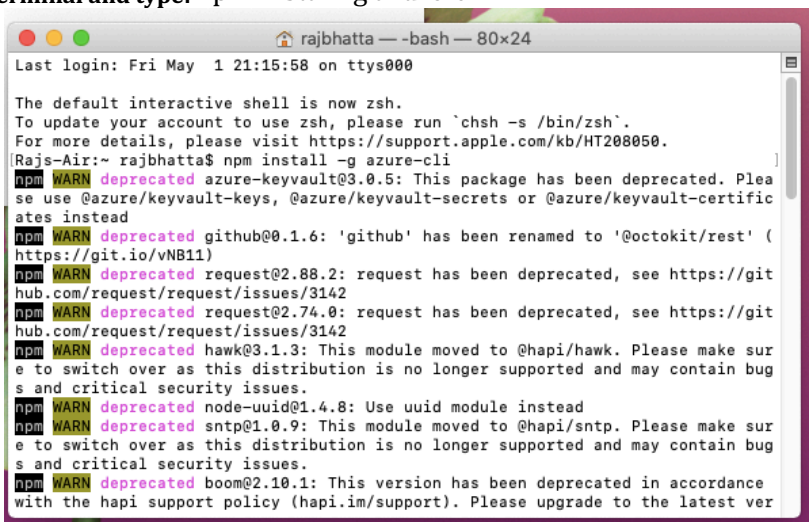
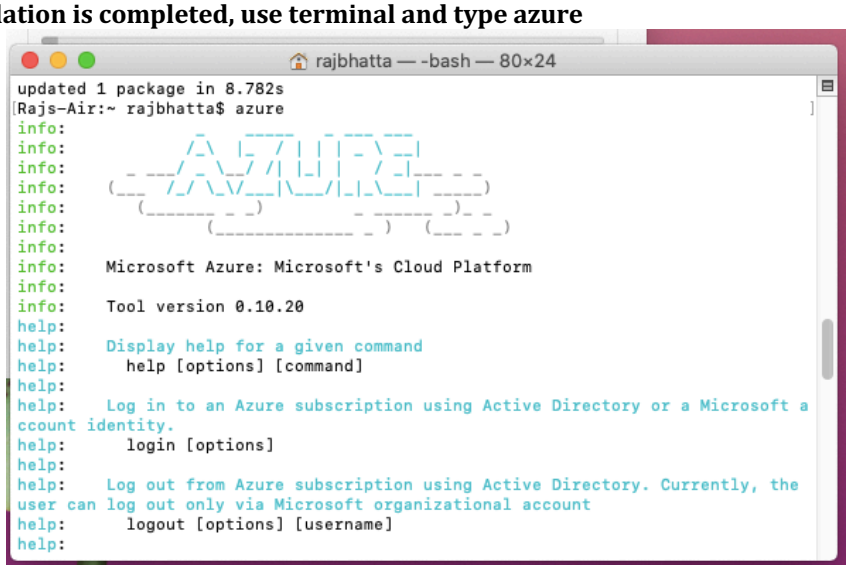
How to work with Azure Function

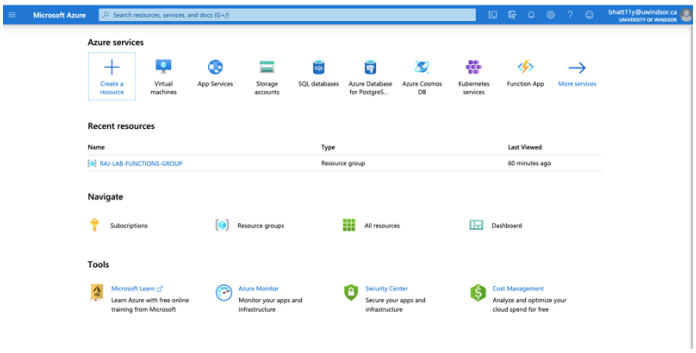
1. **Install Azure CLI using Node NPM package manager**
    - **Goto https://nodejs.org download and install latest version of nodejs**
    - **Goto terminal and type:** npm install -g azure-cli



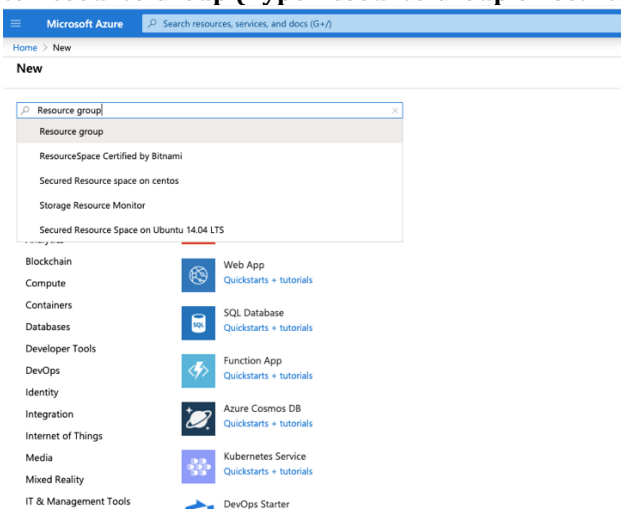
- **Once installation is completed, use terminal and type azure**



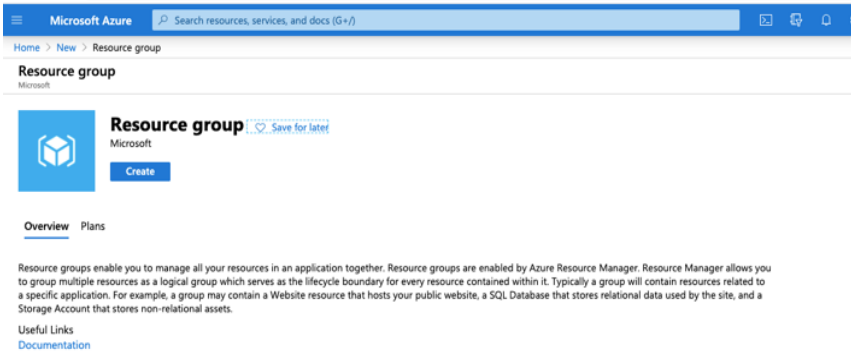
2. **Work with Azure Service Portal Now (I'm using Azure Service provided for student)**
    - **Goto Azure Service Portal**



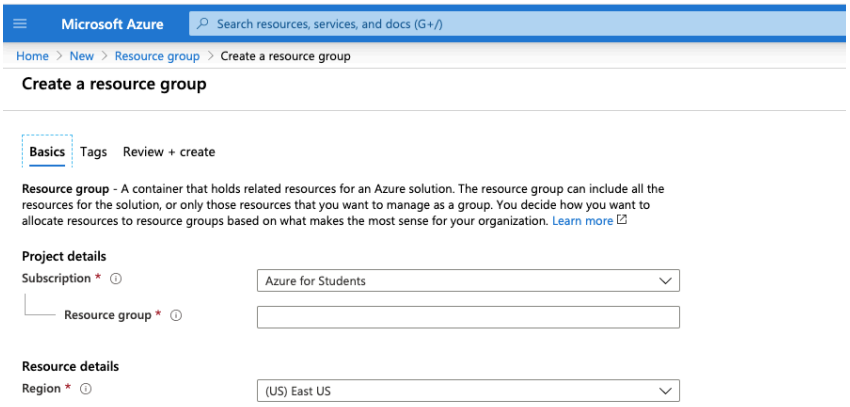
- **Create Resource Group (Type Resource Group on search bar)**



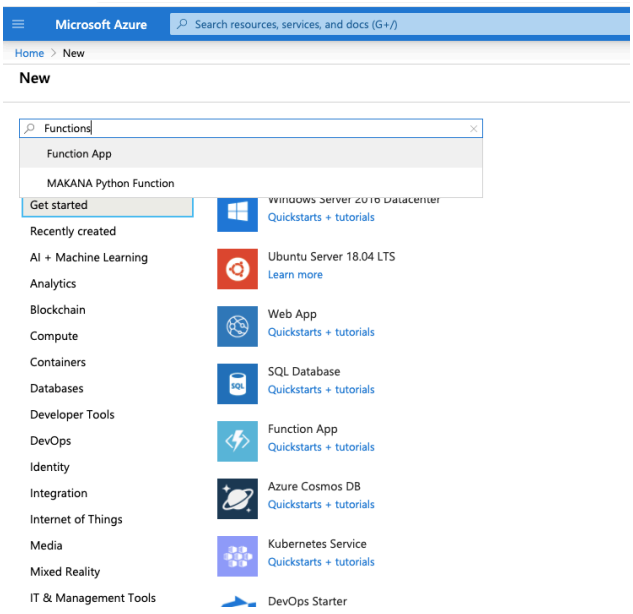
- **Select resource group from dropdown and click create button**



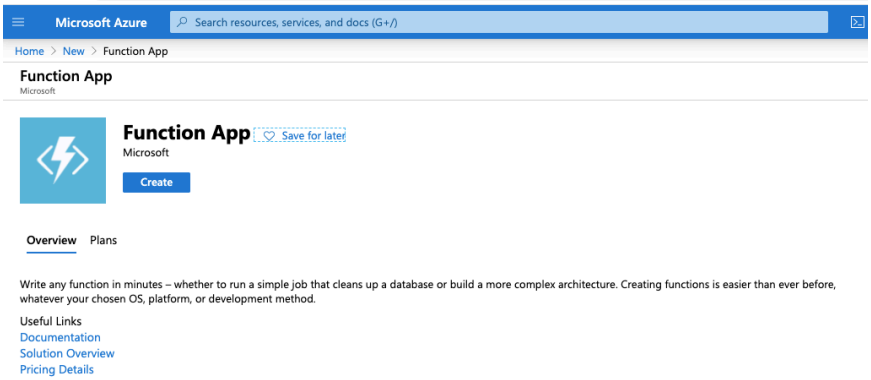
- **Provide proper name and select region where you want to create your resource group**



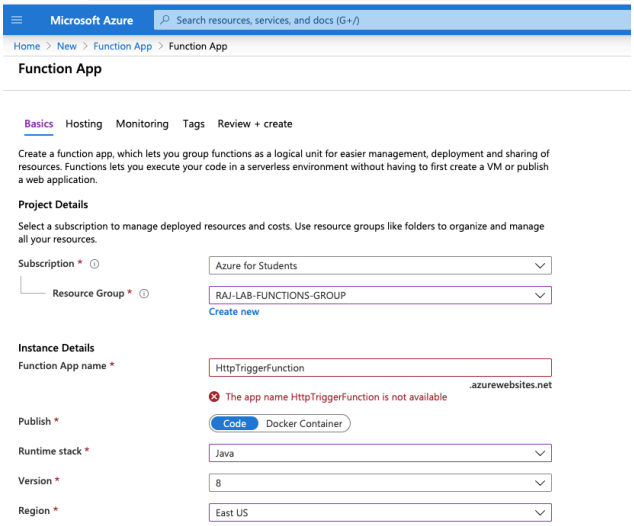
3. **Create HttpTrigger Function**
   - **Goto Azure service portal home and search Function App**



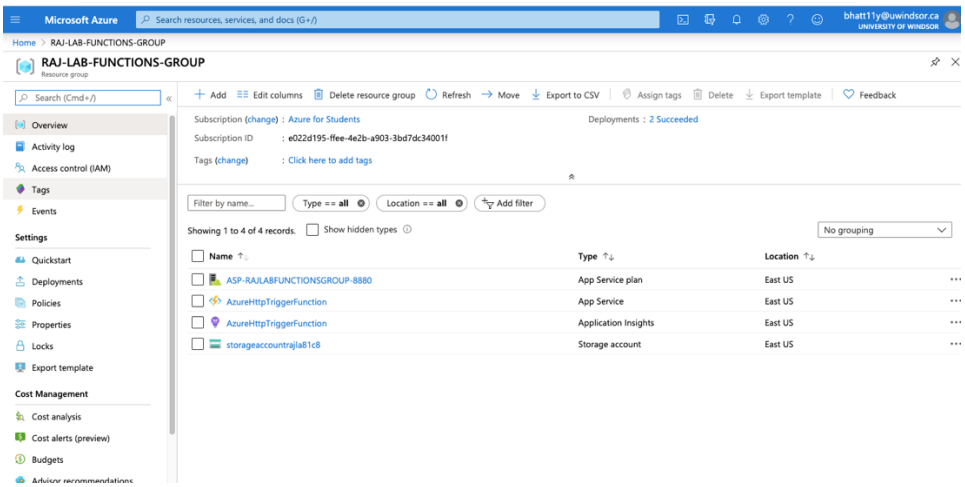
- **Select Function App from dropdown and click on Create**



- **Provide Proper Function App name along with proper language version (In my case I had already created function app name)**

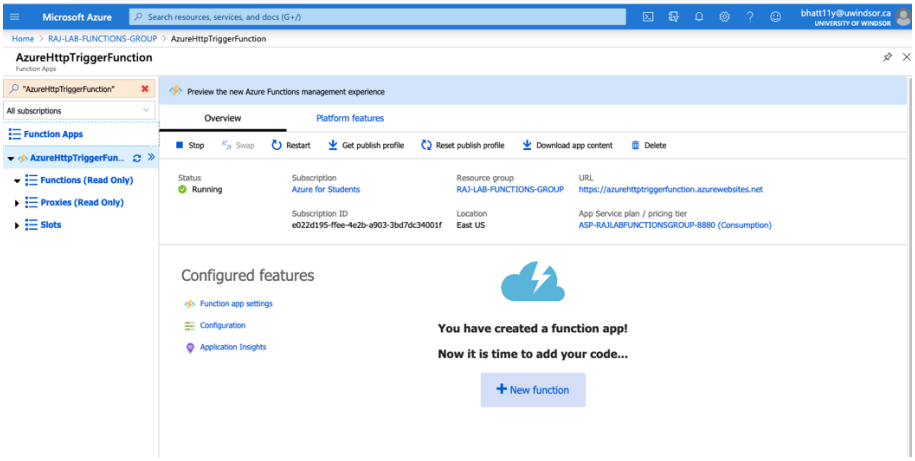


- **Now Goto Home -> Resource Group -> Select created resource group -> then you can see created Function App inside it as shown below:**

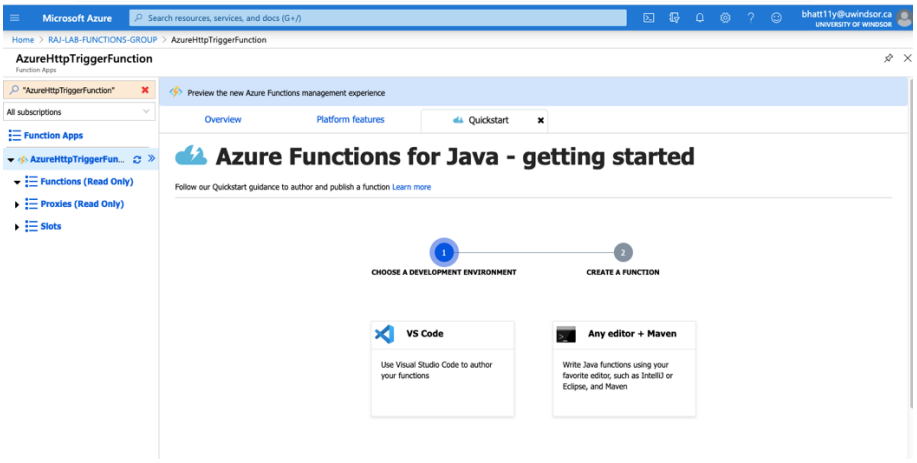


4. Create function inside Function App

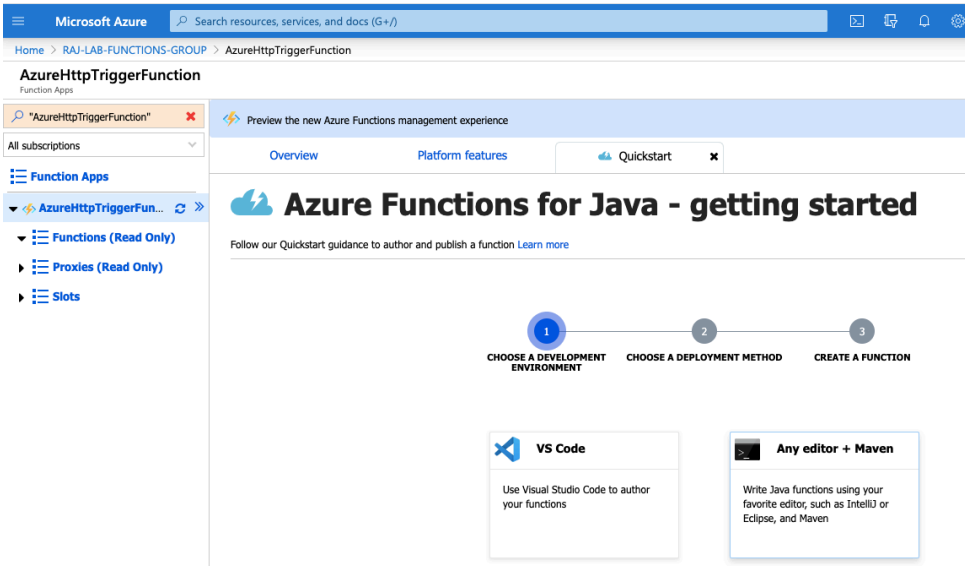
- **Click on Function app that we created**



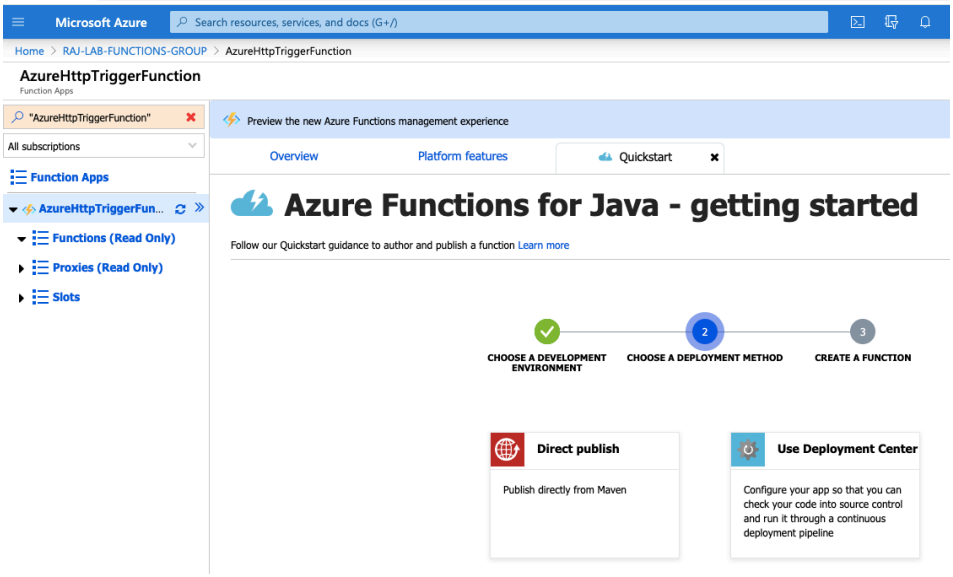
- **Click on New Function**



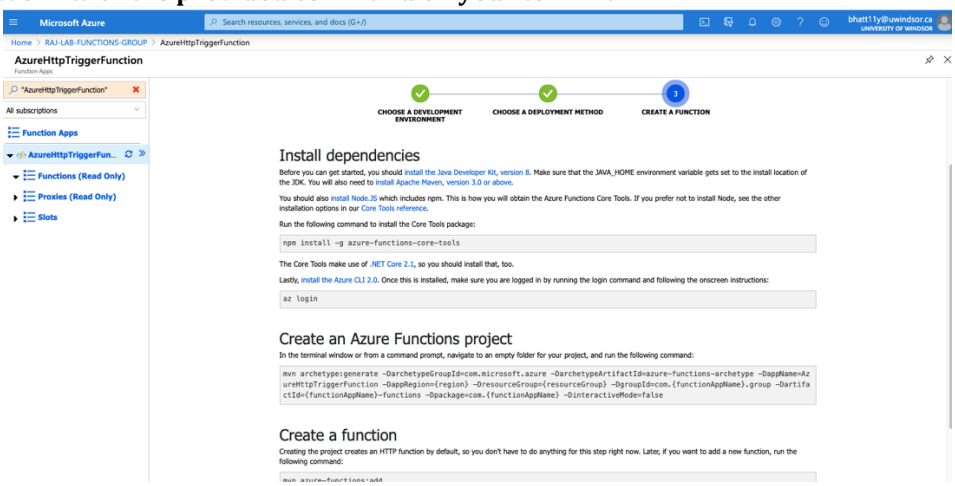
- **Select Any editor+Maven**



- **Direct publish using Maven**

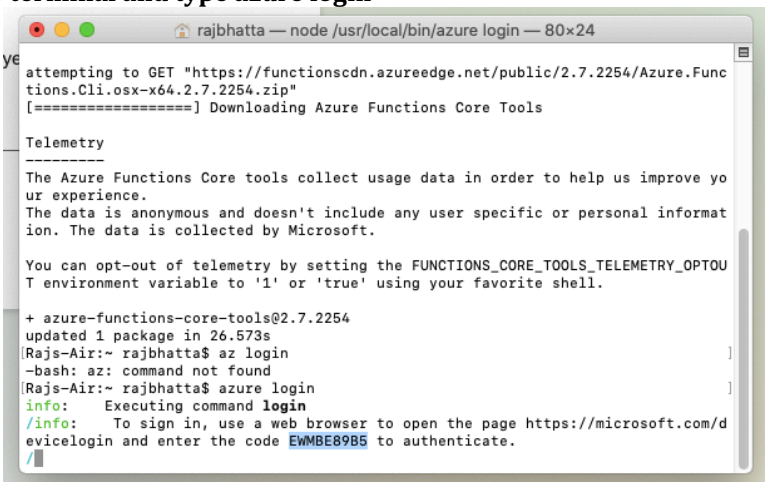


- **Work with the provided command on your terminal.**

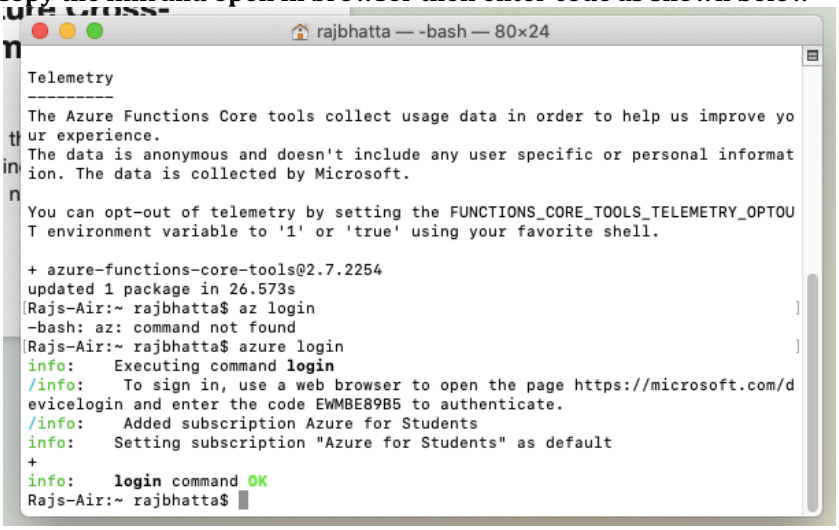


5. Working with Azure CLI for Azure verification

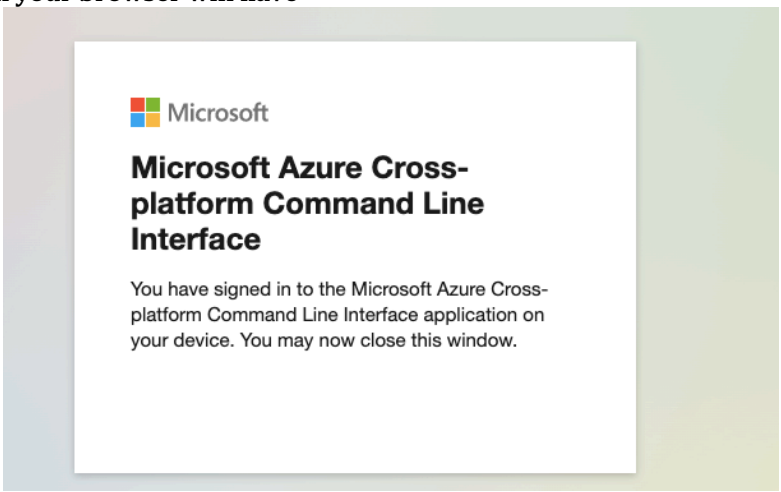
- **Goto terminal and type azure login**



- **Copy the link and open in browser then enter code as shown below**

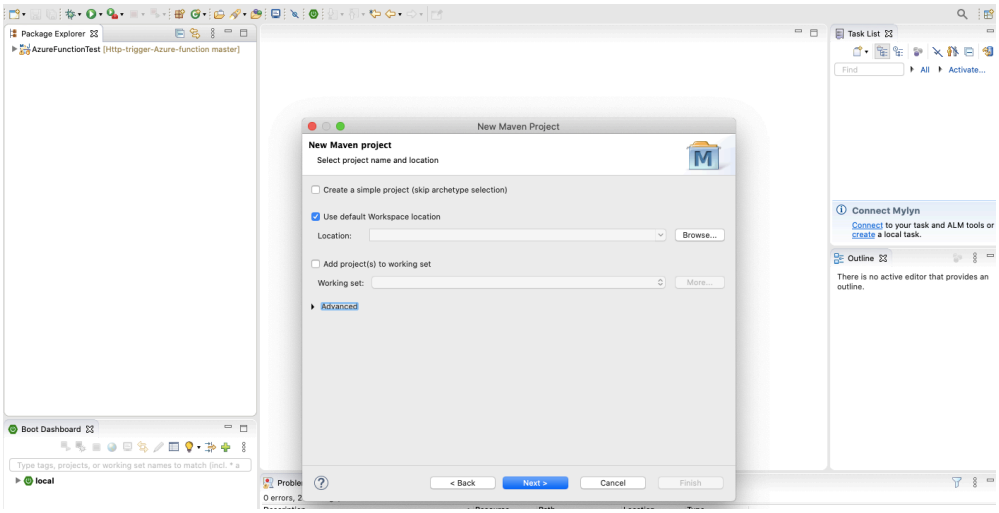


- **Then your browser will have**

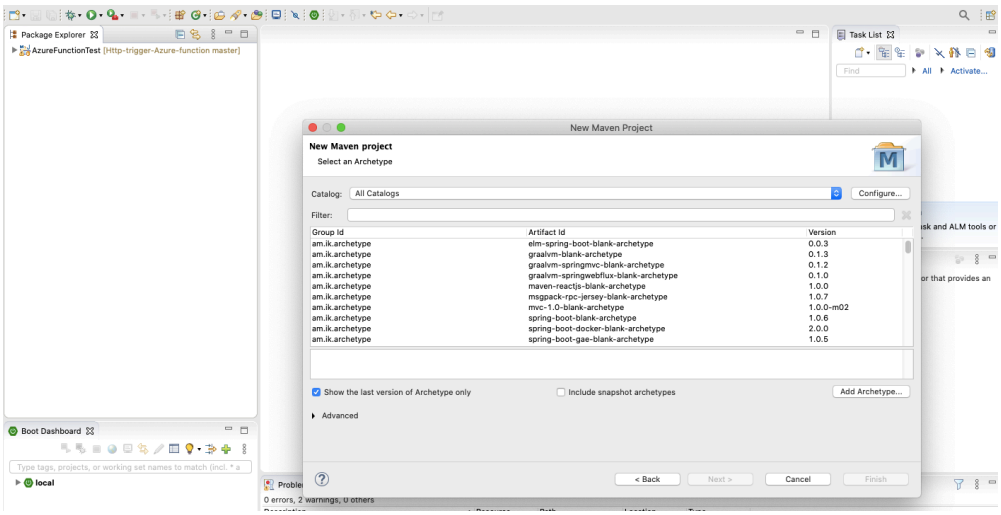


6. Create Azure Trigger Function for development using Eclipse and Maven

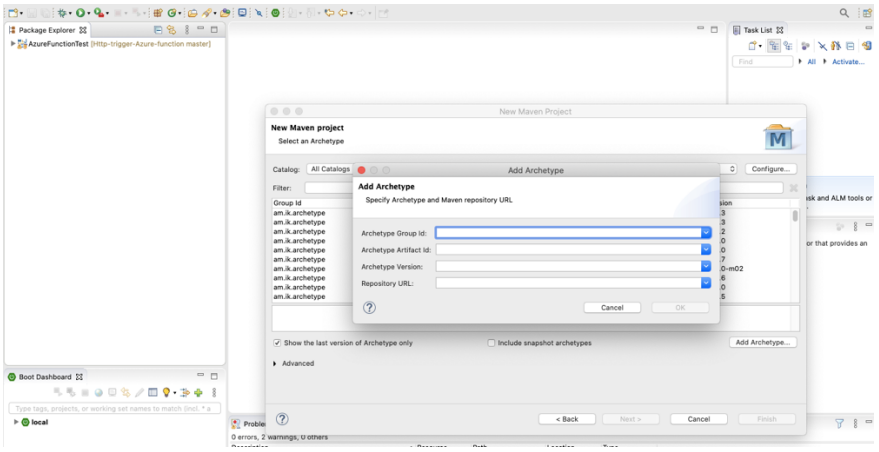
- **Create new Maven project**



- **Click on next**



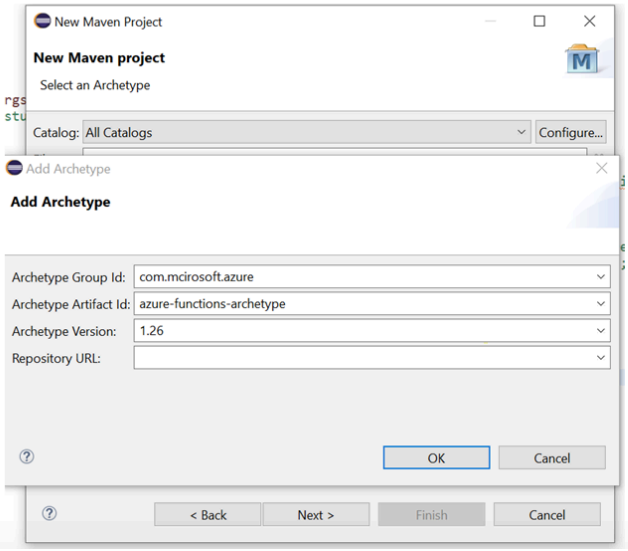
- **Click on add Archtype**



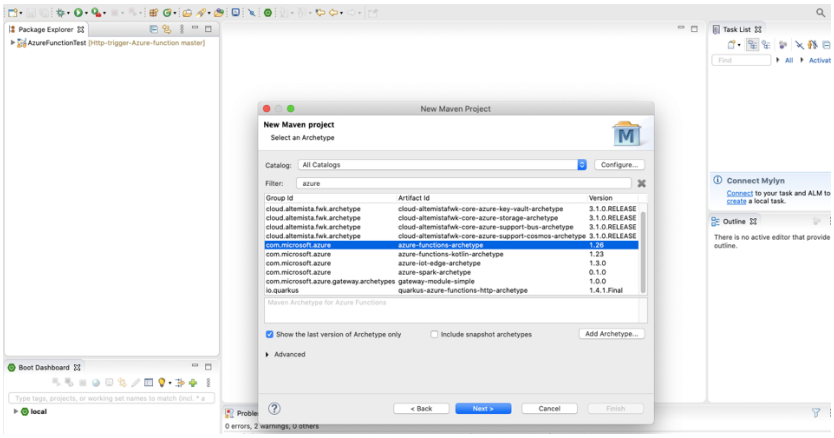
Note: Maven repo for latest Azure function archtype: https://mvnrepository.com/artifact/com.microsoft.azure/azure-functions-archetype

- **Provide archtype as shown below:**

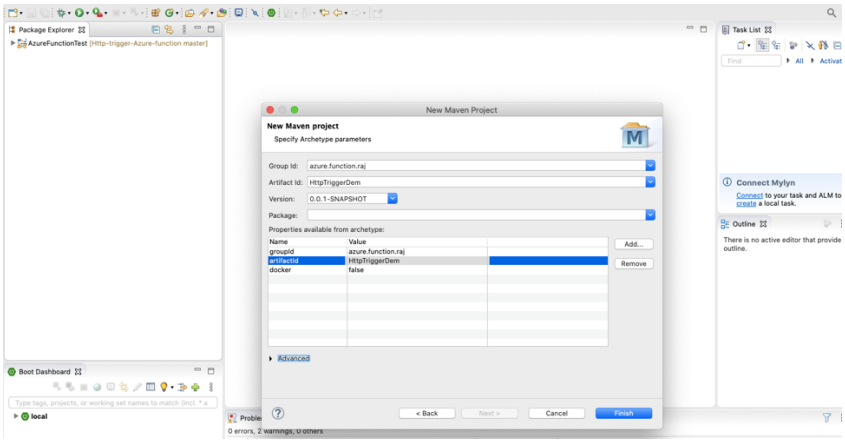
Add a new Arch type while creating a new Maven project in Eclipse. Please refer to the following link for the latest version: https://mvnrepository.com/artifact/com.microsoft.azure/azure-functions-archetype.



- **Search Azure function**



- **Fillup groupId and archtype**



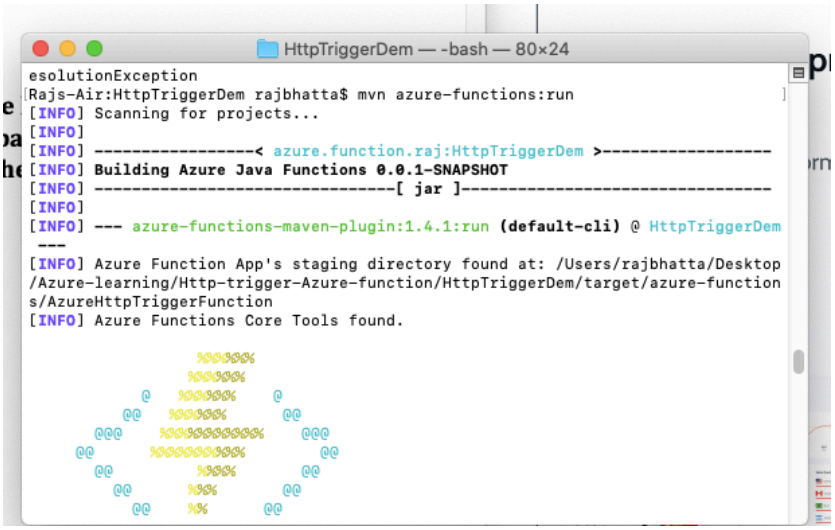
7. Update resource group, function app and region inside POM.XML

```
<?xml version="1.0" encoding="UTF-8" ?>
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>

  <groupId>com.raj</groupId>
  <artifactId>AzureFunctionTest</artifactId>
  <version>0.0.1-SNAPSHOT</version>
  <packaging>jar</packaging>

  <name>Azure Java Functions</name>

  <properties>
    <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
    <maven.compiler.source>1.8</maven.compiler.source>
    <maven.compiler.target>1.8</maven.compiler.target>
    <azure.functions.maven.plugin.version>1.4.1</azure.functions.maven.plugin.version>
    <azure.functions.java.library.version>1.3.1</azure.functions.java.library.version>
    <functionResourceGroup>RAJ-LAB-FUNCTIONS-GROUP</functionResourceGroup>
    <functionAppName>AzureHttpTriggerFunction</functionAppName>
    <functionAppRegion>westus</functionAppRegion>
    <stagingDirectory>${project.build.directory}/azure-functions/${functionAppName}</stagingDirectory>
  </properties>

  <repositories>
    <repository>
      <id>maven.snapshots</id>
      <name>Maven Central Snapshot Repository</name>
      <url>https://oss.sonatype.org/content/repositories/snapshots/</url>
      <releases>
        <enabled>false</enabled>
      </releases>
      <snapshots>
        <enabled>true</enabled>
      </snapshots>
    </repository>
  </repositories>

  <pluginRepositories>
    <pluginRepository>
      <id>maven.snapshots</id>
      <name>Maven Central Snapshot Repository</name>
      <url>https://oss.sonatype.org/content/repositories/snapshots/</url>
      <releases>
        <enabled>false</enabled>
      </releases>
      <snapshots>
        <enabled>true</enabled>
      </snapshots>
    </pluginRepository>
  </pluginRepositories>

  <dependencyManagement>
    <dependencies>
      <dependency>
        <groupId>org.junit.jupiter</groupId>
        <artifactId>junit-jupiter</artifactId>
        <version>5.4.2</version>
      </dependency>
      <dependency>
        <groupId>org.mockito</groupId>
        <artifactId>mockito-core</artifactId>
        <version>2.23.4</version>
      </dependency>
      <dependency>
        <groupId>com.microsoft.azure.functions</groupId>
        <artifactId>azure-functions-java-library</artifactId>
        <version>${azure.functions.java.library.version}</version>
      </dependency>
    </dependencies>
  </dependencyManagement>
```

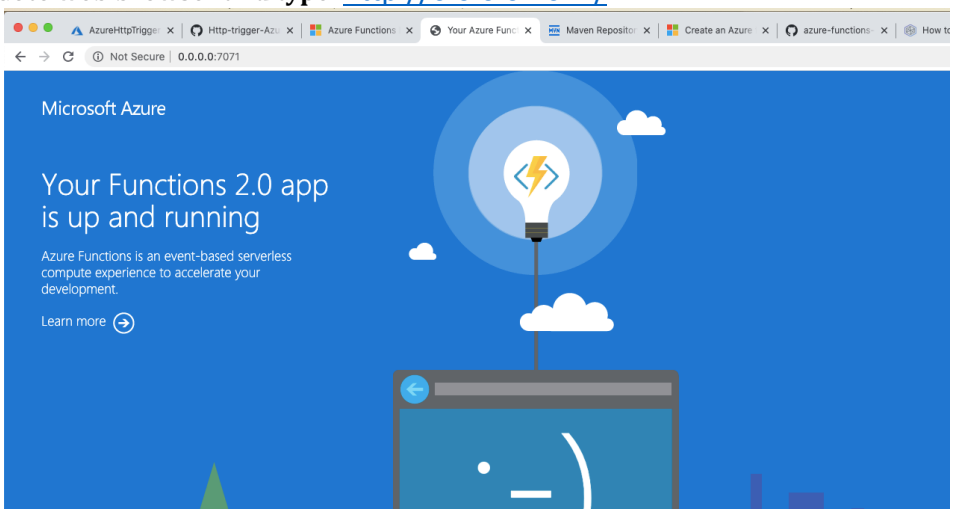
```
<dependencies>
  <dependency>
    <groupId>com.microsoft.azure.functions</groupId>
    <artifactId>azure-functions-java-library</artifactId>
  </dependency>

  <!-- Test -->
  <dependency>
    <groupId>org.junit.jupiter</groupId>
    <artifactId>junit-jupiter</artifactId>
    <scope>test</scope>
  </dependency>
  <dependency>
    <groupId>org.mockito</groupId>
    <artifactId>mockito-core</artifactId>
    <scope>test</scope>
  </dependency>
</dependencies>

<build>
  <pluginManagement>
    <plugins>
      <plugin>
        <groupId>com.microsoft.azure</groupId>
        <artifactId>azure-functions-maven-plugin</artifactId>
        <version>${azure.functions.maven.plugin.version}</version>
      </plugin>
      <plugin>
        <groupId>org.apache.maven.plugins</groupId>
        <artifactId>maven-resources-plugin</artifactId>
        <version>3.1.0</version>
      </plugin>
      <plugin>
        <groupId>org.apache.maven.plugins</groupId>
        <artifactId>maven-dependency-plugin</artifactId>
        <version>3.1.1</version>
      </plugin>
      <plugin>
        <groupId>org.apache.maven.plugins</groupId>
        <artifactId>maven-clean-plugin</artifactId>
        <version>3.1.0</version>
      </plugin>
    </plugins>
  </pluginManagement>

  <plugins>
    <plugin>
      <groupId>com.microsoft.azure</groupId>
      <artifactId>azure-functions-maven-plugin</artifactId>


      <configuration>
        <resourceGroup>${functionResourceGroup}</resourceGroup>
        <appName>${functionAppName}</appName>
        <region>${functionAppRegion}</region>
        <appSettings>
          <!-- Run Azure Function from package file by default -->
          <property>
            <name>WEBSITE_RUN_FROM_PACKAGE</name>
            <value>1</value>
          </property>
          <property>
            <name>FUNCTIONS_EXTENSION_VERSION</name>
            <value>~2</value>
          </property>
        </appSettings>
      </configuration>


      <executions>
        <execution>
          <id>package-functions</id>
          <goals>
```

```
            <goal>package</goal>
          </goals>
        </execution>
      </executions>
    </plugin>



    <plugin>
      <groupId>org.apache.maven.plugins</groupId>
      <artifactId>maven-resources-plugin</artifactId>
      <executions>
        <execution>
          <id>copy-resources</id>
          <phase>package</phase>
          <goals>
            <goal>copy-resources</goal>
          </goals>
          <configuration>
            <overwrite>true</overwrite>
            <outputDirectory>${stagingDirectory}</outputDirectory>
            <resources>
              <resource>
                <directory>${project.basedir}</directory>
                <includes>
                  <include>host.json</include>
                  <include>local.settings.json</include>
                </includes>
              </resource>
            </resources>
          </configuration>
        </execution>
      </executions>
    </plugin>
    <plugin>
      <groupId>org.apache.maven.plugins</groupId>
      <artifactId>maven-dependency-plugin</artifactId>
      <executions>
        <execution>
          <id>copy-dependencies</id>
          <phase>prepare-package</phase>
          <goals>
            <goal>copy-dependencies</goal>
          </goals>
          <configuration>
            <outputDirectory>${stagingDirectory}/lib</outputDirectory>
            <overWriteReleases>false</overWriteReleases>
            <overWriteSnapshots>false</overWriteSnapshots>
            <overWriteIfNewer>true</overWriteIfNewer>
            <includeScope>runtime</includeScope>
            <excludeArtifactIds>azure-functions-java-library</excludeArtifactIds>
          </configuration>
        </execution>
      </executions>
    </plugin>
    <!--Remove obj folder generated by .NET SDK in maven clean-->
    <plugin>
      <artifactId>maven-clean-plugin</artifactId>
      <version>3.1.0</version>
      <configuration>
        <filesets>
          <fileset>
            <directory>obj</directory>
          </fileset>
        </filesets>
      </configuration>
    </plugin>
  </plugins>
</build>

</project>
```

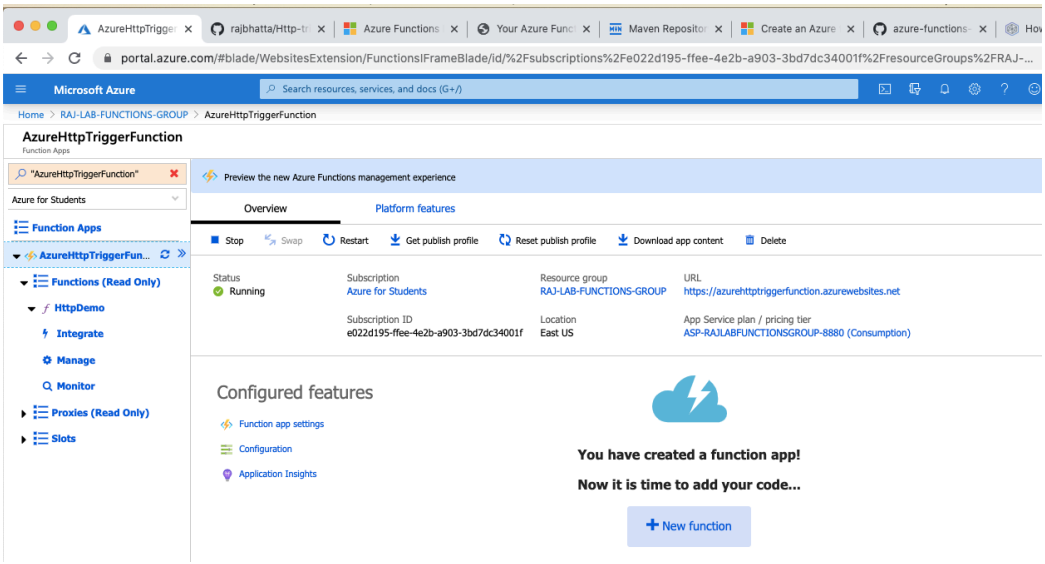
8. **Running Azure function locally**
   - Go inside project folder and type **mvn package**
   - Then **mvn azure-functions:run** to run the Azure function



   - **Goto web browser and type:** http://0.0.0.0:7071/



9. **Deploying Azure Function**
   - Type Azure login to CLI and validate the login
   - Then type: **mvn install package azure-functions:deploy**



Note: Http Demo is the function that we created along with above specified steps. Now, you can utilize this function to handle HttpGet and HttpPost

Note: Step to create Azure function in IntelliJ is provided here
https://docs.microsoft.com/en-us/azure/azure-functions/functions-create-maven-intellij