Coordinates of Common Maven Libraries

Below are the Maven coordinates of Java libraries we use throughout the semester.

To add one to your project, copy the coordinates below and paste them in your pom.xml file between the <dependencies> tags.

If you do not have Auto-Import enabled for Maven, you must choose to Import Changes after modifying pom.xml

You can check your import settings in File >> Settings >> Build, Execution, Deployment >> Build Tools >> Maven >> Importing

Check the box to  "Import Maven projects automatically".

Apache Commons File Upload

Provides support for multipart file uploads in Spring MVC.

<dependency>  
 <groupId>commons-fileupload</groupId>  
 <artifactId>commons-fileupload</artifactId>  
 <version>1.4</version>  
</dependency>

Apache Derby Embedded JDBC Driver

Drivers to enable our application to connect to the database.

<dependency>  
  <groupId>org.apache.derby</groupId>  
  <artifactId>derby</artifactId>  
  <version>10.14.1.0</version>  
</dependency>

Apache Tomcat Servlet API

Provides Tomcat classes like HttpServletRequest and ServletContext. Adjust the <version> to match your installed Tomcat.

<dependency>  
 <groupId>org.apache.tomcat</groupId>  
 <artifactId>tomcat-servlet-api</artifactId>  
 <version>9.0.27</version>  
</dependency>

C3P0

Provides database connection pooling.

<dependency>  
 <groupId>com.mchange</groupId>  
 <artifactId>c3p0</artifactId>  
 <version>0.9.5.4</version>  
</dependency>

Hibernate Core

Provides Hibernate's core object-relational mapping functionality.

<dependency>  
 <groupId>org.hibernate</groupId>  
 <artifactId>hibernate-core</artifactId>  
 <version>5.4.5.Final</version>  
</dependency>

Hibernate Validator

Provides annotation-based form input validation.

<dependency>  
 <groupId>org.hibernate</groupId>  
 <artifactId>hibernate-validator</artifactId>  
 <version>6.1.0.Final</version>  
</dependency>

Jackson Databind for Hibernate 5

Convert POJOs to JSON and vice versa. You need both the general databinding API and the Hibernate-specific datatype. If you're using temporal classes like java.time.LocalDate, you'll also need the [JSR-310 (Links to an external site.)](https://jcp.org/en/jsr/detail?id=310) dependency.

<dependency>  
 <groupId>com.fasterxml.jackson.core</groupId>  
 <artifactId>jackson-databind</artifactId>  
 <version>2.10.1</version>  
</dependency>

<dependency>  
 <groupId>com.fasterxml.jackson.datatype</groupId>  
 <artifactId>jackson-datatype-hibernate5</artifactId>  
 <version>2.10.1</version>  
</dependency>

<dependency>  
 <groupId>com.fasterxml.jackson.datatype</groupId>  
 <artifactId>jackson-datatype-jsr310</artifactId>  
 <version>2.10.1</version>  
</dependency>

Javax Annotation API

Provides @PostConstruct and @PreDestory annotations. Required if using Java 9 or higher.

<dependency>  
 <groupId>javax.annotation</groupId>  
 <artifactId>javax.annotation-api</artifactId>  
 <version>1.3.2</version>  
</dependency>

JSTL (JSP Standard Tag Library)

Contains tags that allow the use of structured programming constructs (loops and conditionals) within JSP.

<dependency>  
 <groupId>jstl</groupId>  
 <artifactId>jstl</artifactId>  
 <version>1.2</version>  
</dependency>

Project Lombok

Annotations such as @Data that alleviate the need for boilerplate code in entity classes, including getters, setters, and constructors.

To inform IntelliJ that Lombok is generating these methods, also [install the Lombok plugin (Links to an external site.)](https://www.baeldung.com/lombok-ide).

<dependency>  
 <groupId>org.projectlombok</groupId>  
 <artifactId>lombok</artifactId>  
 <version>1.18.10</version>  
</dependency>

Spring Core

The core Spring Framework library. Provides dependency injection and inversion of control. If you are using Spring MVC, this dependency will already be included.

<dependency>  
 <groupId>org.springframework</groupId>  
 <artifactId>spring-context</artifactId>  
 <version>4.3.18.RELEASE</version>  
</dependency>

Spring ORM

The Spring Framework library for object-relational mapping. Required to use Hibernate with Spring.

<dependency>  
 <groupId>org.springframework</groupId>  
 <artifactId>spring-orm</artifactId>  
 <version>4.3.18.RELEASE</version>  
</dependency>

Spring MVC

Spring for Model-View-Controller in web applications. Includes Spring Core.

<dependency>  
 <groupId>org.springframework</groupId>  
 <artifactId>spring-webmvc</artifactId>  
 <version>4.3.18.RELEASE</version>  
</dependency>

Spring Security

User authentication, authorization, and login.

<dependency>  
 <groupId>org.springframework.security</groupId>  
 <artifactId>spring-security-web</artifactId>  
 <version>3.2.5.RELEASE</version>  
</dependency>  
<dependency>  
 <groupId>org.springframework.security</groupId>  
 <artifactId>spring-security-config</artifactId>  
 <version>3.2.5.RELEASE</version>  
</dependency>  
<dependency>  
 <groupId>org.springframework.security</groupId>  
 <artifactId>spring-security-taglibs</artifactId>  
 <version>3.2.5.RELEASE</version>  
</dependency>