MyShuttle Application Deployment

1. **Download and Install VirtualBox**
    1. Visit the official VirtualBox website: VirtualBox Downloads
    2. Download the version for your operating system (Windows, macOS, or Linux).
    3. Install in your machine

2. **Download Ubuntu Desktop**
    1. Go to the Ubuntu official website: Ubuntu Downloads
    2. Download the latest LTS version of Ubuntu Desktop (e.g., Ubuntu 22.04).

3. **Install and Setup Ubuntu in VirtualBox**
    1. Open VirtualBox and click on "New" to create a new virtual machine.
    2. Configure the VM:
        Name: <Name the VM of your choice>
        Type: Linux
        Version: Ubuntu (64-bit)
    3. Allocate at least 2048 MB RAM (2 GB) and 20 GB for the virtual hard disk.
    4. Choose "Create a virtual hard disk now" and select VDI (VirtualBox Disk Image).
    5. Set Dynamically allocated storage and complete the setup.
    6. Start the VM and load the downloaded Ubuntu ISO file.

4. **Install Git in Ubuntu**
    1. Open the terminal in Ubuntu and execute the following commands:
        sudo apt update
        sudo apt install git –y
    2. Verify the installation: *git --version*

5. **Clone MyShuttle Project**
    1. Navigate to your desired directory
    2. Clone the MyShuttle repository: *git clone https://samson40221@dev.azure.com/samson40221/MyShuttle/_git/MyShuttle*

6. **Install Maven**
    1. Open the terminal in Ubuntu and execute the following commands:
        sudo apt install maven –y

2. Verify the installation: *mvn –version*

7. Install Java and Tomcat and Set JAVA_HOME, CATALINA_HOME

1. Download and Extract Java: Java Downloads | Oracle
2. Download and Extract Tomcat: Apache Tomcat® - Welcome!
3. Set the environment variables in the .profile file using Nano.

```
#SET JAVA_HOME
JAVA_HOME=/home/sameera/jdk-23_linux-x64_bin/jdk-23.0.1
export JAVA_HOME
PATH=$JAVA_HOME/bin:$PATH
export PATH

#SET CATALINA_HOME
CATALINA_HOME=/home/sameera/apache-tomcat-9.0.98
export CATALINA_HOME

CLASSPATH=$CLASSPATH:$JAVA_HOME/bin
export CLASSPATH
```

8. Configure MySQL

1. Install MySQL: *sudo apt install mysql-server -y*
2. Secure MySQL installation: *sudo mysql_secure_installation*
3. Create the database and user for your application:

   sudo mysql -u root –p

   <.....Run the database scripts.....>

   The database for our project will be created successfully.

9. Build the project

1. To build the MyShuttle project, navigate to the directory containing the pom.xml file
2. Clean and build the project:

   mvn clean

   mvn package –DskipTests

   This generates the WAR file in the `target` directory.

10. Deploy the WAR File into tomcat server and start it

1. Copy the generated WAR file to the *webapps* directory: Do it manually or run the following command.

sudo cp target/myshuttledev.war <..put tomcat webapps directory..>

2. To start the tomcat server, navigate to tomcat bin directory and run the following command: *./startup.sh*
3. Access the deployed application in your browser:
   http://localhost:8080/myshuttledev/