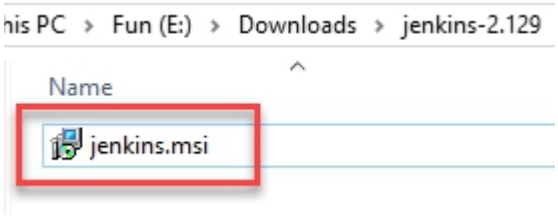
Semester	Semester VIII	
Subject	DevOps Lab	
Subject Professor In-charge	Prof. Yash Shah	
Laboratory	L11B	
Student Name	Ashwini Jadhav	
Roll Number	17101B0038	
Grade and Subject Teacher's Signature		

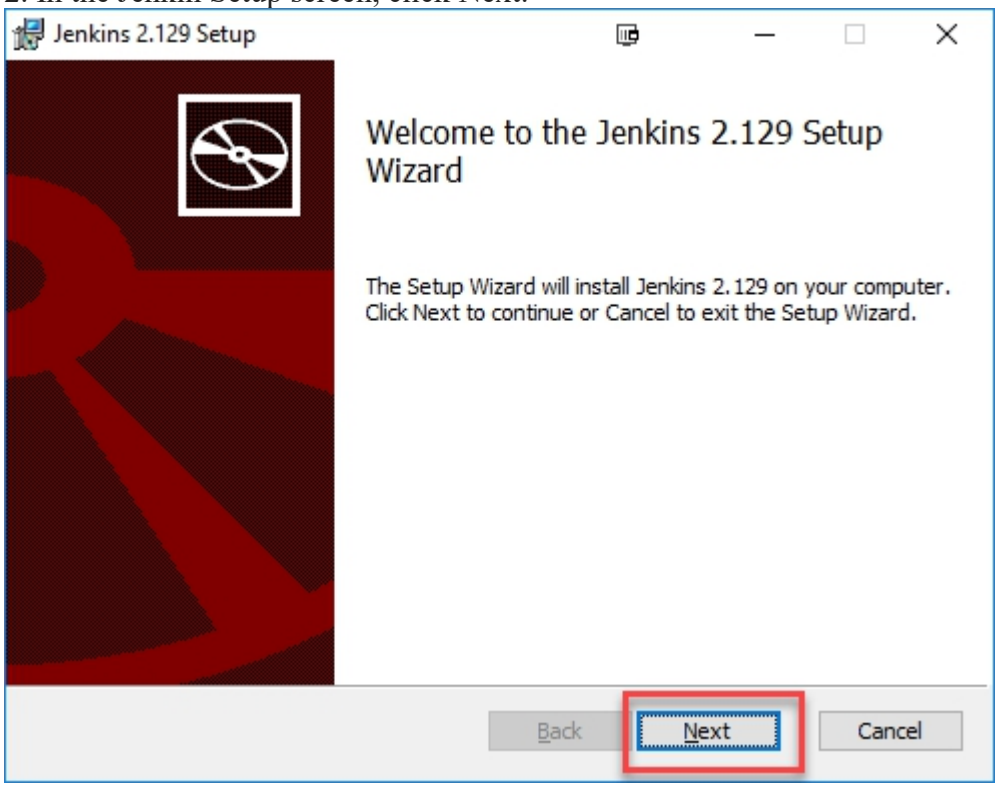
Experiment Number	6	
Experiment Title	To carry out pipelining through Jenkins	
Resources / Apparatus Required	Hardware: Compatible Computer System	Java Development Kit (JDK) v.11
Objectives	Explore and implement pipelines and GUI pipelines on Jenkins	
Theory	**What is jenkins?** Jenkins is an open source Continuous Integration server capable of orchestrating a chain of actions that help to achieve the Continuous Integration process (and not only) in an automated fashion. Jenkins is a widely used application around the world that has around 300k installations and growing day by day. **Need of Jenkins:** The reason Jenkins became so popular is that of its monitoring of repeated tasks which arise during the development of a project. For example, if your team is developing a project, Jenkins will continuously test your project builds and show you the errors in early stages of your development. By using Jenkins, software companies can accelerate their software development process, as Jenkins can automate build and test at a rapid rate. Jenkins supports the complete development lifecycle of software from building, testing, documenting the software, deploying and other stages of a software development lifecycle.	

Installation steps:

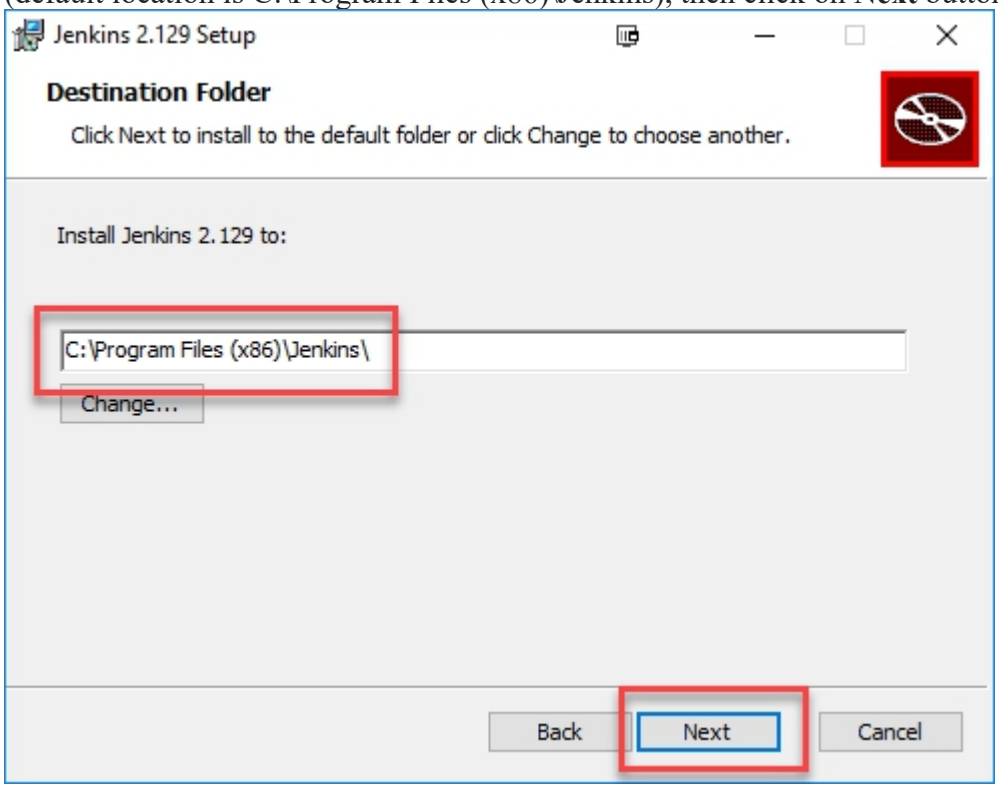
1. Double-click on unzipped jenkins.msi. You can also Jenkin using a WAR (Web application ARchive) but that is not recommended.



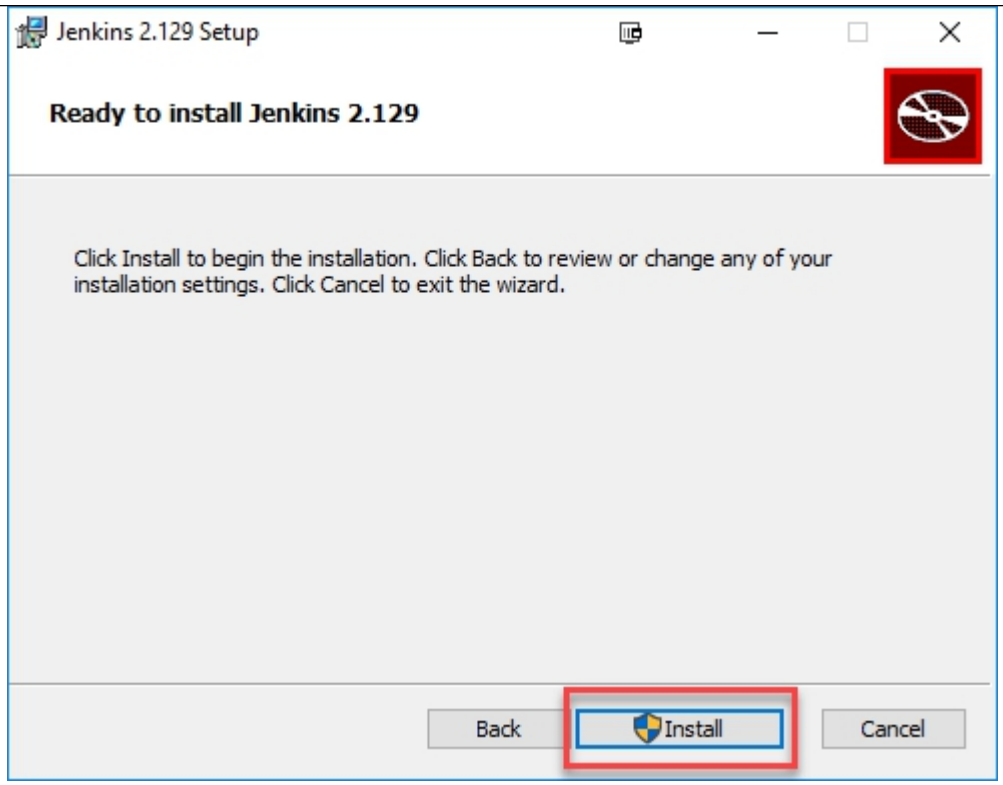
2. In the Jenkin Setup screen, click Next.



3. Choose the location where you want to have the Jenkins instance installed (default location is C:\Program Files (x86)\Jenkins), then click on **Next** button.



4. Click on the Install button.

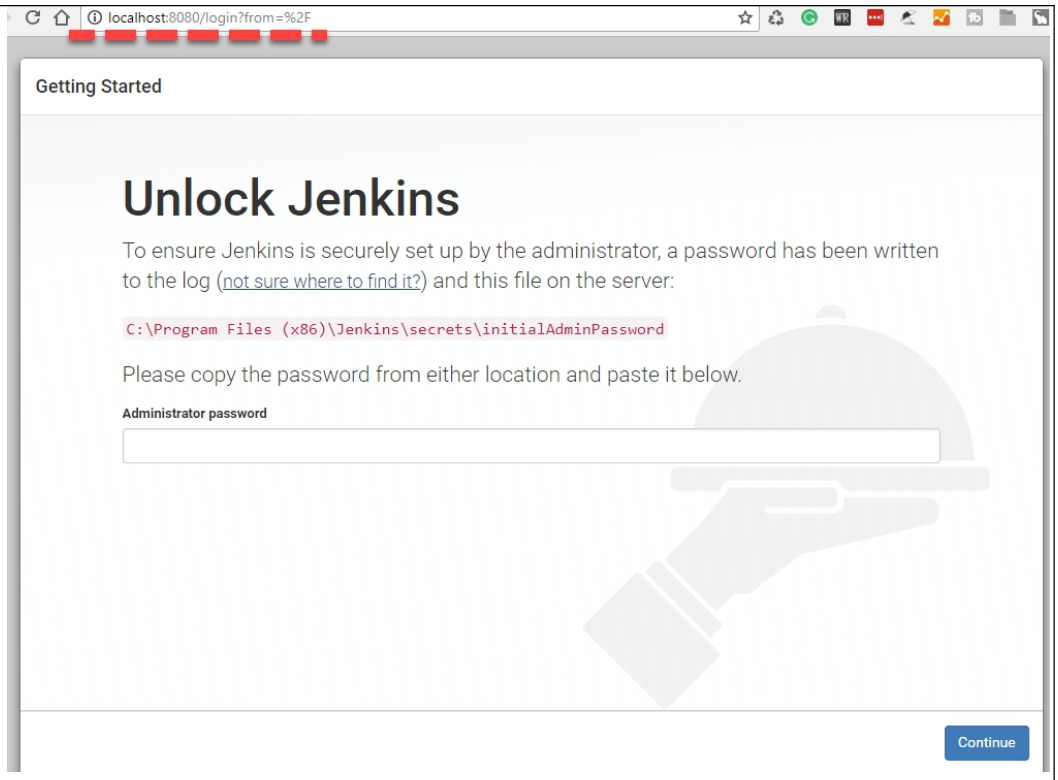


5. Once install is complete, click Finish.

6. After completing the Jenkins installation process, a browser tab will pop-up asking for the initial Administrator password. To access Jenkins, you need to go to browse the following path in your web browser.

http://localhost:8080

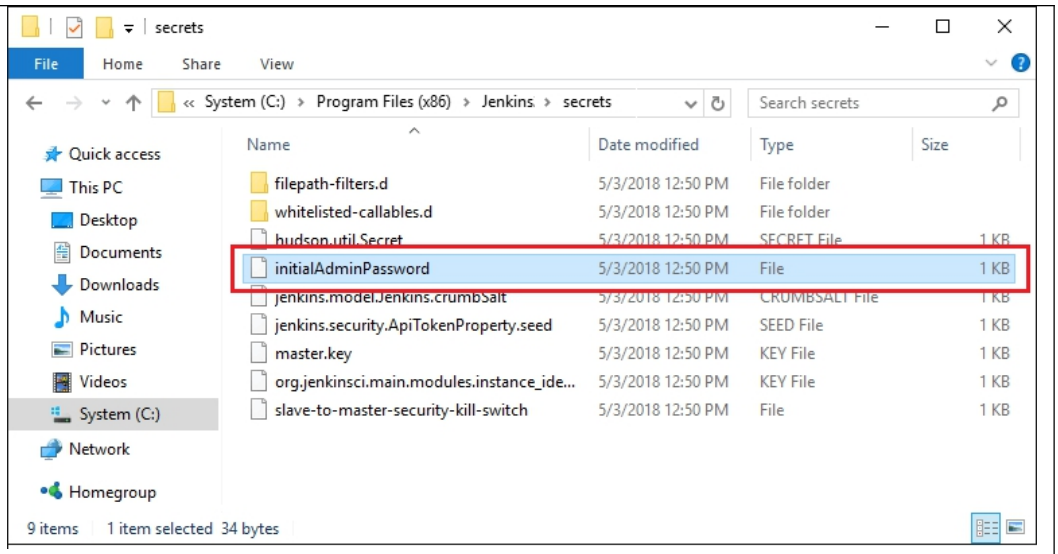
If you can access the above URL, then it confirms that Jenkins is successfully installed in your system.



7. The initial Administrator password should be found under the Jenkins installation path (set at Step 4 in Jenkins Installation).

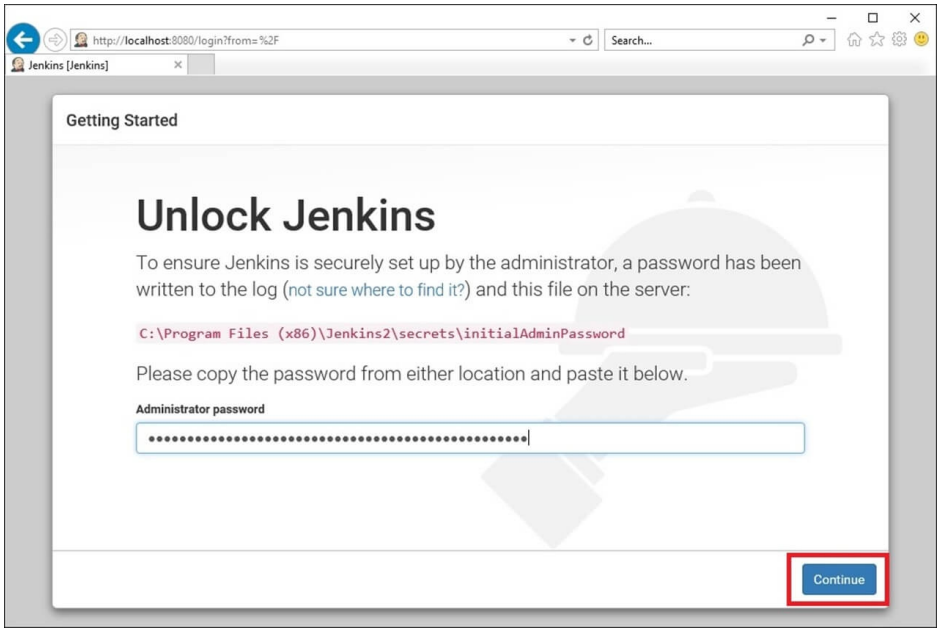
For default installation location to C:\Program Files (x86)\Jenkins, a file called **initialAdminPassword** can be found under C:\Program Files (x86)\Jenkins\secrets.

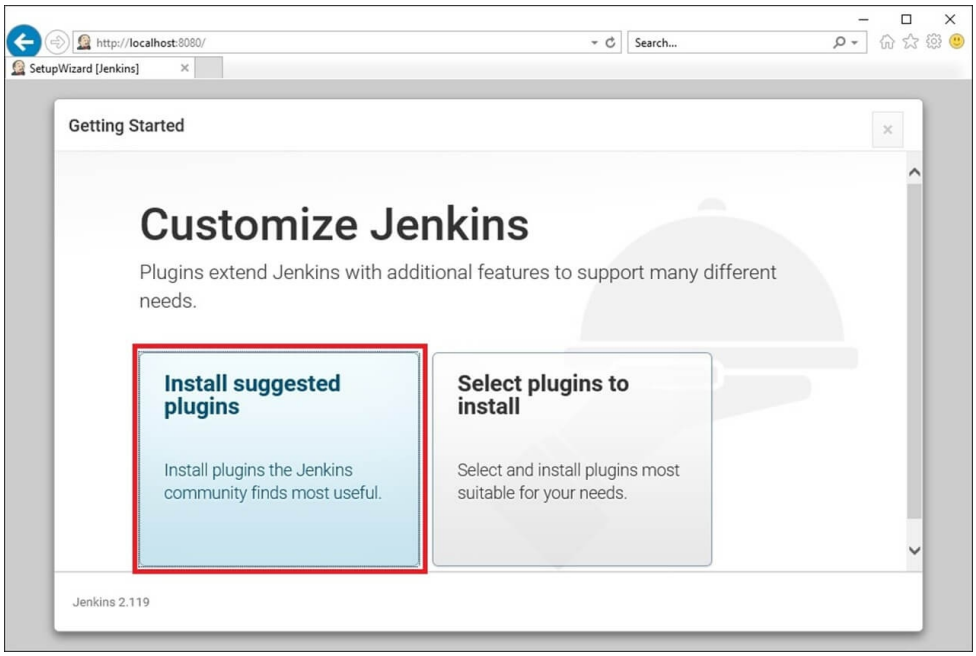
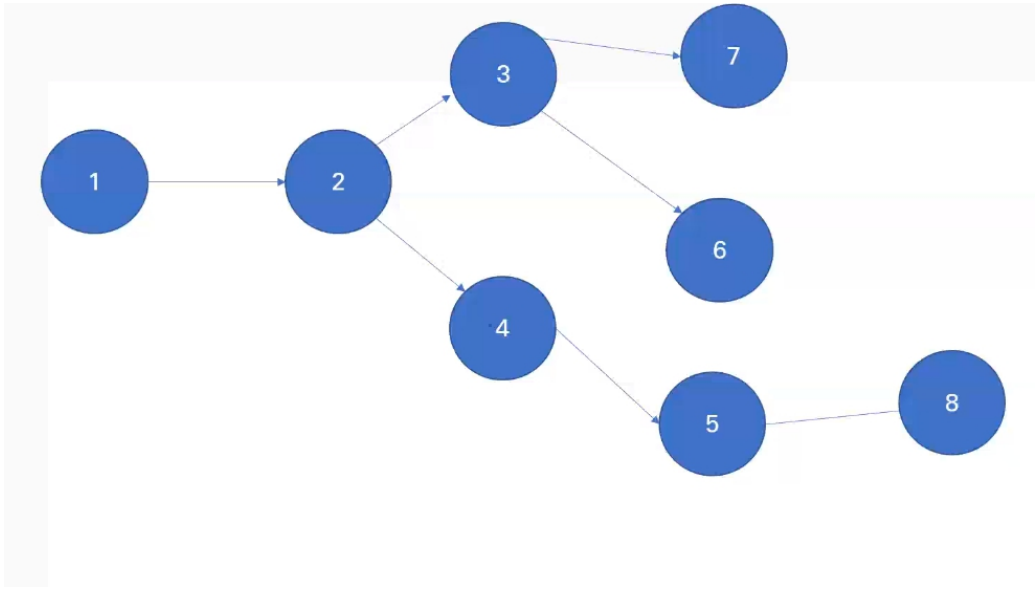
However, If a custom path for Jenkins installation was selected, then you should check that location for **initialAdminPassword** file.



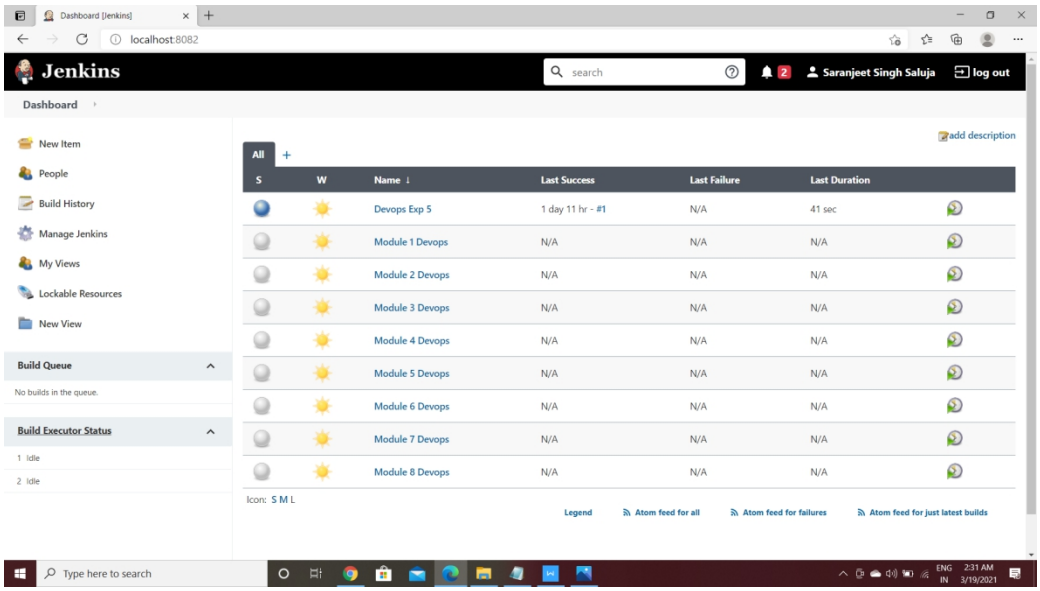
8. Open the highlighted file and copy the content of the **initialAdminPassword** file.

9. Paste the password it into browser's pop-up tab (http://localhost:8080/login?form=%2F) and click on Continue button.

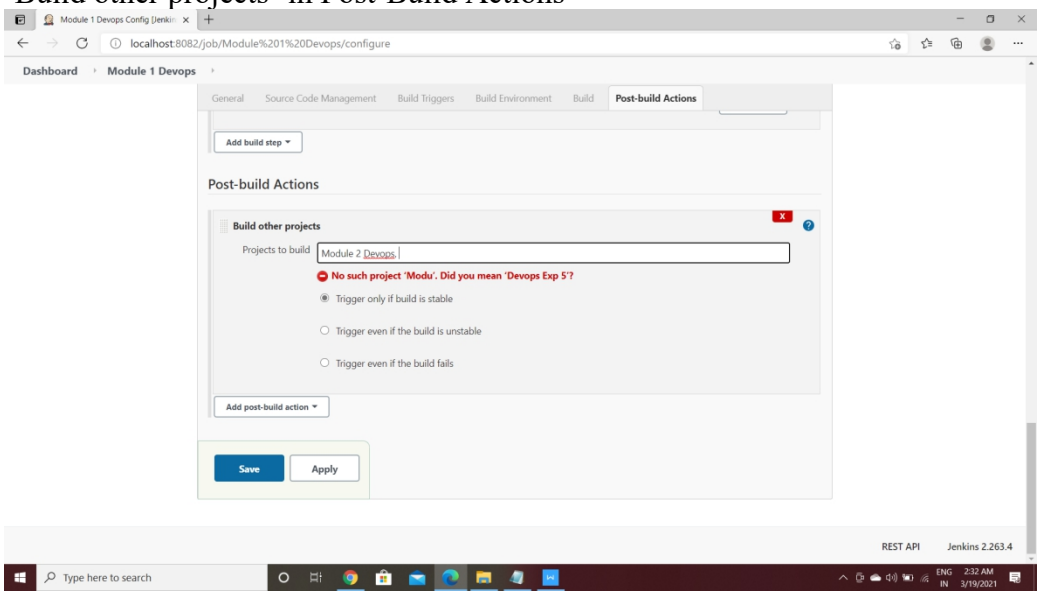


	10. Click on the "Install suggested plugins button" so Jenkins will retrieve and install the essential plugins  11. Jenkins will start to download and install all the necessary plugins needed to create new Jenkins Jobs.
Output	Implementation of the following pipeline: 

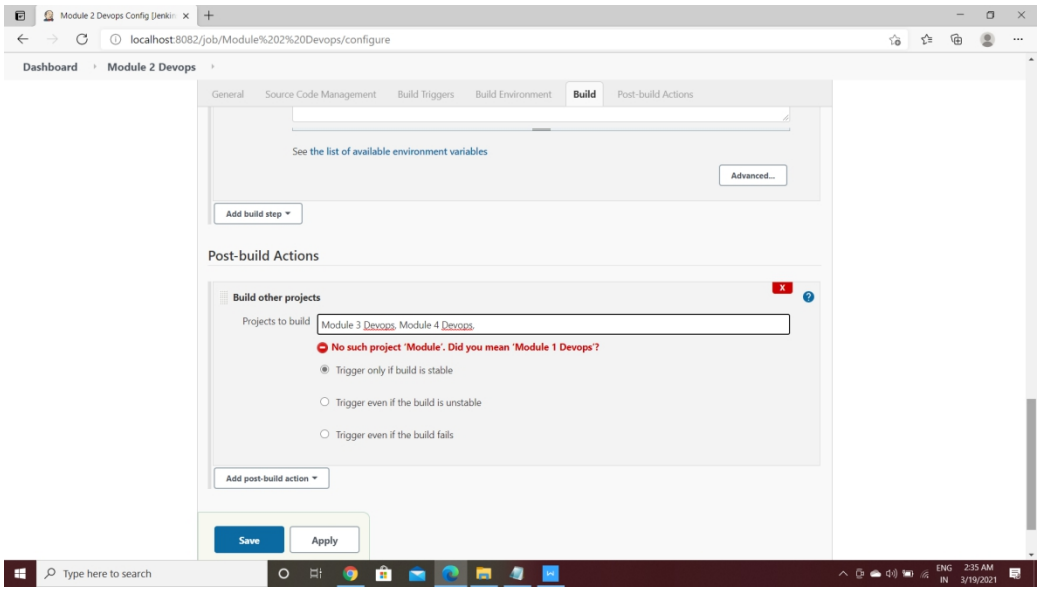
1. Create 8 new projects by clicking on New Item on the Dashboard

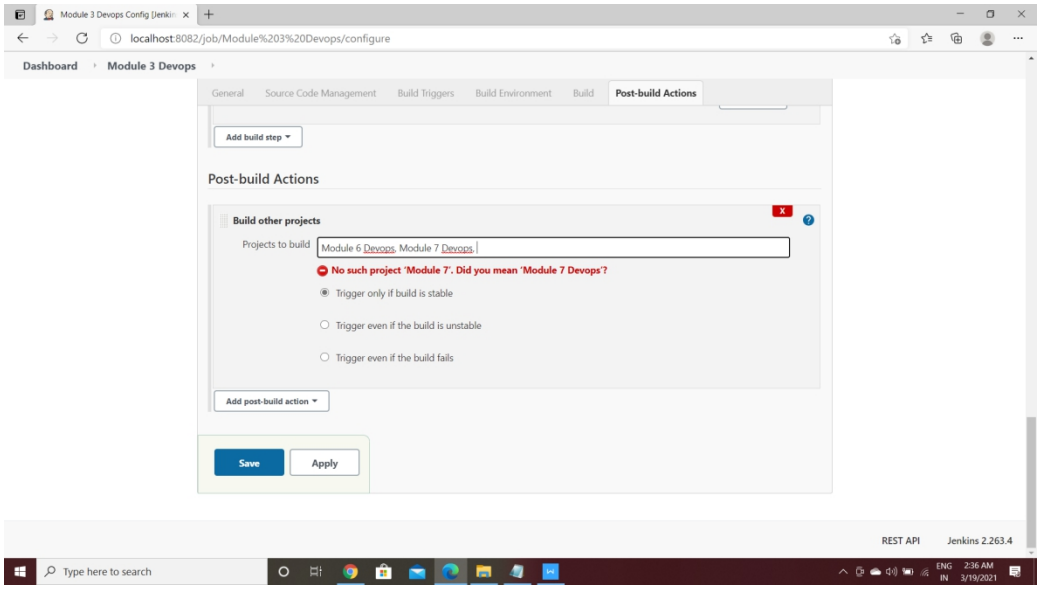


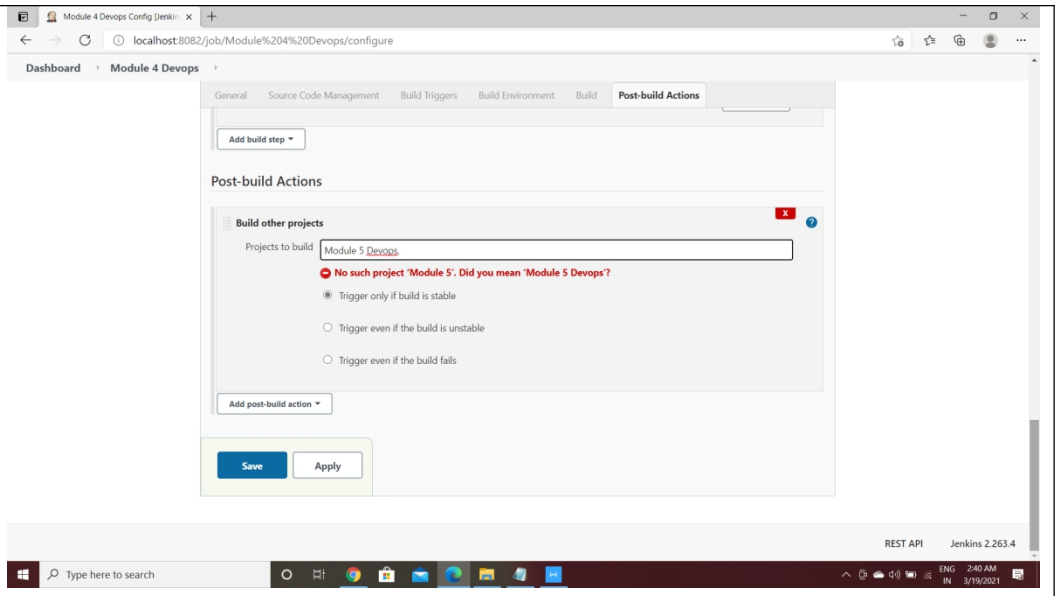
2. In order to create Pipeline from first module, click on Configure, and add 'Build other projects' in Post-Build Actions

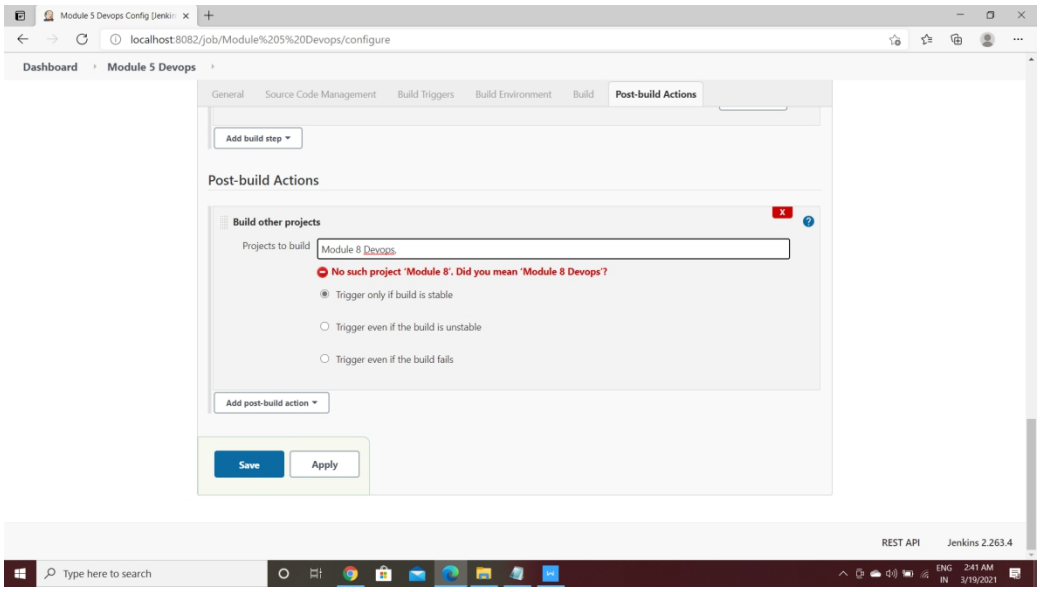


3. Similarly, Post-Build actions for Module 2, 3, 4 and 5 respectively.

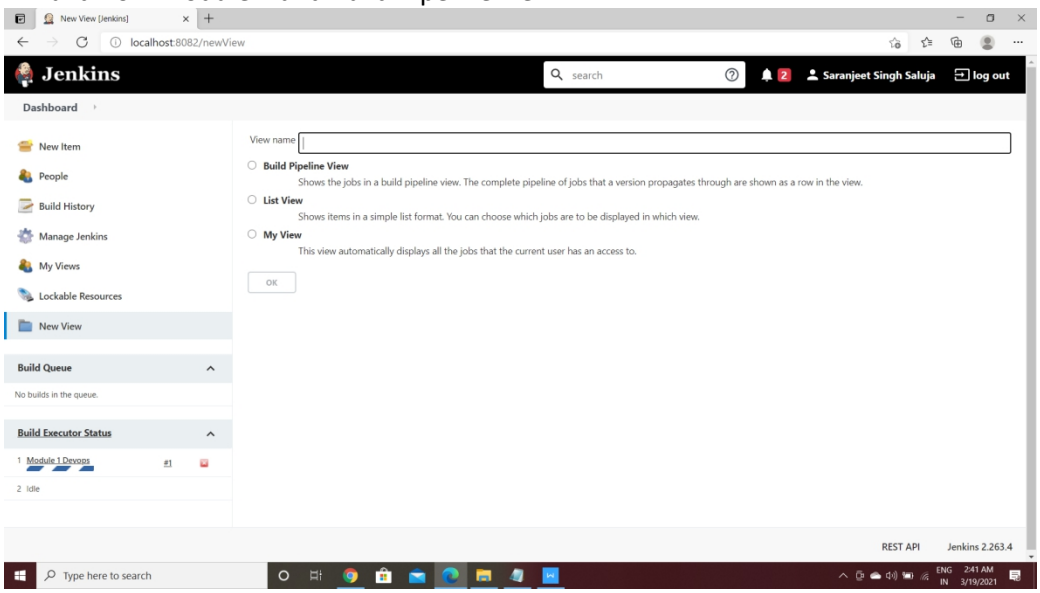




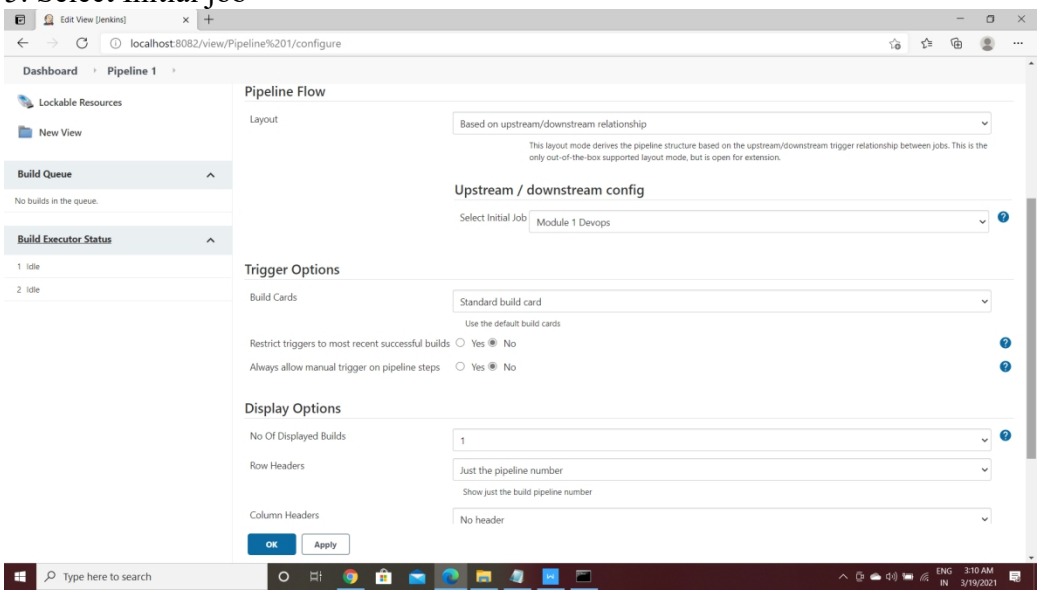

Module 4 Devops Config [Jenkins
localhost:8082/job/Module%204%20Devops/configure
Dashboard
Module 4 Devops
General
Source Code Management
Build Triggers
Build Environment
Build
Post-build Actions
Add build step
Post-build Actions
Build other projects
Projects to build
Module 5 Devops
No such project 'Module 5'. Did you mean 'Module 5 Devops'?
Trigger only if build is stable
Trigger even if the build is unstable
Trigger even if the build fails
Add post-build action
Save
Apply
REST API
Jenkins 2.263.4
Type here to search
ENG
IN
2:40 AM
3/19/2021

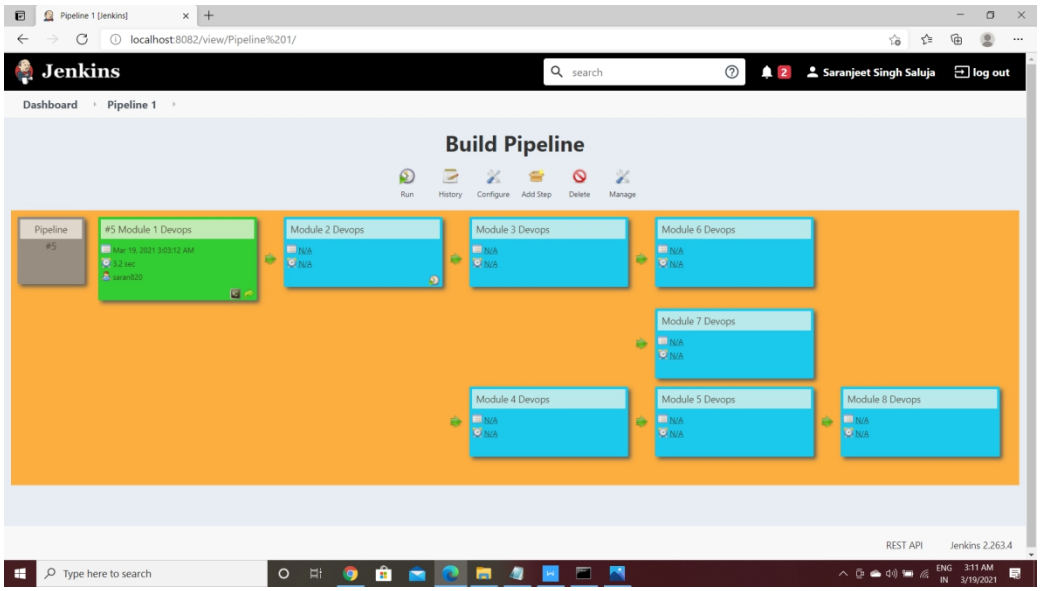
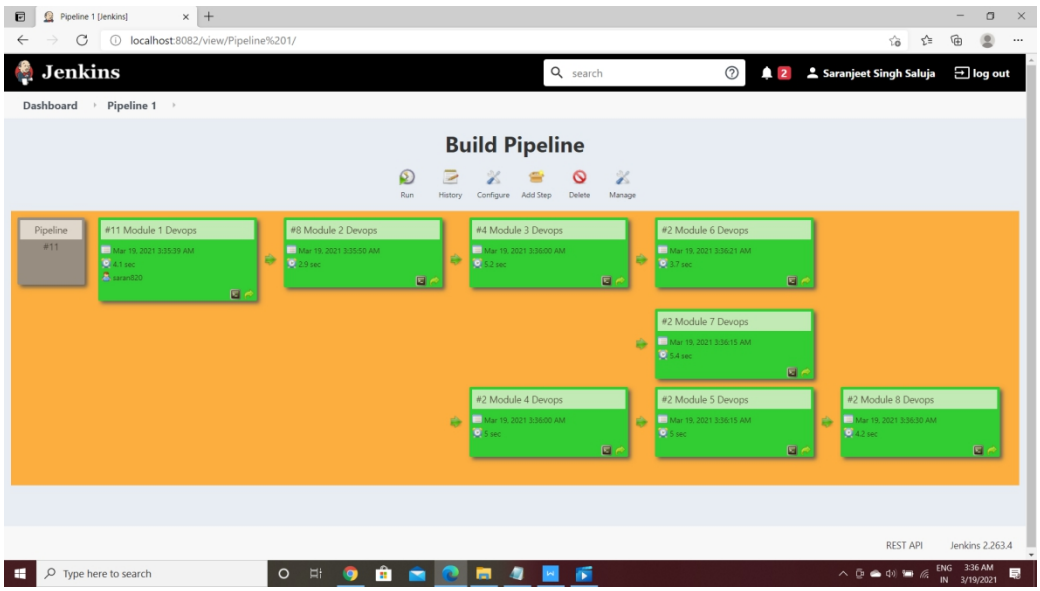

Module 5 Devops Config [Jenkins
localhost:8082/job/Module%205%20Devops/configure
Dashboard
Module 5 Devops
General
Source Code Management
Build Triggers
Build Environment
Build
Post-build Actions
Add build step
Post-build Actions
Build other projects
Projects to build
Module 8 Devops
No such project 'Module 8'. Did you mean 'Module 8 Devops'?
Trigger only if build is stable
Trigger even if the build is unstable
Trigger even if the build fails
Add post-build action
Save
Apply
REST API
Jenkins 2.263.4
Type here to search
ENG
IN
2:41 AM
3/19/2021

4. Build now Module 1 and Build Pipeline view



5. Select Initial job



	6. Run Pipeline  
Conclusion	Thus, we have implemented pipelining using jenkins and created pipeline GUI to jenkins.