Objectives

- Create a simple web application that logs requests
  - Clone a web application from github
  - Edit the provided servlet
  - Deploy the application to a servlet container

Servlet Providing Text

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```
@WebServlet(urlPatterns={"/myservlet"})
public class MyServlet extends HttpServlet
{
  protected void doGet(HttpServletRequest request,
                       HttpServletResponse response)
                       throws ServletException, IOException {
    PrintWriter out = response.getWriter();
    String str = "Hello, world.\n";
    out.append(str)
  }

  //...doPost implementation
}
```

- A *servlet* is a Java class that has methods to handle requests
- Extended the base Servlet class and overrode the `doGet()` method
- URLs are relative to the base URL of your web application

Request and Response

- Notice that the framework methods such as `doGet` receive two arguments
  - `HttpServletRequest`: access information related to the request, url parameters for example
  - `HttpServletResponse`: access functionality related to the response, such as the writer, content headers, and so on
- Also notice that a Servlet is also a Java class
  - For this exercise it is ok to store data in a `static` variable attached to the servlet class

Cloning the Web Application

- We have set up a public repository containing a basic Java web application[1]
- You can clone this project and import to Eclipse as you have done previously
- Make sure you are in the Java EE perspective (upper right corner)

[1] `https://github.com/marks1024/logging-exercise-361`

Installing the Web Server

- Java EE is an open standard with many different implementations to choose from
- *Tomcat*[2] is probably the easiest to obtain and use
  - Simply download and unzip in a known location on your computer
  - Choose the 8.5 version
- To run the application we have at least two options
  - Tell the IDE where the server is ("run on server" option in eclipse)
  - Package our web application as a `.war` file and copy to Tomcat's `webapps/` directory

[2] `http://tomcat.apache.org/`

Task: Logging Application

- Use the web app skeleton from github to create a simple logging application
- Servlet that records every request made to the servlet (time of access, host, path)
- Store a log in a `static` variable on the servlet class (use an `ArrayList`) for example (see the documentation for `HttpServletRequest`[3])
- Deploy your application either locally and access from your browser at `localhost:8080`

[3] `https://tomcat.apache.org/tomcat-5.5-doc/servletapi/javax/servlet/http/HttpServletRequest.html`