

CSI3025

Application Development and Deployment

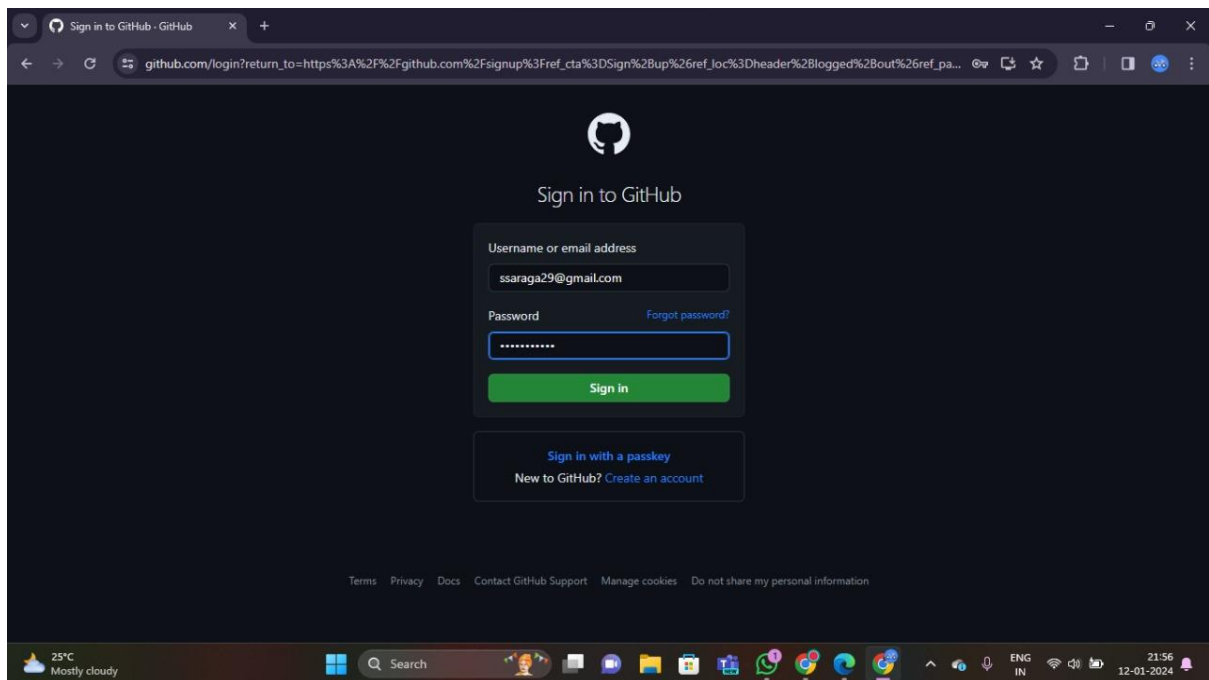
Winter Semester 2023 – '24

Digital Assignment - 1

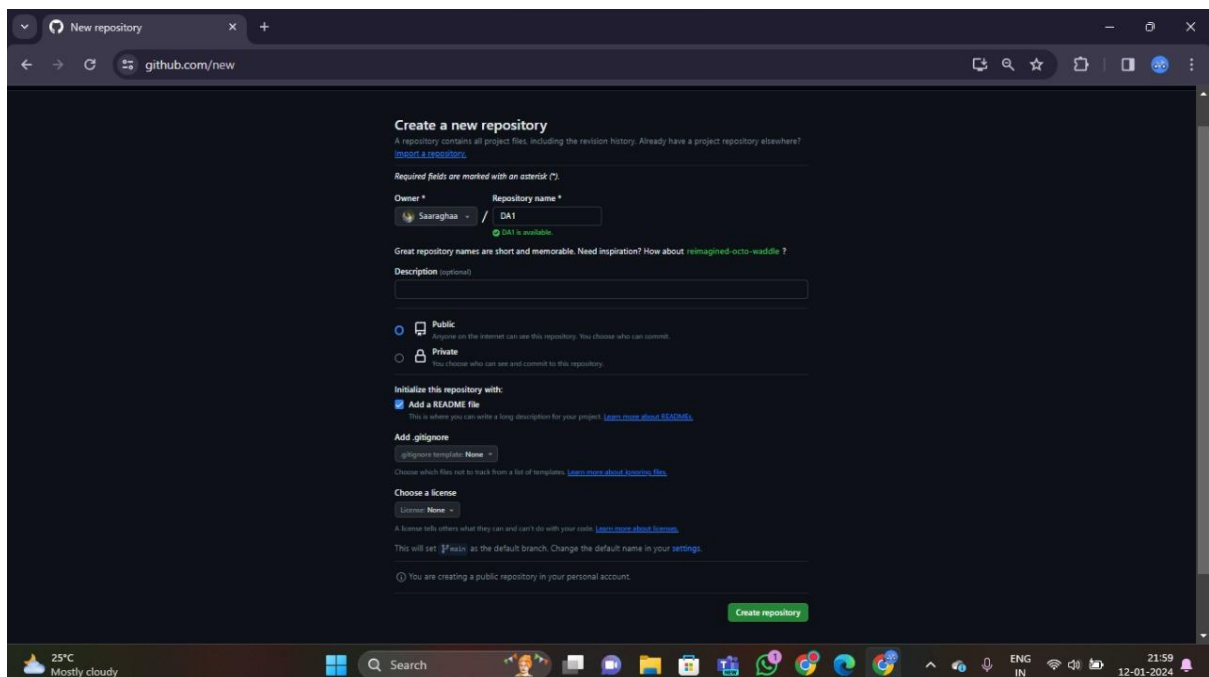
SARAGA S
20MIC0081

GITHUB SIGN IN:

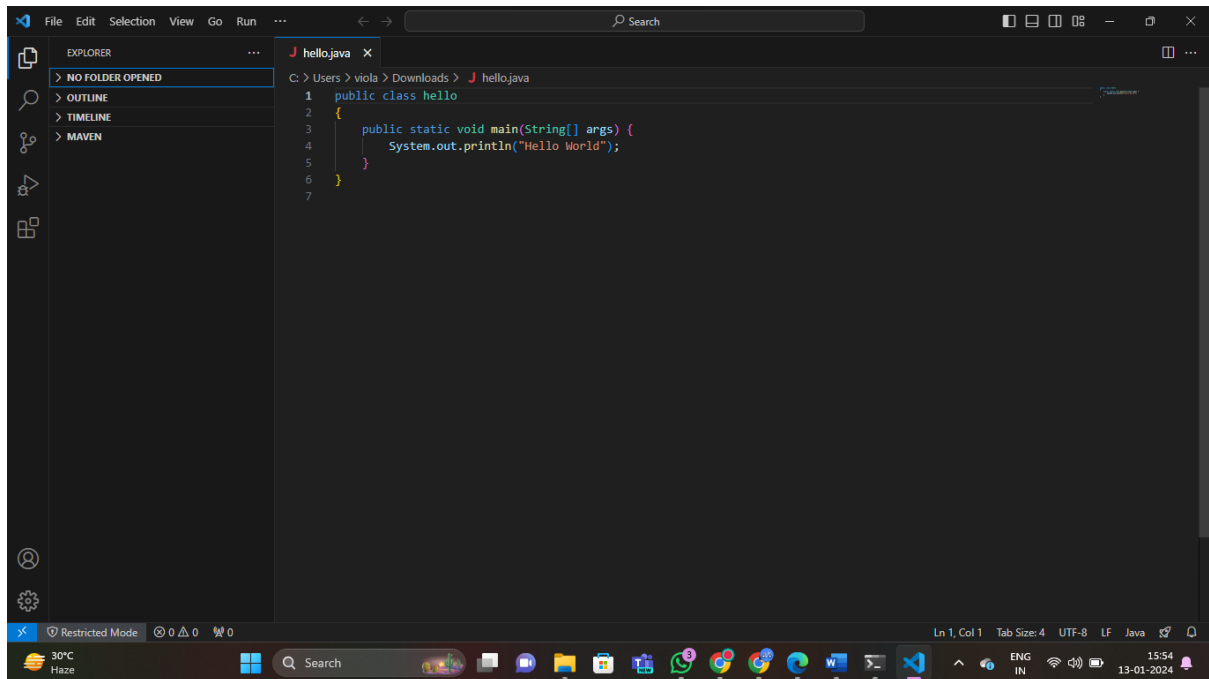
Step – 1: Sign in to GITHUB.



Step – 2: Create a new repository, make it public.



Step – 3: Hello world program.

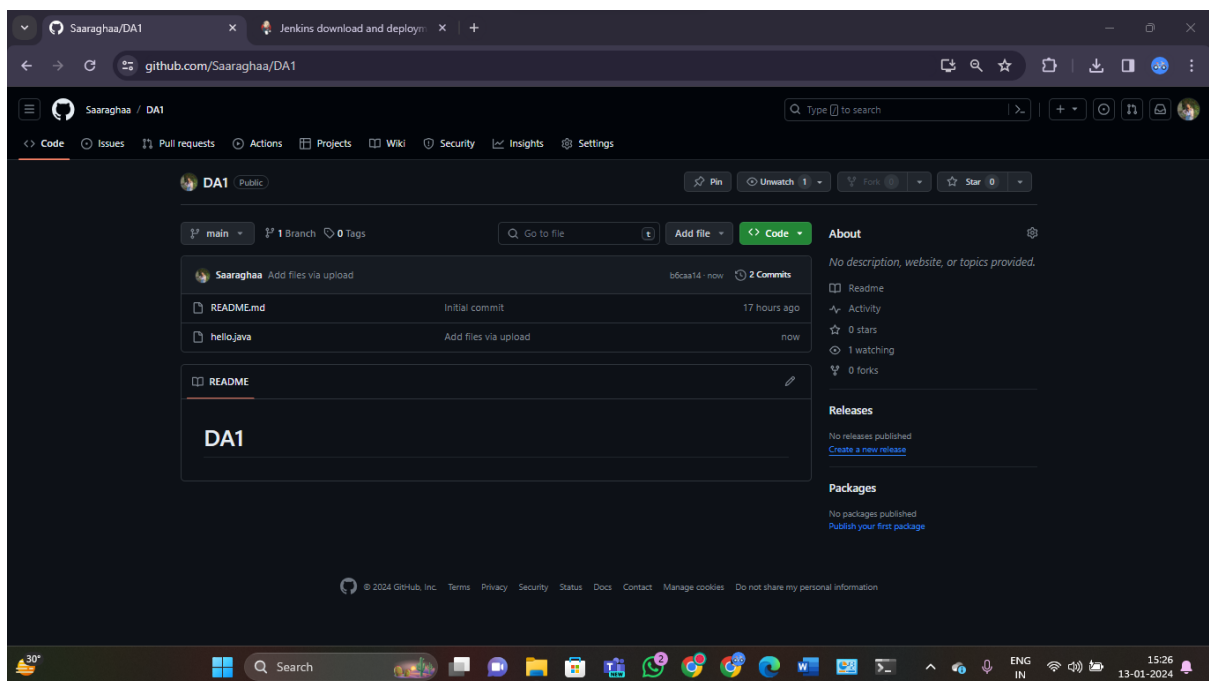


The screenshot shows an IDE window with a file named 'hello.java' open. The code is as follows:

```
1 public class hello
2 {
3     public static void main(String[] args) {
4         System.out.println("Hello World");
5     }
6 }
7
```

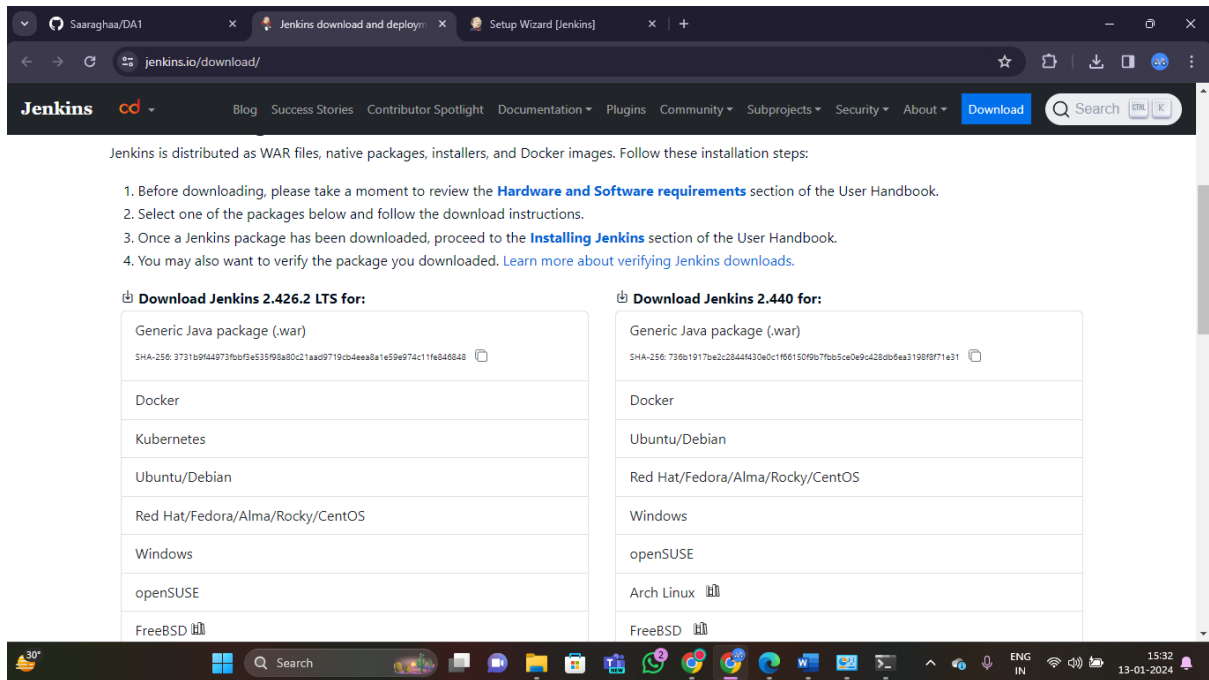
The IDE interface includes a sidebar with 'EXPLORER', 'OUTLINE', 'TIMELINE', and 'MAVEN' views. The status bar at the bottom indicates 'Ln 1, Col 1', 'Tab Size: 4', 'UTF-8', 'LF', 'Java', and 'Restricted Mode'.

Step – 4: Hello world program in GitHub repository

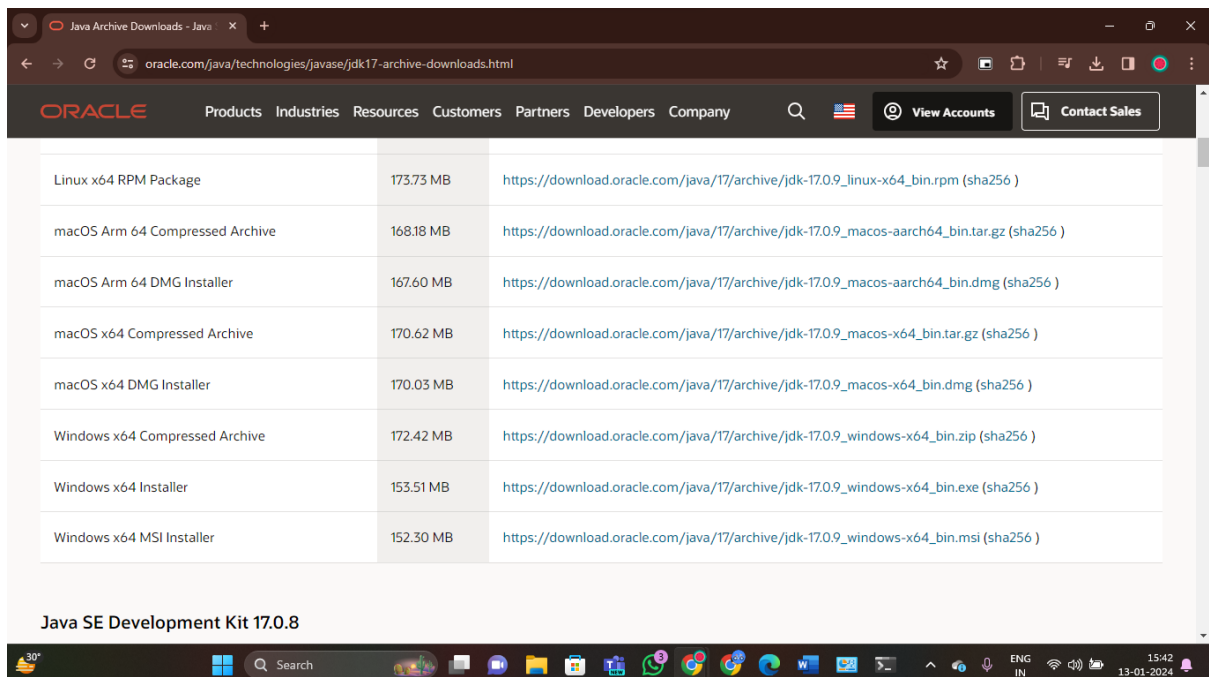


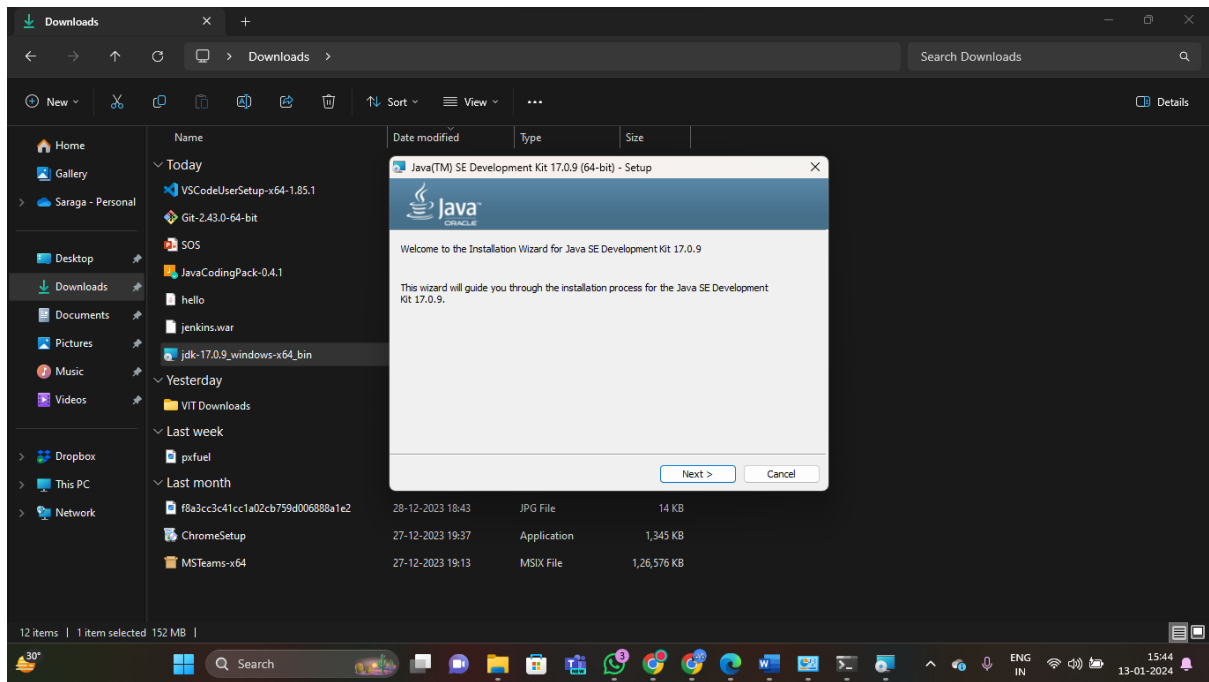
Jenkins installation

Step – 1: Download Jenkins 2.426.2 LTS .war from <https://www.jenkins.io/download/>

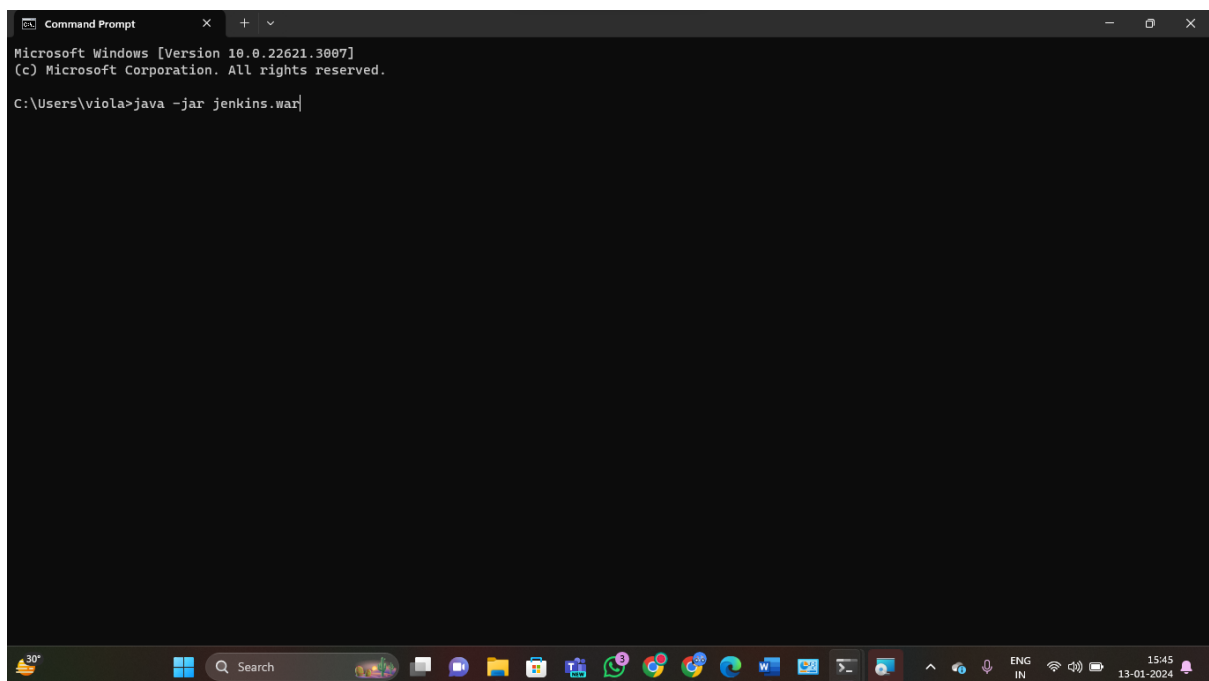


Step – 2: Download java 17.0.9 installer file and install on windows.





Step – 3: Open terminal and run command “java -jar Jenkins.war” to install Jenkins on windows.



Step – 4: Copy the password that is generated.

```
C:\Windows\System32\cmd.e
ty.jsp.JettyJspServlet
2024-01-13 09:51:31.745+0000 [id=1] INFO o.e.j.s.DefaultSessionIdManager#doStart: Session workerName=node0
2024-01-13 09:51:34.484+0000 [id=1] INFO hudson.WebAppMain#contextInitialized: Jenkins home directory: C:\Users\viola\.jenkins found at: $user
r.home/.jenkins
2024-01-13 09:51:35.400+0000 [id=1] INFO o.e.j.s.handler.ContextHandler#doStart: Started w.@12aa4996{Jenkins v2.426.2,/,file:///C:/Users/viola/.jenkins/war/,AVAILABLE}{C:\Users\viola\.jenkins\war}
2024-01-13 09:51:35.492+0000 [id=1] INFO o.e.j.server.AbstractConnector#doStart: Started ServerConnector@20c0a64d{HTTP/1.1, (http/1.1)}{0.0.0.0:8080}
2024-01-13 09:51:35.929+0000 [id=1] INFO org.eclipse.jetty.server.Server#doStart: Started Server@12359a82{STARTING}[10.0.18,sto=0] @12051ms
2024-01-13 09:51:35.936+0000 [id=31] INFO winstone.Logger#logInternal: Winstone Servlet Engine running: controlPort=disabled
2024-01-13 09:51:36.440+0000 [id=36] INFO jenkins.InitReactorRunner$1#onAttained: Started initialization
2024-01-13 09:51:36.658+0000 [id=34] INFO jenkins.InitReactorRunner$1#onAttained: Listed all plugins
2024-01-13 09:51:40.610+0000 [id=46] INFO jenkins.InitReactorRunner$1#onAttained: Prepared all plugins
2024-01-13 09:51:40.630+0000 [id=46] INFO jenkins.InitReactorRunner$1#onAttained: Started all plugins
2024-01-13 09:51:40.658+0000 [id=47] INFO jenkins.InitReactorRunner$1#onAttained: Augmented all extensions
2024-01-13 09:51:41.899+0000 [id=47] INFO jenkins.InitReactorRunner$1#onAttained: System config loaded
2024-01-13 09:51:41.907+0000 [id=47] INFO jenkins.InitReactorRunner$1#onAttained: System config adapted
2024-01-13 09:51:41.946+0000 [id=47] INFO jenkins.InitReactorRunner$1#onAttained: Loaded all jobs
2024-01-13 09:51:41.957+0000 [id=47] INFO jenkins.InitReactorRunner$1#onAttained: Configuration for all jobs updated
2024-01-13 09:51:42.161+0000 [id=62] INFO hudson.util.Retrier#start: Attempt #1 to do the action check updates server
2024-01-13 09:51:43.436+0000 [id=49] INFO jenkins.install.SetupWizard#init:

*****
*****
*****

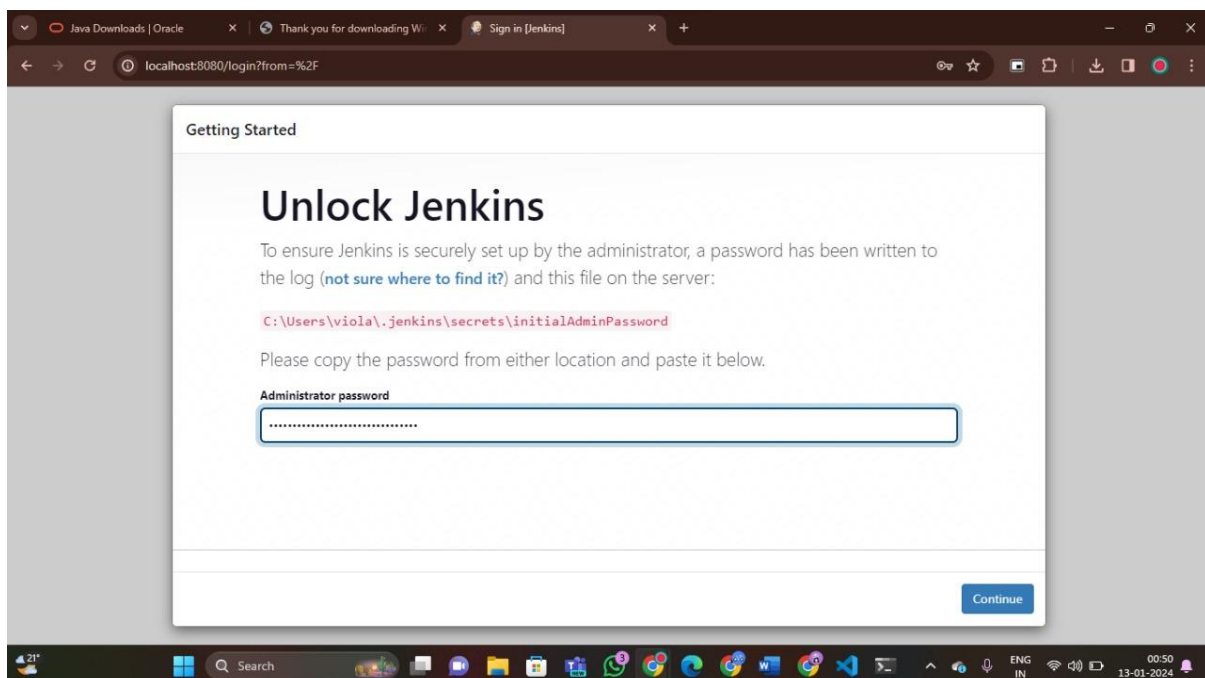
Jenkins initial setup is required. An admin user has been created and a password generated.
Please use the following password to proceed to installation:

ec848edd2f124f8a99827f4dc15ede43

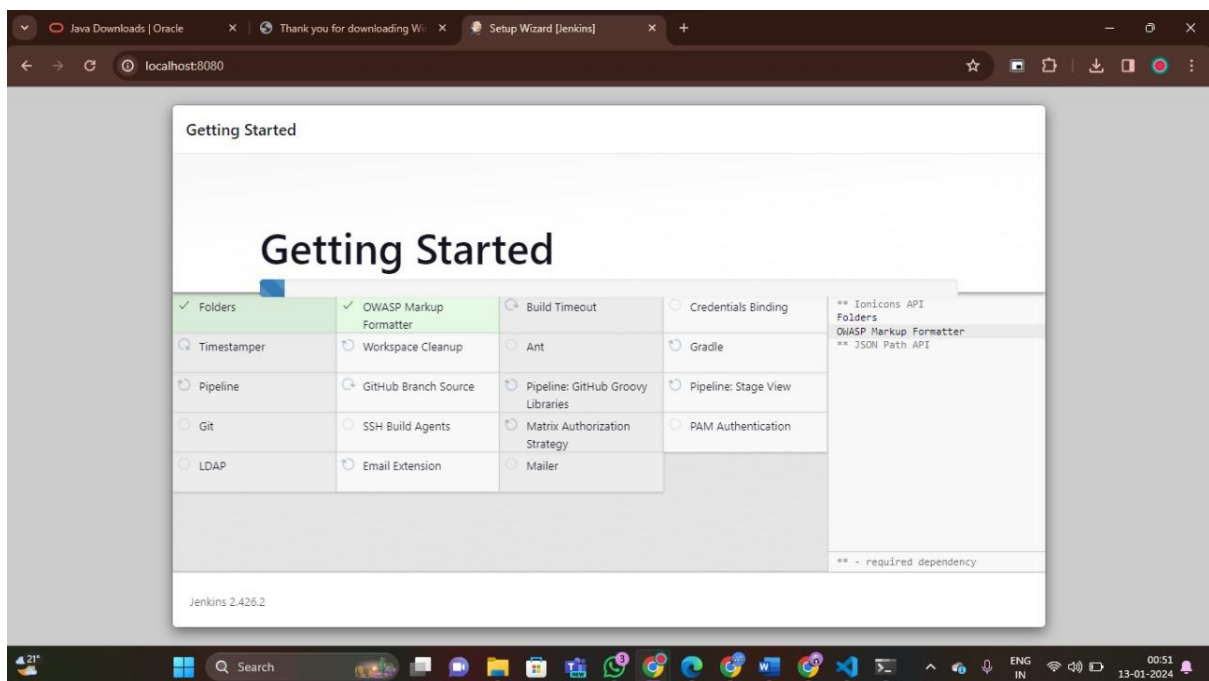
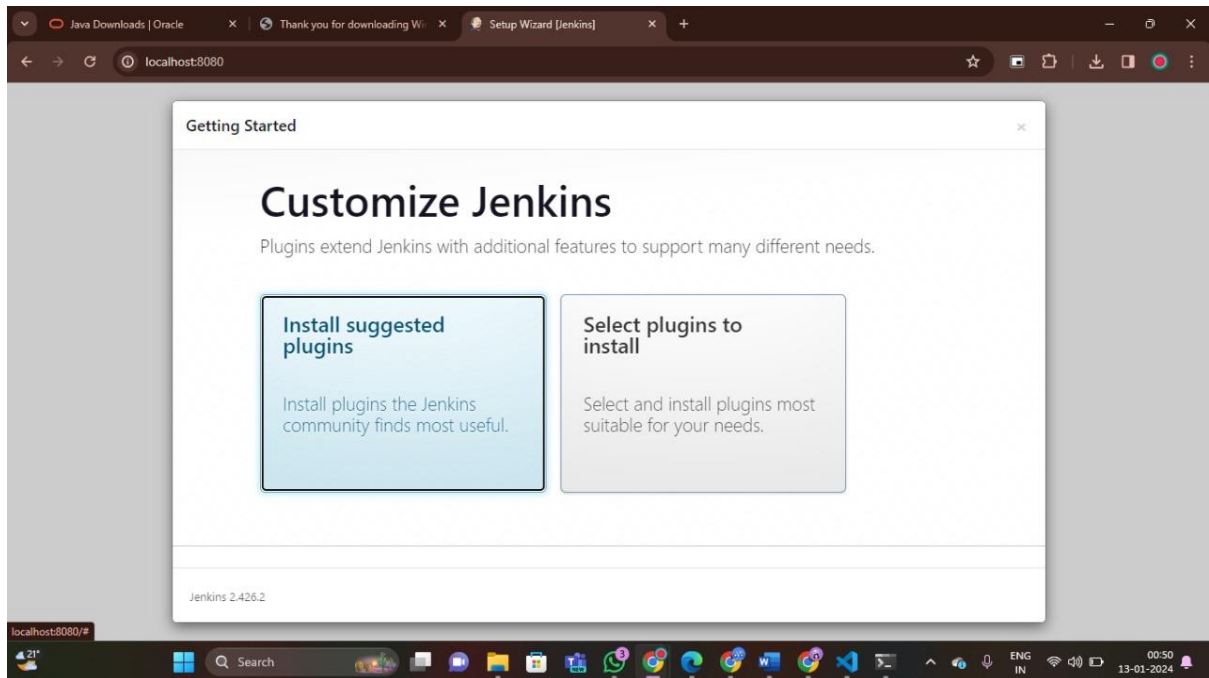
This may also be found at: C:\Users\viola\.jenkins\secrets\initialAdminPassword

*****
*****
```

Step – 5: Enter the copied password upon entering the site - <https://localhost:8080>



Step – 6: Select Install Suggested plugins.



Step – 7 After successful installation of suggested, Enter the First Admin User details and select save.

The screenshot shows the Jenkins Setup Wizard window titled "Getting Started" with the subtitle "Create First Admin User". The window is open in a web browser at localhost:8080. The form contains the following fields:

- Username:** 20MIC0081
- Password:** (masked with dots)
- Confirm password:** (masked with dots)
- Full name:** Saraga
- E-mail address:** saraga.s2020@vitstudent.ac.in

At the bottom of the form, there are two buttons: "Skip and continue as admin" and "Save and Continue". The Jenkins version "Jenkins 2.426.2" is displayed in the bottom left corner of the wizard.

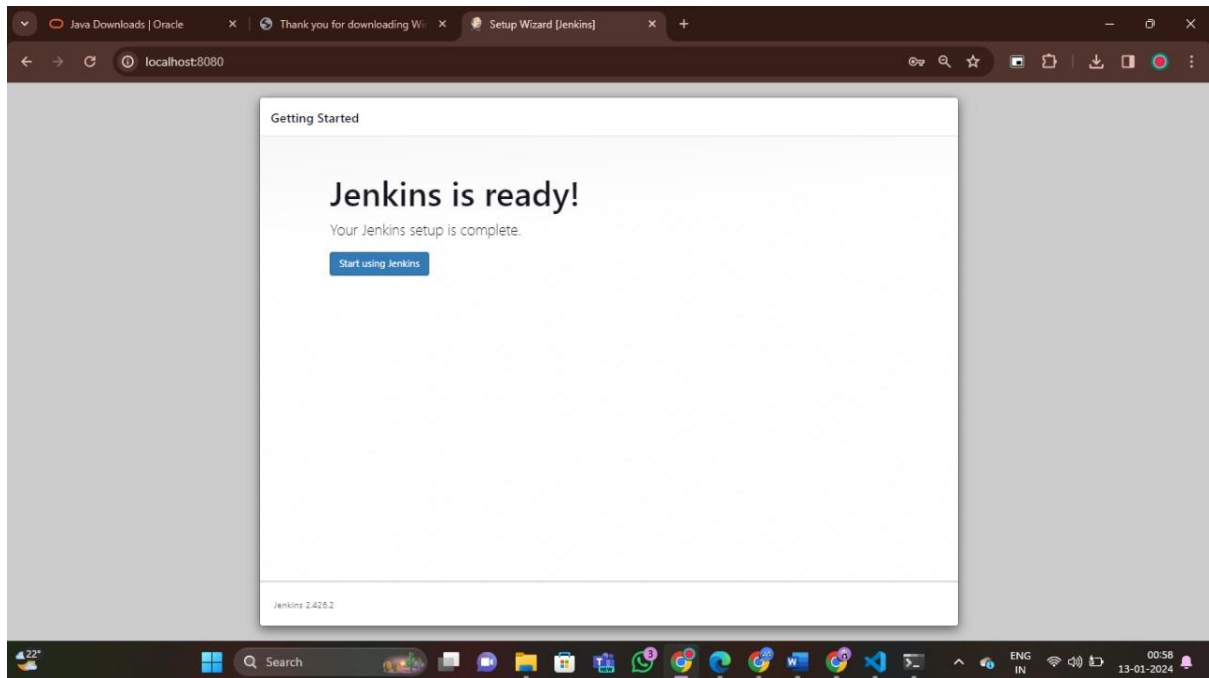
The screenshot shows the Jenkins Setup Wizard window titled "Getting Started" with the subtitle "Instance Configuration". The window is open in a web browser at localhost:8080. The form contains the following fields:

- Jenkins URL:** http://localhost:8080/

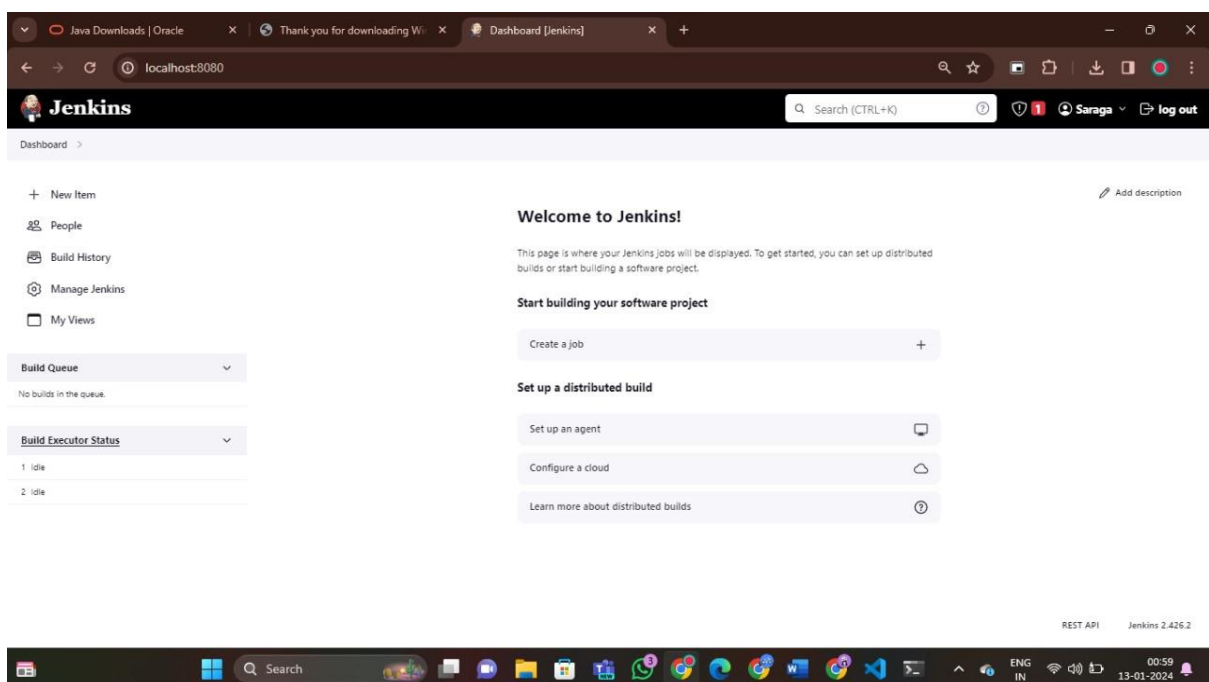
Below the field, there is explanatory text: "The Jenkins URL is used to provide the root URL for absolute links to various Jenkins resources. That means this value is required for proper operation of many Jenkins features including email notifications, PR status updates, and the BUILD_URL environment variable provided to build steps. The proposed default value shown is not saved yet and is generated from the current request, if possible. The best practice is to set this value to the URL that users are expected to use. This will avoid confusion when sharing or viewing links."

At the bottom of the form, there are two buttons: "Not now" and "Save and Finish". The Jenkins version "Jenkins 2.426.2" is displayed in the bottom left corner of the wizard.

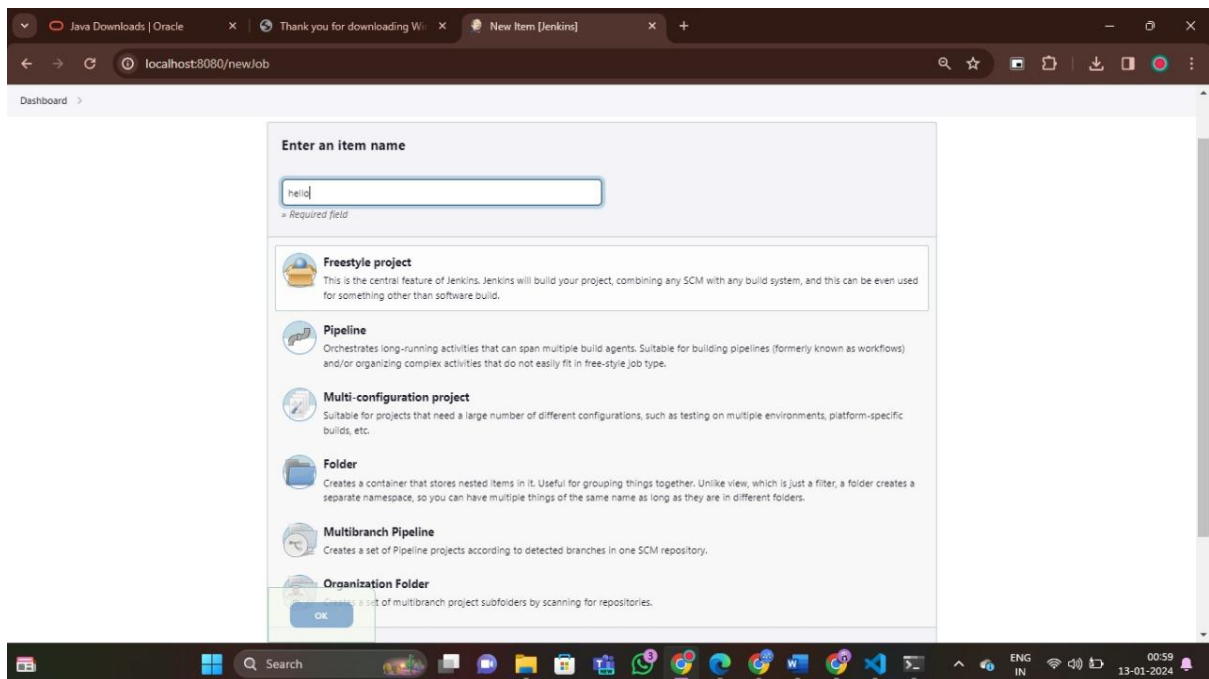
Step – 8: Start using Jenkins.



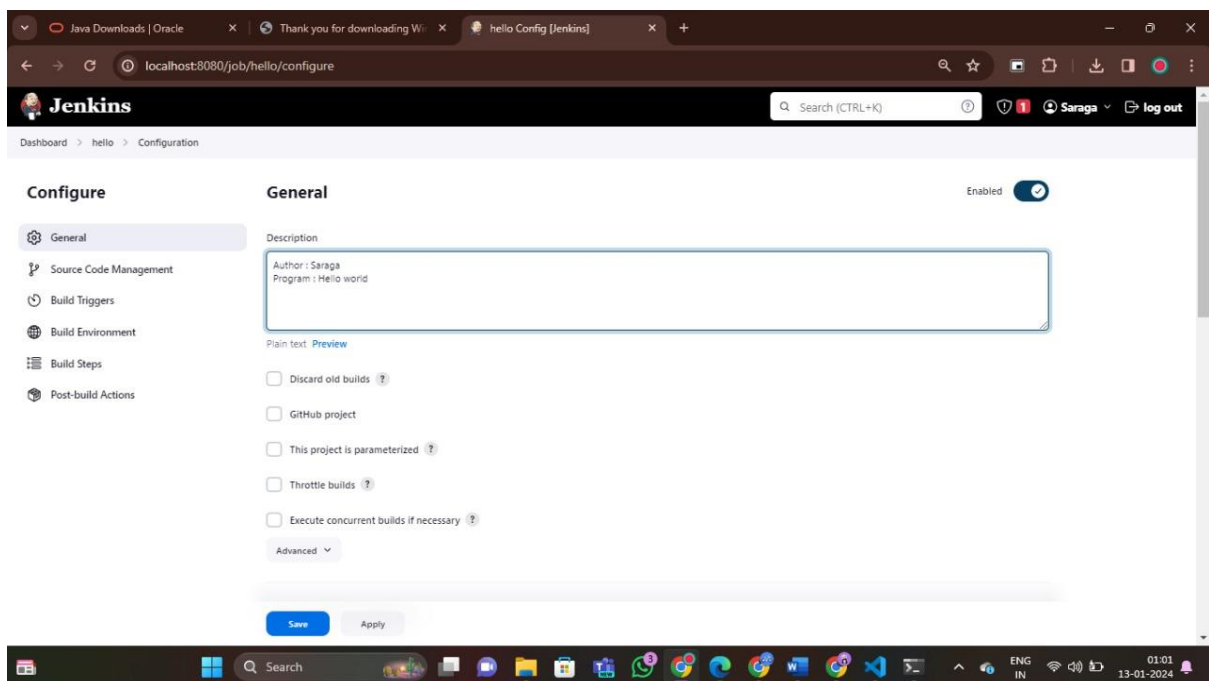
Step – 9: Select Create a Job.



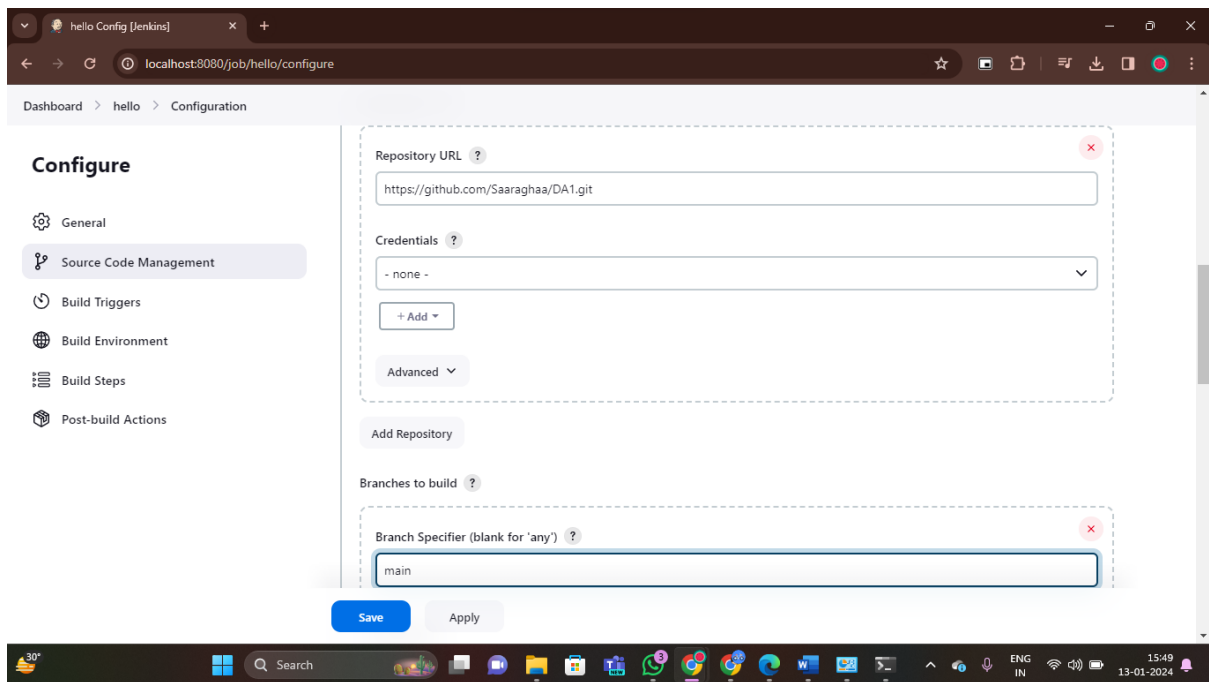
Step – 10: Enter name of the job “hello”, select Freestyle project and click OK.



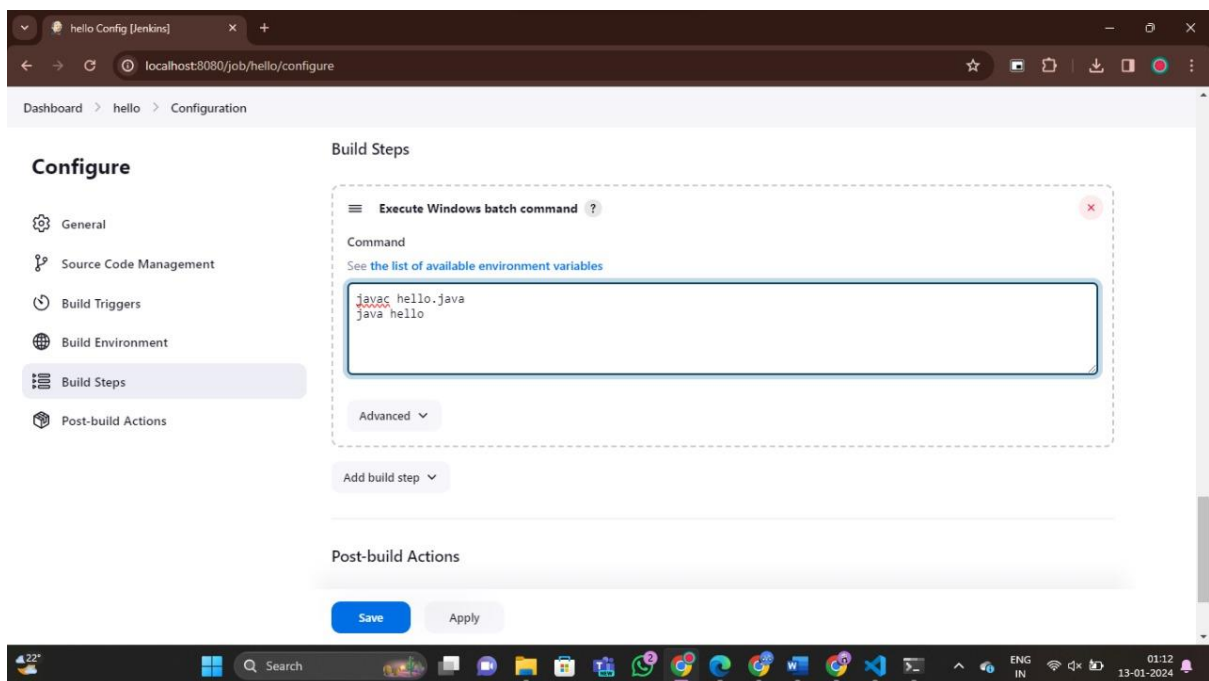
Step – 11: Enter description for the job and the repository URL.



Step – 12: Under Source Code Management select Git, enter your GitHub Repository and under Branch type “main”.



Step – 13: Under Build Steps, Select Execute Windows batch command and Enter Java commands “java hello.java” and “java hello. Click “Save”.



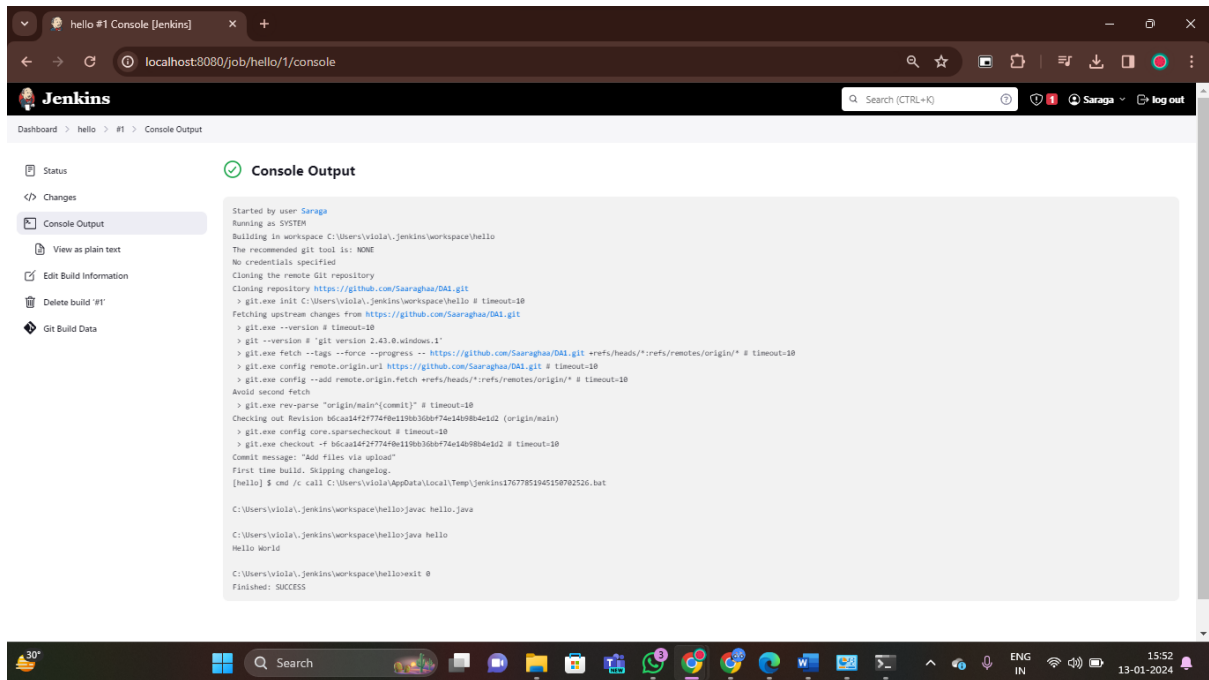
Step – 14: Now select Build Now and building will be scheduled & automatically started.

The screenshot shows the Jenkins web interface in a browser window. The address bar displays 'localhost:8080/job/hello/'. The page title is 'hello'. On the left sidebar, the 'Build Now' button is highlighted. The main content area shows the job configuration for 'hello', including a description 'Saraga Hello world', a 'Permalinks' section, and a 'Build History' section. The 'Build History' section shows a single build (#1) from '13-Jan-2024, 3:50 pm' with a status of 'Success'. The bottom of the page shows the Jenkins REST API and version 'Jenkins 2.426.2'.

Step – 15: The build will execute without any errors and when built successfully, get the status.

The screenshot shows the Jenkins web interface in a browser window. The address bar displays 'localhost:8080/job/hello/1/'. The page title is 'Jenkins'. The main content area shows the job status for 'hello #1 (13-Jan-2024, 3:50:57 pm)' with a status of 'Success'. The 'Console Output' section shows 'No changes.' and 'Started by user Saraga'. The 'Git Build Data' section shows the revision 'b6caa14f2f774f0e119bb36bbf74e14b98b4e1d2' and the repository 'https://github.com/Saarghaa/DA1.git'. The bottom of the page shows the Jenkins REST API and version 'Jenkins 2.426.2'.

Final Output



The screenshot shows the Jenkins web interface in a browser. The address bar indicates the URL is `localhost:8080/job/hello/1/console`. The Jenkins logo is visible in the top left, and a search bar is in the top right. The left sidebar contains navigation links: Status, Changes, Console Output (selected), View as plain text, Edit Build Information, Delete build '#1', and Git Build Data. The main area displays the 'Console Output' for build #1, which includes the following text:

```
Started by user Saraga
Running as SYSTEM
Building in workspace C:\Users\viola\.jenkins\workspace\hello
The recommended git tool is: NONE
No credentials specified
Cloning the remote Git repository
Cloning repository https://github.com/Saarghaa/DAL.git
> git.exe init C:\Users\viola\.jenkins\workspace\hello # timeout=10
Fetching upstream changes from https://github.com/Saarghaa/DAL.git
> git.exe --version # timeout=10
> git --version # 'git version 2.43.0.windows.1'
> git.exe fetch --tags --force --progress -- https://github.com/Saarghaa/DAL.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git.exe config remote.origin.url https://github.com/Saarghaa/DAL.git # timeout=10
> git.exe config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
Avoid second fetch
> git.exe rev-parse 'origin/main:{commit}' # timeout=10
Checking out Revision b6caa14f277490e1190b300b74e140804e1d2 (origin/main)
> git.exe config core.sparsecheckout # timeout=10
> git.exe checkout -f b6caa14f277490e1190b300b74e140804e1d2 # timeout=10
Commit message: "Add Files via upload"
First time build. Skipping changelog.
[hello] $ cmd /c call C:\Users\viola\AppData\Local\Temp\jenkins17677851945158782526.bat

C:\Users\viola\.jenkins\workspace\hello>javac hello.java

C:\Users\viola\.jenkins\workspace\hello>java hello

Hello World

C:\Users\viola\.jenkins\workspace\hello>exit 0
Finished: SUCCESS
```

The Windows taskbar is visible at the bottom, showing the system clock as 15:52 on 13-01-2024.