

Assignment1

Submitted

by

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Module1: Application Development Fundamental

The Client B&B would like to take their business online so that they can sell their products online and grow their business. You are required to setup technical ground for the development team so that the team can start with the development.

You are requested to do following actions:

1. Install Java8/11/17/* and Latest version of VSCode.
2. Create a Java Dynamic project(Maven, Spring boot).
3. Create an Index.html file.
4. Install the tomcat9/10/11/* server.
5. Deploy to the application on tomcat9/10/11/* Server.
6. Start the server.
7. Verify the application is up and running

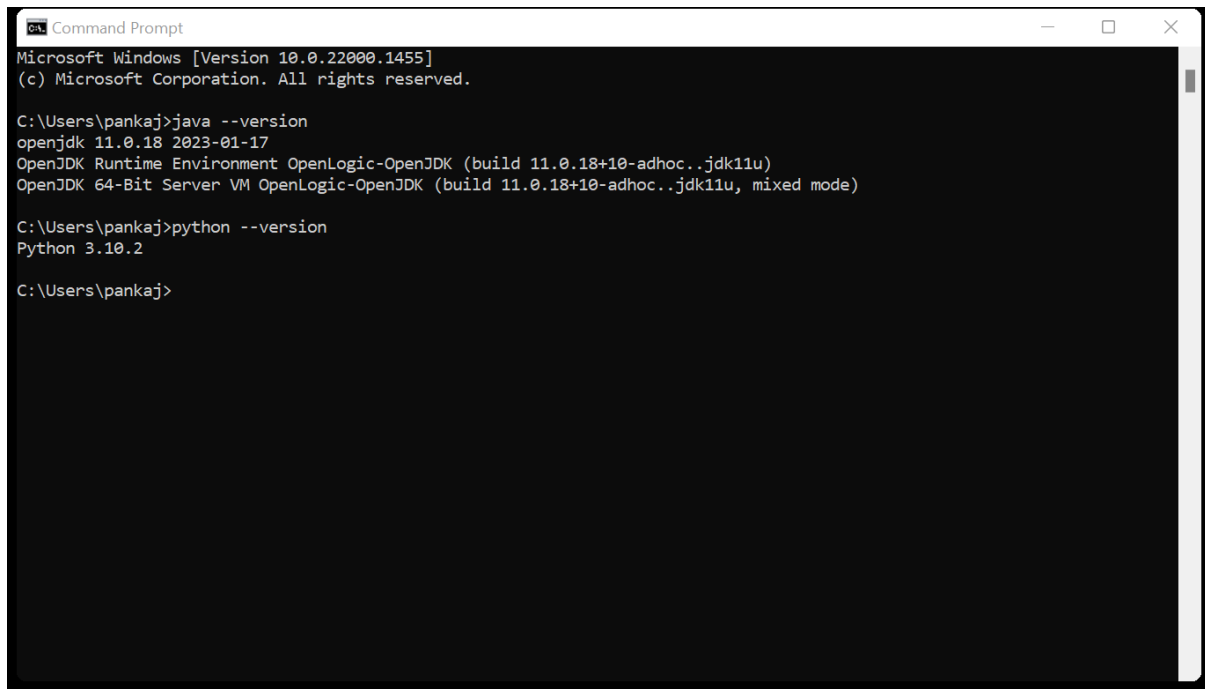
Step1:- Install Java8/11/17/* and Latest version of VSCode

1. Install Java:

-Go to the Java SE Development Kit (JDK) download page

(<https://www.oracle.com/java/technologies/javase-downloads.html>)

-Download and install Java8/11/17/* based on your preference and requirements.

A screenshot of a Windows Command Prompt window. The title bar says "Command Prompt". The text inside shows the user running 'java --version' and 'python --version' commands. The output for Java shows 'openjdk 11.0.18' and 'OpenJDK 64-Bit Server VM'. The output for Python shows 'Python 3.10.2'. The prompt is currently at 'C:\Users\pankaj>'.

```
Microsoft Windows [Version 10.0.22000.1455]
(c) Microsoft Corporation. All rights reserved.

C:\Users\pankaj>java --version
openjdk 11.0.18 2023-01-17
OpenJDK Runtime Environment OpenLogic-OpenJDK (build 11.0.18+10-adhoc..jdk11u)
OpenJDK 64-Bit Server VM OpenLogic-OpenJDK (build 11.0.18+10-adhoc..jdk11u, mixed mode)

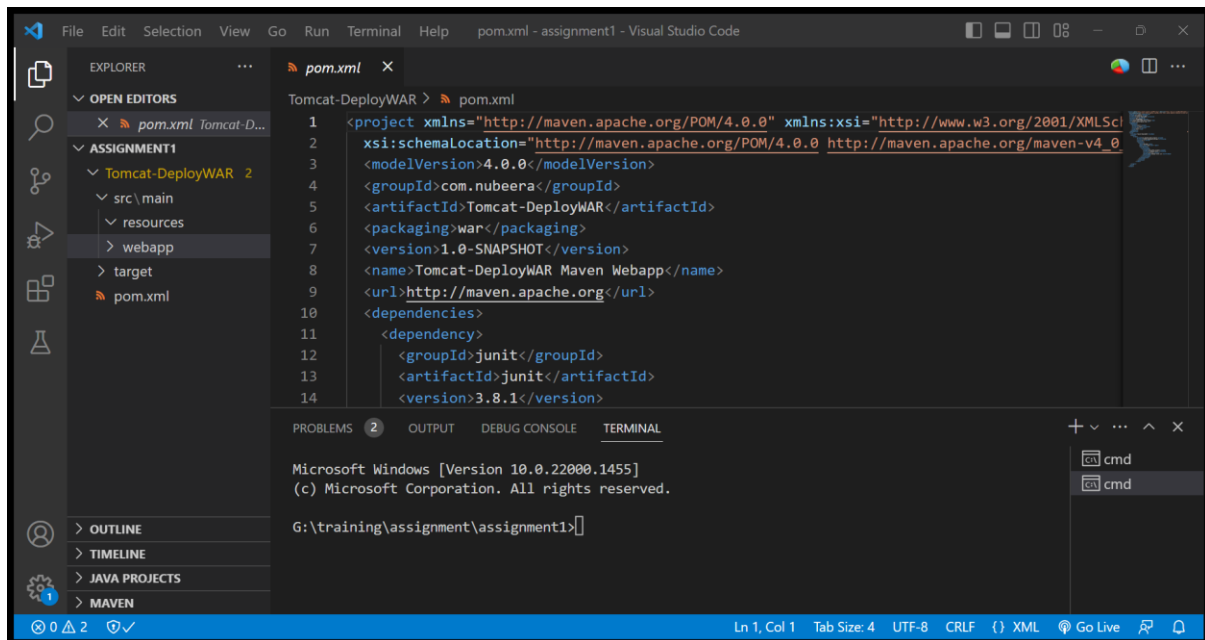
C:\Users\pankaj>python --version
Python 3.10.2

C:\Users\pankaj>
```

2. Install Latest version of VSCode:
 - Go to the VSCode download page
(<https://code.visualstudio.com/download>)
 - Download and install the latest version of VSCode for your operating system.

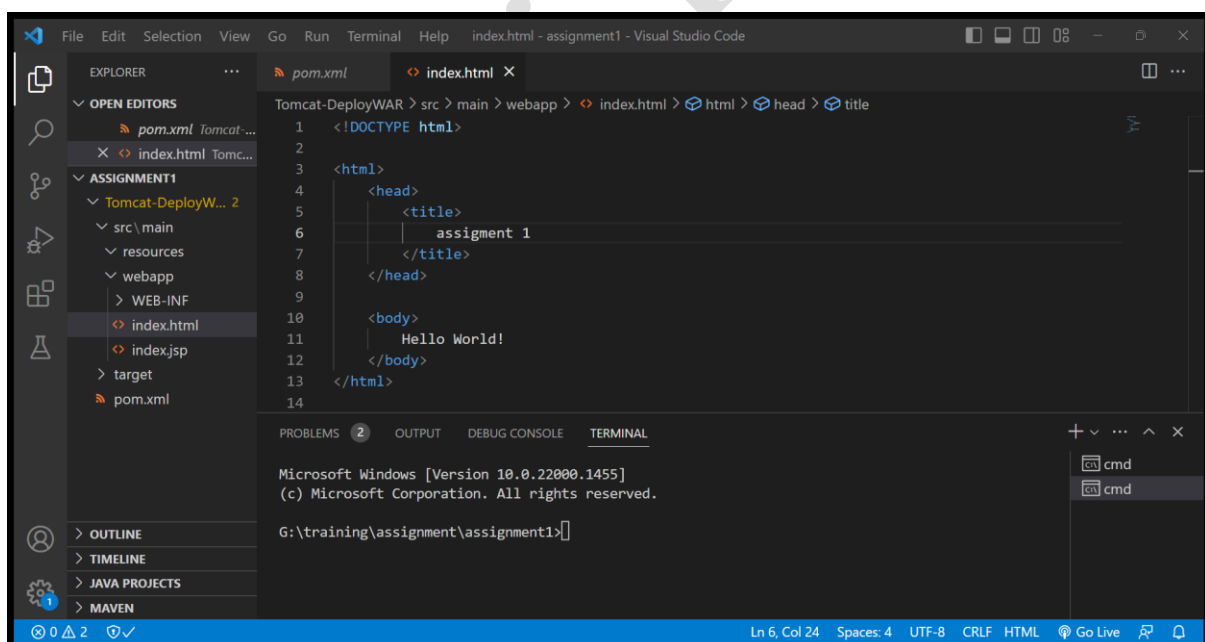
Step2: - Create a Java Dynamic project(Maven, Spring boot).

- Open VSCode and create a new workspace.
- In the VSCode terminal, navigate to the workspace directory.
- Run the command "**mvn archetype:generate -DgroupId=com.example -DartifactId=client-bnb -DarchetypeArtifactId=maven-archetype-webapp**" to create a Maven project with Spring Boot.
- Import the project into VSCode.



Step3: - Create an Index.html file.

- In the project folder, navigate to the "src/main/webapp" directory.
- Create a new file named "index.html".
- Add the necessary HTML code for the home page of your website.



Step4: - Install the tomcat9/10/11/* server.

- Download and install the Tomcat9/10/11/* server from the Apache Tomcat website (<https://tomcat.apache.org/download-10.cgi>)

- Extract the contents of the downloaded file to a directory on your computer.

Step5: - Deploy to the application on tomcat9/10/11/* Server.

- In VSCode, open the "pom.xml" file and add the following dependency and plugins.

```
• <dependencies>
•   <dependency>
•     <groupId>junit</groupId>
•     <artifactId>junit</artifactId>
•     <version>3.8.1</version>
•     <scope>test</scope>
•   </dependency>
• </dependencies>
• <plugin>
•   <groupId>org.apache.maven.plugins</groupId>
•   <artifactId>maven-dependency-plugin</artifactId>
•   <version>2.3</version>
•   <executions>
•     <execution>
•       <phase>package</phase>
•       <goals><goal>copy</goal></goals>
•       <configuration>
•         <artifactItems>
•           <artifactItem>
•             <groupId>com.github.jsimone</groupId>
•             <artifactId>webapp-runner</artifactId>
•             <version>8.5.11.3</version>
•             <destFileName>webapp-
runner.jar</destFileName>
•           </artifactItem>
•         </artifactItems>
•       </configuration>
•     </execution>
•   </executions>
• </plugin>
```

- In the VSCode terminal, run the command "mvn clean package" to build the project.

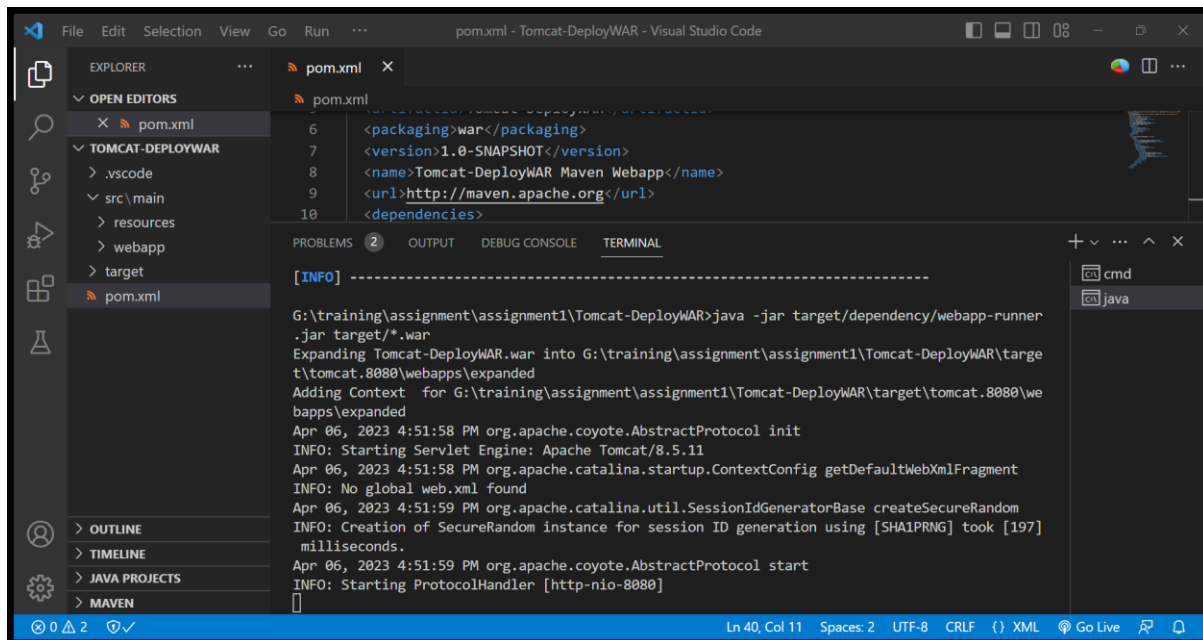
The screenshot shows the Visual Studio Code interface with a terminal window open. The terminal displays the output of the command `G:\training\assignment\assignment1\Tomcat-DeployWAR>mvn clean package`. The output includes several informational messages and warnings, such as "Scanning for projects...", "Building Tomcat-DeployWAR Maven Webapp 1.0-SNAPSHOT", and "Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!". The terminal also shows the progress of the build process, including deleting the target directory and copying resources.

The screenshot shows the continuation of the Maven build process in the Visual Studio Code terminal. The output includes messages for "resources:3.3.0:testResources", "compiler:3.10.1:testCompile", "surefire:3.0.0:test", and "war:3.3.2:war". The build process concludes with the message "BUILD SUCCESS" and "Total time: 2.962 s". The terminal also shows the finished time and date: "Finished at: 2023-04-06T08:44:01+05:30".

- Copy the "client-bnb.war" file from the "target" directory to the "webapps" directory of the Tomcat server.

Step6: - Start the server or run the project

- In the VSCode terminal, run the command "java -jar target/dependency/webapp-runner.jar target/*.war" to build the project



Step7: - Verify the application is up and running

- Open a web browser and go to "http://localhost:8080/client-bnb/index.html" to verify that the application is up and running.

