid confusion

```
C:\Windows\system32\cmd.exe

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

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>_
```

Local Disk (C:)
- $AVG
- dev
- PerfLogs
- Program Files
- ProgramData
- Python27
- repos
- Users
- Windows
- workspace
  - .metadata
  - spacebook-1
    - WebContent
      - images

C:\Users\edeleastar>cd ..

C:\Users>cd ..

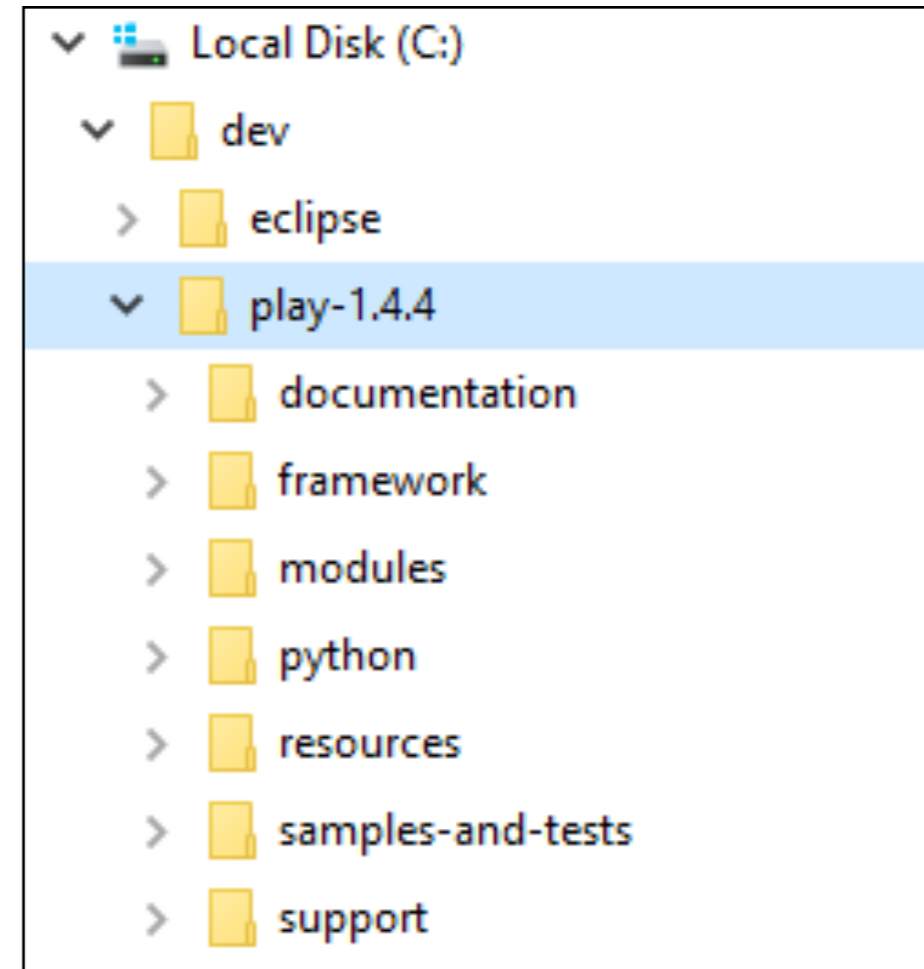*C:*>cd workspace

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

4

Installing Play

- Play must be downloaded and installed on your PC

  - www.playframework.org

  - Use version 1.4.4

- 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

Path Configuration

Path Configuration

Environment Variables ✕

User variables for edele

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

New...   Edit...   Delete

System Properties ✕

Computer Name | Hardware | Advanced | System Protection | Remote

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

Performance

Visual effects, processor scheduling, memory usage and virtual memory

Settings...

User Profiles

Desktop settings related to your sign-in

Settings...

Start-up and Recovery

System start-up, system failure and debugging information

Settings...

Environment Variables...

OK   Cancel   Apply

System variables

Variable	Value
ComSpec	C:\Windows\system32\cmd.exe
NUMBER_OF_PROCESSORS	1
OS	Windows_NT
Path	C:\ProgramData\Oracle\Java\javapath;C:\Windows\system32;C:\Windows;C:\Win...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
PROCESSOR_ARCHITECTURE	AMD64
PROCESSOR_IDENTIFIER	Intel64 Family 6 Model 42 Stepping 7, GenuineIntel
PROCESSOR_LEVEL	6
PROCESSOR_REVISION	2a07
PSModulePath	%ProgramFiles%\WindowsPowerShell\Modules;C:\Windows\system32\WindowsP...

New...   Edit...   Delete

OK   Cancel

- New entry in system path

Verifying Play

- Play applications are created and executed using the shell (i.e. DOS on windows)

  - You must be able to navigate your folder structure using the shell

  - If you are having difficulty - fix this immediately (i.e. learn basics of DOS)!

- 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-1.4.4\play**

  - This is an 'explicit path' - ie. a fully qualified path to the play program

```
Command Prompt

C:\dev>play new playdemo
~
~                  _            _
~    _ __  | | __ _  _   _  | |
~   | '_ \ | |/ _` || | | | | |
~   | |_) || | (_| || |_| | |_|  ()
~   | .__/ |_|\__,_| \__, | (_)
~   |_|                |___/
~
~ play! 1.4.4, https://www.playframework.com
~
~ The new application will be created in C:\dev\playdemo
~ What is the application name? [playdemo]
~
~ OK, the application is created.
~ Start it with : play run playdemo
~ Have fun!
~

C:\dev>
```

9

In DOS


```
C:\dev>play new playdemo
~
~           _            _
~    _ __  | | __ _ _   _| |
~   | '_ \ | |/ _` | | | | |
~   | |_) || | (_| | |_| | |_
~   | .__/ |_|\__,_|\__, |(_)
~   |_|              |_/
~
~ play! 1.4.4, https://www.playframework.com
~
~ The new application will be created in C:\dev\playdemo
~ What is the application name? [playdemo]
~
~ OK, the application is created.
~ Start it with : play run playdemo
~ Have fun!
~

C:\dev>
```

- This command creates a skeleton play application called 'playdemo' in the current directory (c:\dev\ws in the above example)

- Usually you will want to 'change into' this new directory for subsequent commands
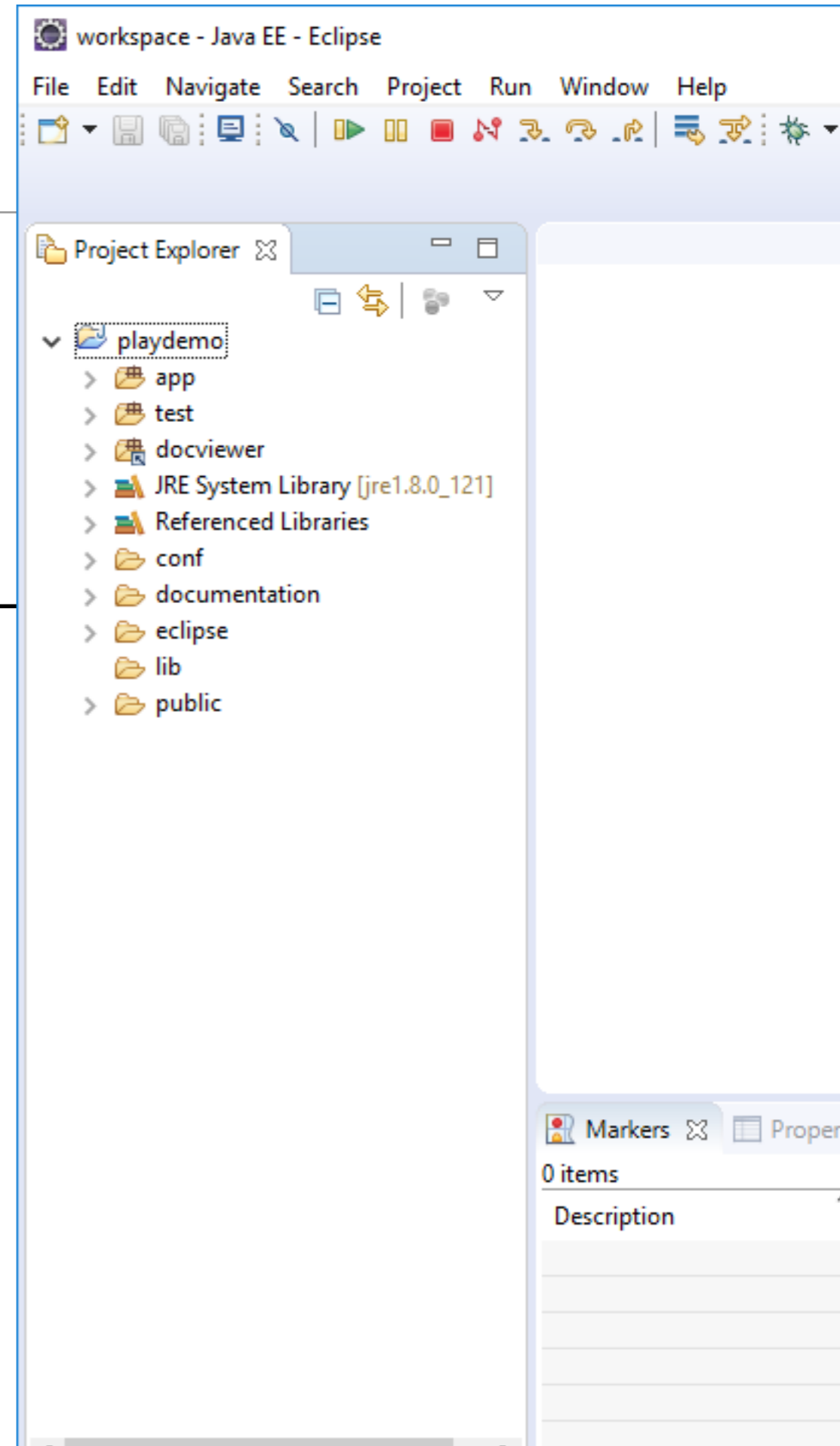
    c:\dev\ws>cd playdemo

    c:\dev\ws\playdemo>

Eclipsify

- In order to make the new project visible to Eclipse
  - *"play eclipsify"*

```
~
~ The new application will be created in C:\dev\playdemo
~ What is the application name? [playdemo]
~
~ OK, the application is created.
~ Start it with : play run playdemo
~ Have fun!
~

C:\dev>cd playdemo

C:\dev\playdemo>play eclipsify
~
~        _            _
~  _ __ | |__ _ _   _| |
~ | '_ \| |/ _` | | | | |
~ | |_) | | (_| | |_| | |_
~ | .__/|_|\__,_|\__, (_)
~ |_|            |___/
~
~ play! 1.4.4, https://www.playframework.com
~
~ using java version "1.8.0_121"
~ OK, the application "playdemo" is ready for eclipse
~ Use File/Import/General/Existing project to import C:\dev\playdemo into eclipse
~
~ Use eclipsify again when you want to update eclipse configuration files.
~ However, it's often better to delete and re-import the project into your workspace since eclipse keeps dirty caches...
~
~
~

C:\dev\playdemo>
```
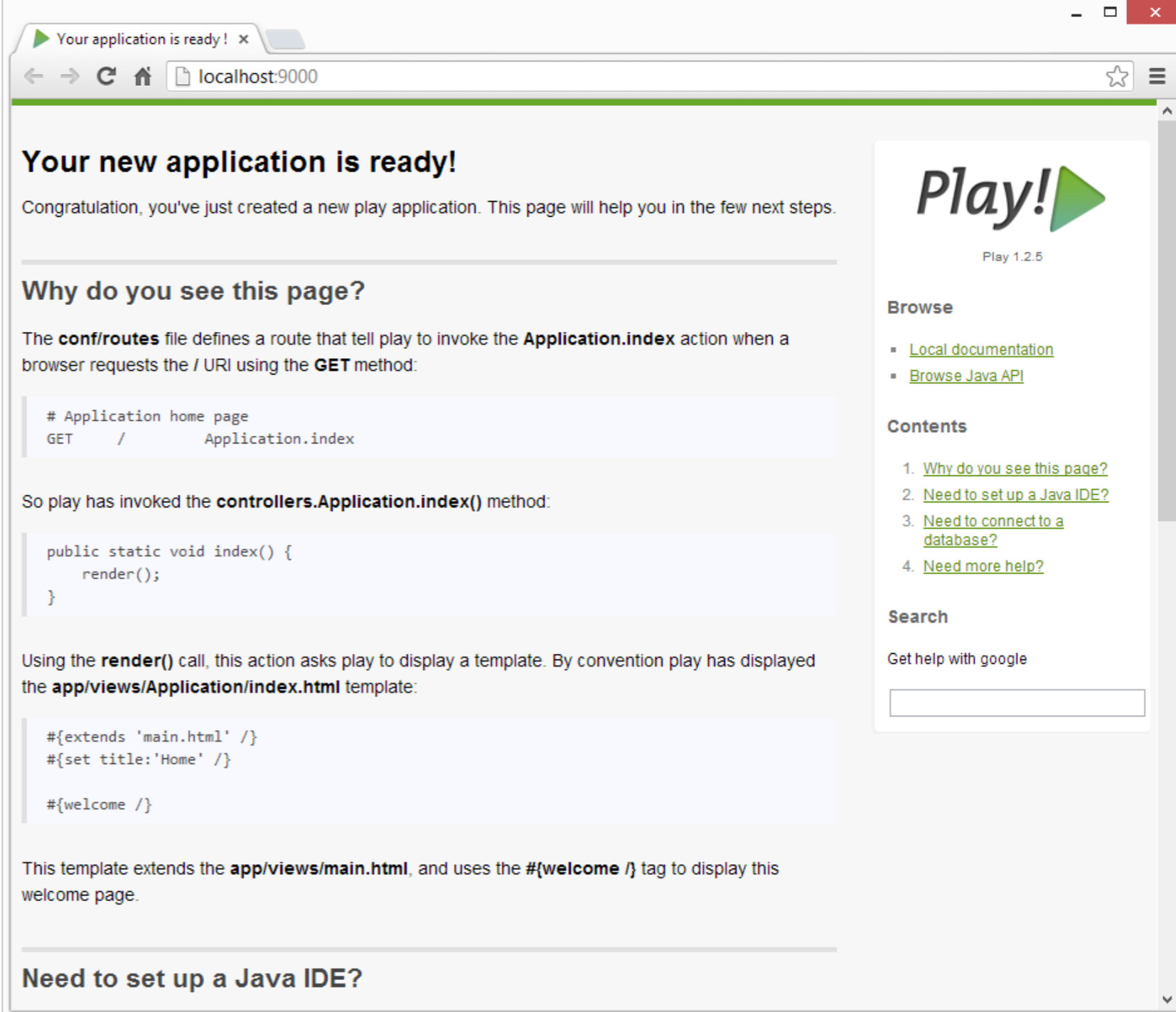
In Eclipse

- If we 'import' the newly created project into eclipse, we can now develop the application in the IDE (Eclipse is and IDE).

- The project may not look like this initially. ———

workspace - Java EE - Eclipse

File Edit Navigate Search Project Run Window Help

Project Explorer ✕

- ∨ 📂 playdemo
  - ＞ 🗁 app
  - ＞ 🗁 test
  - ＞ 🗁 docviewer
  - ＞ ▬ JRE System Library [jre1.8.0_121]
  - ＞ ▬ Referenced Libraries
  - ＞ 🗁 conf
  - ＞ 🗁 documentation
  - ＞ 🗁 eclipse
  - 🗁 lib
  - ＞ 🗁 public

Markers ✕   Proper

0 items

Description

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

Back in the shell, from inside the playdemo folder, type the following command:

```
play run
```

Play will respond with something like this:

```
~
~        _            _
~  _ __ | | __ _ _   _| |
~ | '_ \| |/ _' | | | | |
~ |  __/|_|\____|\__ (_)
~ |_|              |__/
~
~ play! 1.4.4, http://www.playframework.org
~
~ Ctrl+C to stop
~
Listening for transport dt_socket at address: 8000
16:30:33,586 INFO  ~ Starting /Users/edeleastar/Dropbox/webdev/2012/dev/projects/spacebook
16:30:34,646 WARN  ~ You're running Play! in DEV mode
16:30:34,894 INFO  ~ Listening for HTTP on port 9000 (Waiting a first request to start) ...
16:30:58,912 INFO  ~ Application 'Spacebook' is now started !
```

You may get a dialog from the firewall, asking for permission to run, which you should agree to.

Now run the browser, and navigate to:

- http://localhost:9000/

you should see something like this:

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