

# Advanced Internet Technologies

Lab Sessions

# Lab Exercise 3

- Tomcat
  - Get the Tomcat bundle according to your operating system
  - Decompress it / install it in a convenient location
    - Read/Write Permissions!
  - Deploy your application server
    - ./startup.sh or startup.bat
  - Show the Initial screen

# Lab Exercise 3

- Tomcat
  - Access the console to see which webapps are installed
    - If does not work, hack the configuration file (`$CATALINA_HOME/conf/tomcat-users.xml`) to grant yourself permissions
  - Stop Tomcat
    - `./shutdown.sh`
  - Write your experience report (Exercise 3), discussing the steps you took, problems you faced and how you solved them

# Lab Exercise 4

- Servlets (1)
  - Create an Exercise4 servlet that prints **“Hello World” and the current time** using the structure explained in lessons
  - Tomcat/webapps/Exercise4
  - Note that Exercise4 must have a WEB-INF folder
  - The WEB-INF folder must contain:
    - classes
    - web.xml
  - Configure the <servlet> and <servlet-mapping> tags

# Lab Exercise 4

- Servlets (1)
  - Compile the servlet class, using the J2EE servlet API
    - `javac -cp $TOMCAT/lib/servlet-api.jar Exercise4.java`
  - Call the server according to the URL mapping you specified in web.xml
  - Write your experience report (Exercise 4), discussing the steps you took, problems you faced and how you solved them

# Lab Exercise 5

- Servlets (2)
  - Now, we will make a servlet that is able to receive parameters from a URL request, and print them
  - Make a verbatim copy of the servlet Exercise4 in a new servlet called Exercise5
  - At parent level, create a simple html form that sends 3 parameters at your choice.
    - The target of the form should be the servlet Exercise5
    - The parameters should be sent using the GET http verb

# Lab Exercise 5

- Servlets (2)
  - Modify the hello world servlet to receive the parameters sent in the GET string
  - Hint:
    - `import java.util.Enumeration;`
    - `Enumeration<String> params= request.getParameterNames();`
  - The enum will hold all the names of the parameters sent by GET

# Lab Exercise 5

- Servlets (2)
  - Still, you need to extract the values!
  - Hint:
    - `String parameterName = params.nextElement();`
    - `String parameterValue = request.getParameter(parameterName);`
  - Write your experience report (Exercise 5), discussing the steps you took, problems you faced and how you solved them
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# Lab Exercise 6

- Install the Eclipse Webtools Platform
- Create a new Dynamic Web Project
- Repeat the Exercise 5 using the structure created by Eclipse
- Export the project in a WAR file
- Load the WAR file from the administration console of Tomcat
- Write your experience report (Exercise 6), discussing the steps you took, problems you faced and how you solved them