



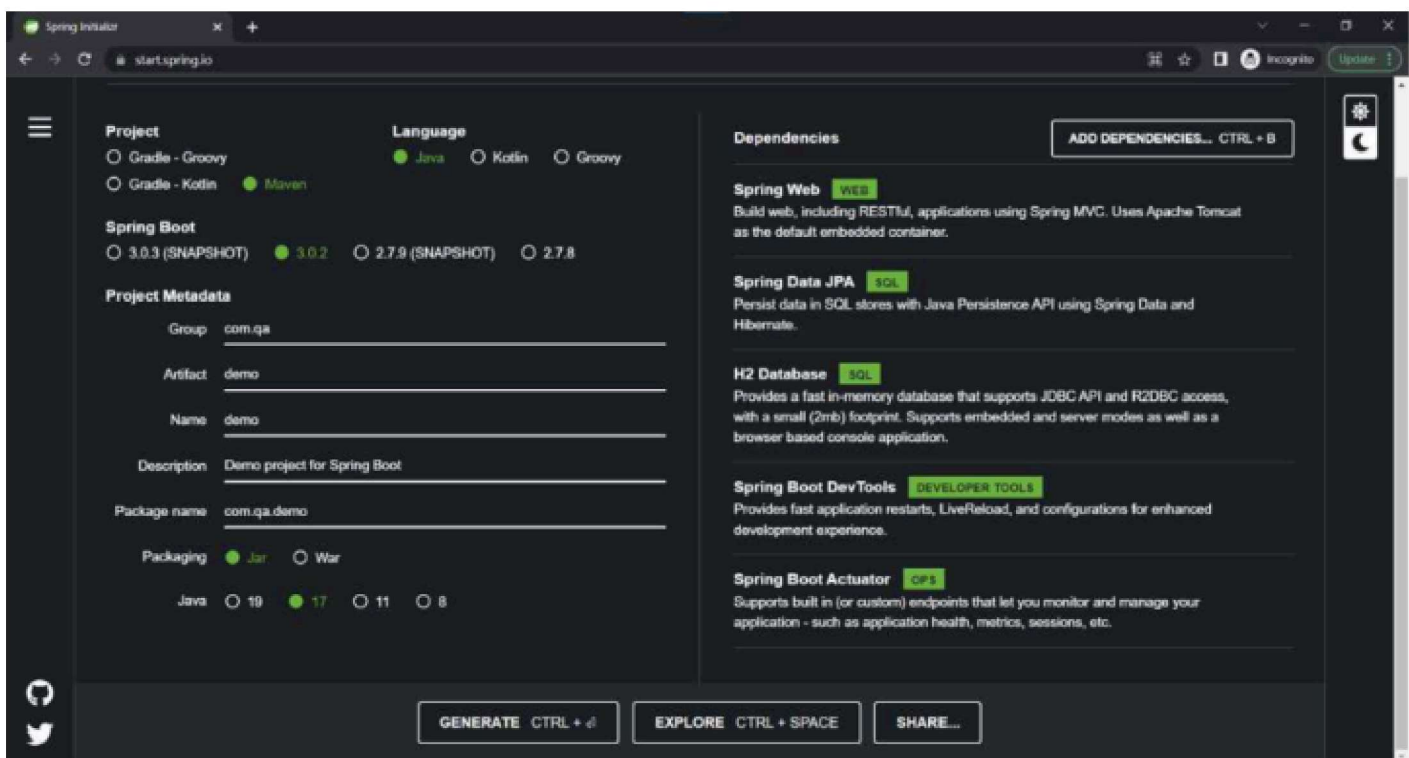
Lab 1 – Creating a Spring application

The purpose of this task is to demonstrate how to create and run a Spring application using the IntelliJ IDEA. The Spring Boot Maven project will be generated by Spring Initializr as it is the most efficient method of creating a Spring project and comes with an assigned project wizard.

Task 1

Step-by-step guide to create a new Spring Boot project:

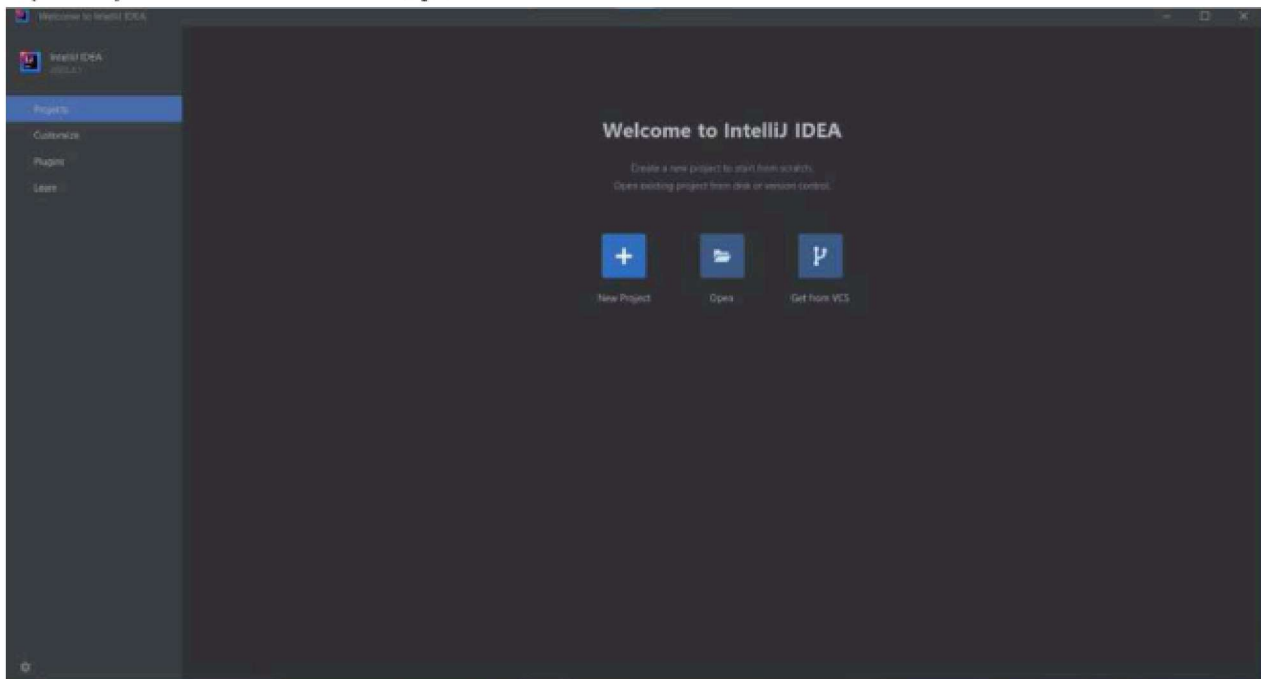
1. Access the Spring Initializr at <https://start.spring.io/>
2. Select **Maven** project.
3. Select Spring Boot version 3.0.2.
4. Change the group to com.qa.
5. Add the five dependencies you can see in the image:



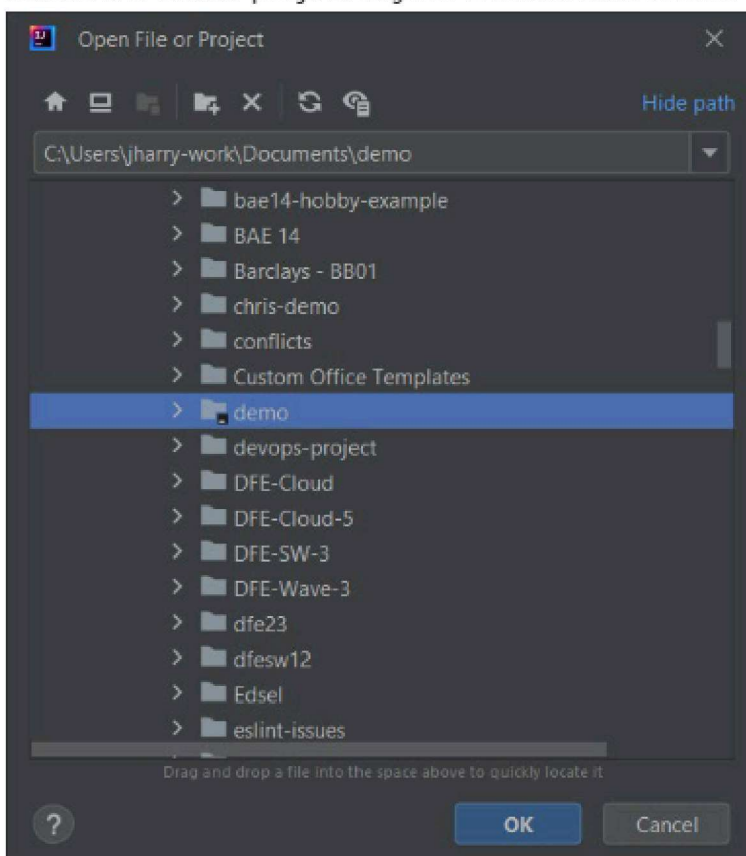
6. Click **Generate** to download the project as a zip.
7. Unzip the project into the Documents folder.



8. Open up IntelliJ and select **Open**.

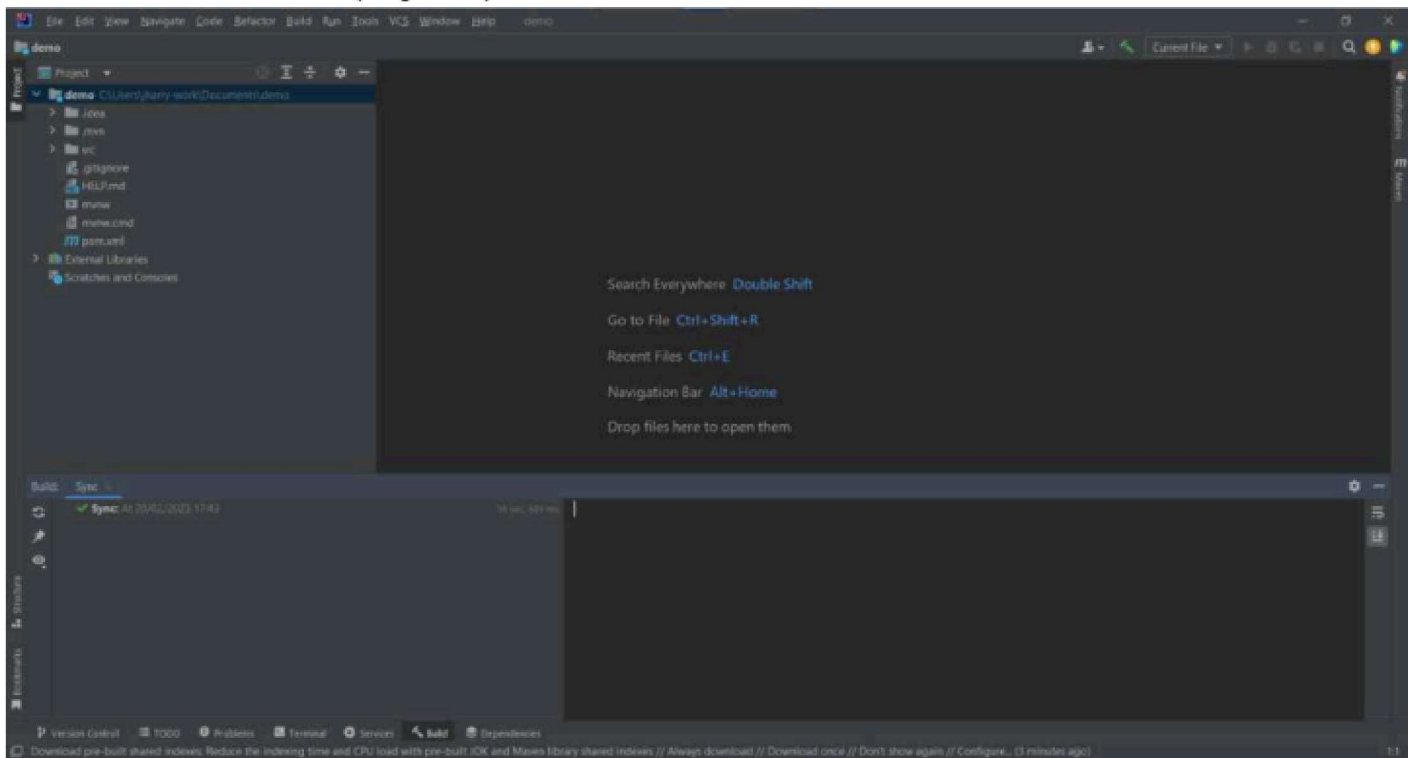


9. Select the **demo** project in your **Documents** folder.

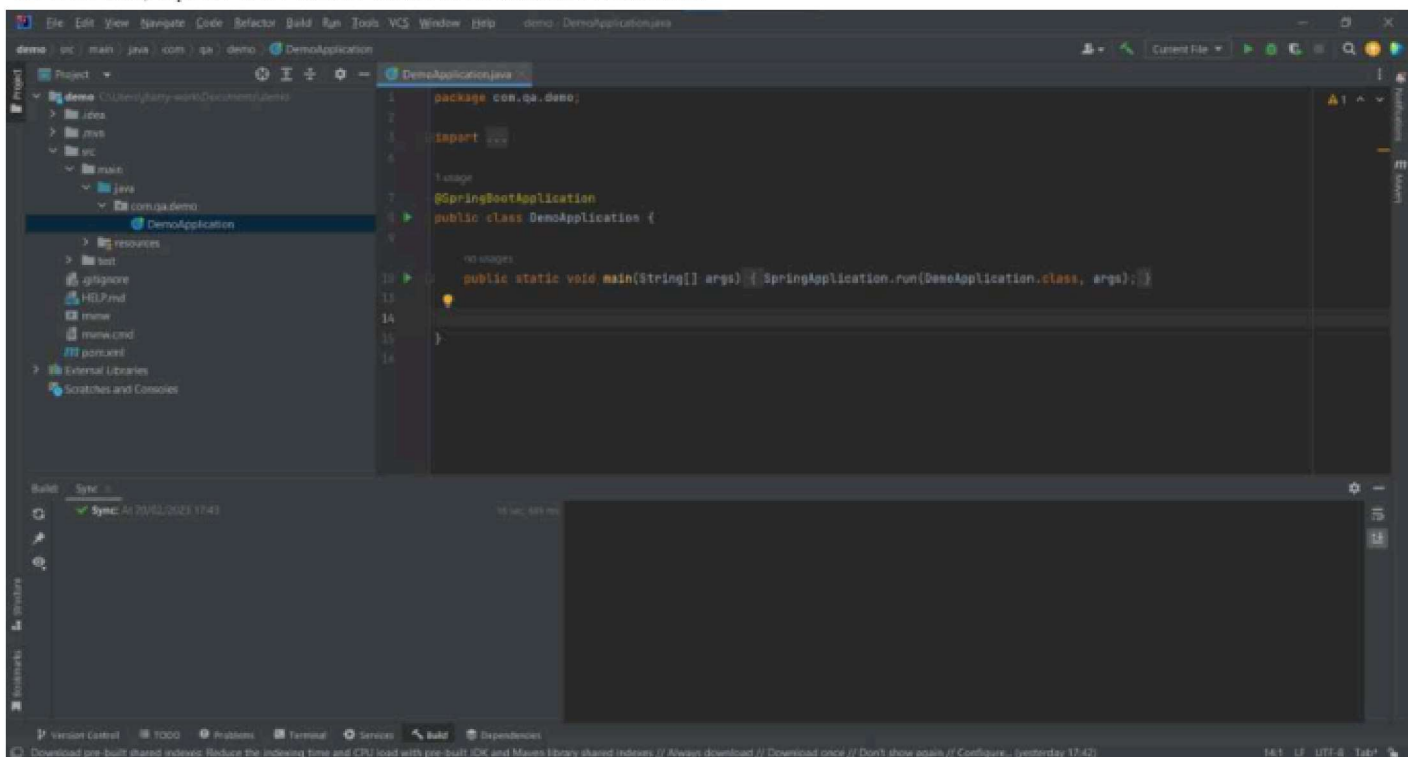




10. You should now see the project open in IntelliJ.



11. In IntelliJ, open the class with the **main** method.



12.



13. Paste this code into line 14:

```
@GetMapping("/hello")
public String greeting() {
    return "Hello, World!";
}
```

14. And this code above **@SpringBootApplication**:

```
@RestController
```

The screenshot shows an IDE window with the file `DemoApplication.java` open. The code in the file is as follows:

```
1 import ...
2
3 @RestController
4 @SpringBootApplication
5 public class DemoApplication {
6
7     no usages
8
9     public static void main(String[] args) {
10         SpringApplication.run(DemoApplication.class, args);
11     }
12
13     no usages
14
15     @GetMapping("/hello")
16     public String greeting() {
17         return "Hello, World!";
18     }
19 }
20
```

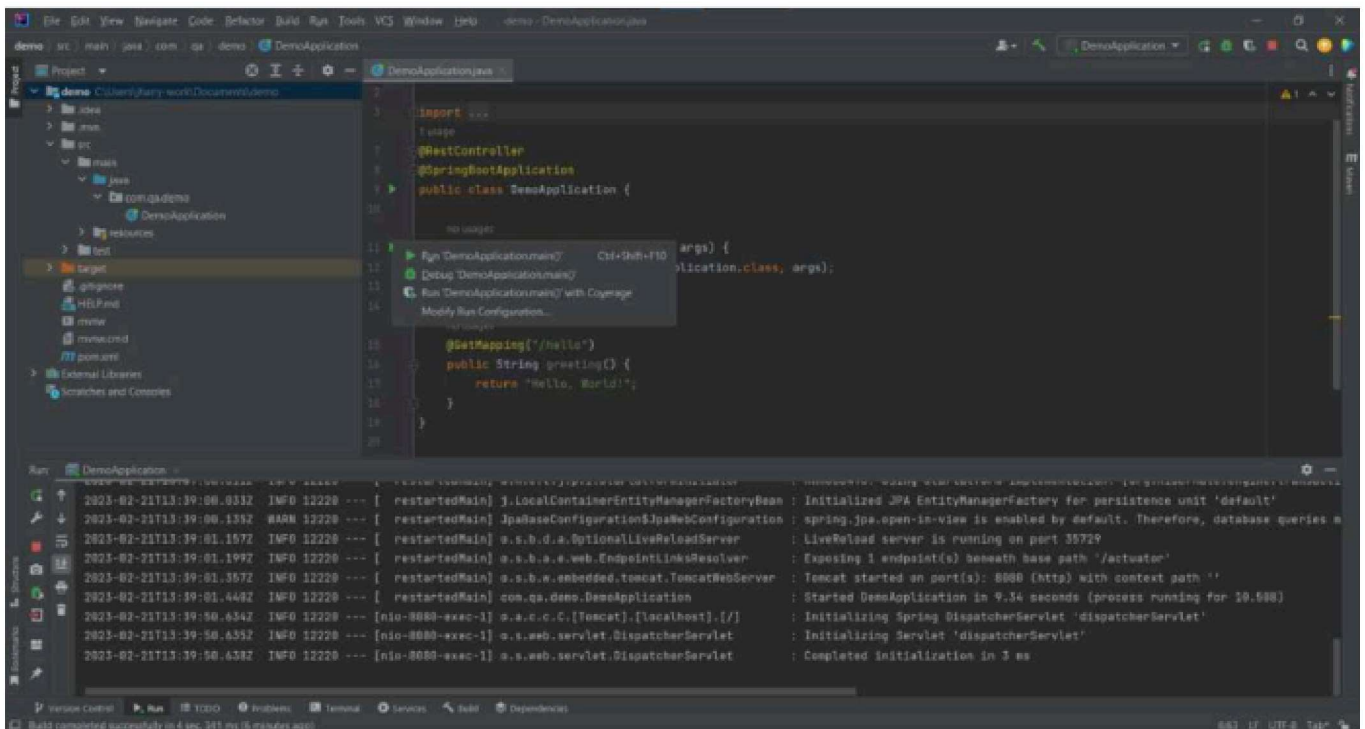
Below the code editor, the Run console shows the following logs:

```
2023-02-21T13:39:00.033Z INFO 12220 --- [ restartedMain] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2023-02-21T13:39:00.115Z WARN 12220 --- [ restartedMain] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by default. Therefore, database queries may
2023-02-21T13:39:01.157Z INFO 12220 --- [ restartedMain] o.s.b.d.s.OptionalLiveReloadServer : LiveReload server is running on port 35729
2023-02-21T13:39:01.194Z INFO 12220 --- [ restartedMain] o.s.b.a.e.web.EndpointLinksResolver : Exposing 1 endpoint(s) beneath base path '/actuator'
2023-02-21T13:39:01.357Z INFO 12220 --- [ restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 8080 (http) with context path ''
2023-02-21T13:39:01.440Z INFO 12220 --- [ restartedMain] com.qa.demo.DemoApplication : Started DemoApplication in 9.34 seconds (process running for 19.508)
2023-02-21T13:39:00.634Z INFO 12220 --- [nio-8080-exec-1] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring DispatcherServlet 'dispatcherServlet'
2023-02-21T13:39:50.635Z INFO 12220 --- [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet : Initializing Servlet 'dispatcherServlet'
2023-02-21T13:39:50.638Z INFO 12220 --- [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet : Completed initialization in 3 ms
```

At the bottom of the IDE, a status bar indicates: `Build completed successfully in 4 sec, 341 ms (3 minutes ago)`.



15. Run the Spring app using the green play button in the gutter on line 10:



16. Once the app has started you should be able to see this message at <http://localhost:8080/hello>

