

```
C:\Windows\System32\cmd.exe
C:\Users\Tejas\Desktop\Jenkins_lab-main\Dockerfile>docker build . -t jenkins:PES1UG22CS815
[+] Building 2.5s (6/6) FINISHED
=> [internal] load build definition from Dockerfile                                docker:default
=> => transferring dockerfile: 286B                                              0.0s
=> [internal] load metadata for docker.io/jenkins/jenkins:lts                  0.0s
=> [internal] load .dockerignore                                                 2.3s
=> [internal] load .dockerignore                                                 0.0s
=> => transferring context: 2B                                                  0.0s
=> [1/2] FROM docker.io/jenkins/jenkins:lts@sha256:01c0b0cf789fa24253090fccca264df223b5e09b14a0ea59f0847c70bdc0f 0.0s
=> CACHED [2/2] RUN apt-get update && apt-get install -y make && apt-get install -y g++ --fix-missing 0.0s
=> exporting to image                                                           0.0s
=> => exporting layers                                                         0.0s
=> => writing image sha256:3e99c668c5a2fa22a1033d07f1ed4f0c74bfd62b9e30116811a009c1527f2415 0.0s
=> => naming to docker.io/library/jenkins:PES1UG22CS815                      0.0s

What's Next?
1. Sign in to your Docker account → docker login
2. View a summary of image vulnerabilities and recommendations → docker scout quickview

C:\Users\Tejas\Desktop\Jenkins_lab-main\Dockerfile>
```

```

C:\Users\Tejas\Desktop\Jenkins_lab-main\dockerfiles\docker run -p 8084:8080 -p 50000:50000 -it jenkins:PS1UG2CZ5815
Running from: /usr/share/jenkins/jenkins.war
webroot: /var/jenkins_home/war
2024-03-08 14:17:19.080+0000 [id=1] INFO winstone.Logger$LogInternal: Beginning extraction from war file
2024-03-08 14:17:21.187+0000 [id=1] WARNING o.e.j.s.handler.ContextHandler$ServletContextPath: Empty contextPath
2024-03-08 14:17:21.244+0000 [id=1] INFO org.eclipse.jetty.server.Server$doStart: jetty-10.0.18; built: 2023-10-27T01:59:58.245Z; git: 8545f0b6f4cd8db838f626b045d496344154db7; jvm 17.0.10-7
2024-03-08 14:17:21.525+0000 [id=1] INFO o.e.j.w.StandardDescriptorProcessor$VisitServlet: NO JSF Support for /, did not find org.eclipse.jetty.jsp.JettyJspServlet
2024-03-08 14:17:21.575+0000 [id=1] INFO o.e.j.s.s.DefaultSessionManager$doStart: Session workerName=nodes
2024-03-08 14:17:22.370+0000 [id=1] INFO hudson.WebAppMain$Context$Initializer: Jenkins home directory: /var/jenkins_home found at: EnvVars.masterEnvVars.get("JENKINS_HOME")
2024-03-08 14:17:22.333+0000 [id=1] INFO o.e.j.s.handler.ContextHandler$doStart: Started w.@4d192ae(Jenkins v2.440.1.1, file:///var/jenkins_home/war/AVAILABLE/([var/jenkins_home/war])
2024-03-08 14:17:22.348+0000 [id=1] INFO o.e.j.s.server.AbstractConnector$doStart: Started ServerConnector@78365cfa(HTTP/1.1, (http/1.1))@0.0.0.0:8080
2024-03-08 14:17:22.367+0000 [id=1] INFO org.eclipse.jetty.server.Server$doStart: Started Server$doStart(STARTING)[10.18.18,sto=0] @4286ms
2024-03-08 14:17:22.360+0000 [id=27] INFO winstone.Logger$LogInternal: Winstone Servlet Engine running: controlPort=disabled
2024-03-08 14:17:22.547+0000 [id=35] INFO jenkins.InitReactorRunner$1$onAttained: Started initialization
2024-03-08 14:17:22.576+0000 [id=40] INFO jenkins.InitReactorRunner$1$onAttained: Listed all plugins
2024-03-08 14:17:22.581+0000 [id=40] INFO jenkins.InitReactorRunner$1$onAttained: Prepared all plugins
2024-03-08 14:17:23.368+0000 [id=36] INFO jenkins.InitReactorRunner$1$onAttained: Started all plugins
2024-03-08 14:17:23.375+0000 [id=48] INFO jenkins.InitReactorRunner$1$onAttained: Augmented all extensions
2024-03-08 14:17:23.585+0000 [id=43] INFO jenkins.InitReactorRunner$1$onAttained: System config loaded
2024-03-08 14:17:23.586+0000 [id=43] INFO jenkins.InitReactorRunner$1$onAttained: System config adapted
2024-03-08 14:17:23.586+0000 [id=43] INFO jenkins.InitReactorRunner$1$onAttained: Loaded all jobs
2024-03-08 14:17:23.589+0000 [id=43] INFO jenkins.InitReactorRunner$1$onAttained: Configuration for all jobs updated
2024-03-08 14:17:23.624+0000 [id=61] INFO hudson.util.Retrier$doStart: Attempt #1 to do the action check updates server
2024-03-08 14:17:24.013+0000 [id=39] INFO jenkins.install.SetupWizard$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:
e95ba99840d4d166a16354e83c4b879
This may also be found at: /var/jenkins_home/secrets/initialAdminPassword
=====
=====
2024-03-08 14:17:40.375+0000 [id=34] INFO jenkins.InitReactorRunner$1$onAttained: Completed initialization
2024-03-08 14:17:40.390+0000 [id=26] INFO hudson.lifecycle.Lifecycle$onReady: Jenkins is fully up and running
2024-03-08 14:17:53.740+0000 [id=61] INFO h.w.DownloadService$doDownload: Starting the installation of Jenkins update data file for hudson.tasks.Review.MavenInstaller
2024-03-08 14:17:53.740+0000 [id=61] INFO hudson.util.Retrier$doStart: Performed the action check updates server successfully at the attempt #1
2024-03-08 14:17:59.741+0000 [id=16] INFO hudson.PluginManager$doStart: Starting installation of a batch of 21 plugins with their dependencies
2024-03-08 14:17:59.744+0000 [id=16] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of ionicons-api for plugin cloudbees-folder
2024-03-08 14:17:59.746+0000 [id=16] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of ionicons-api on behalf of admin
2024-03-08 14:17:59.746+0000 [id=16] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of token-macro for plugin build-timestamp

```

The screenshot displays the Jenkins web interface. At the top, the browser address bar shows the URL 'localhost:8096/job/PES1UG22CS815-1/3/console'. The Jenkins logo and name are visible in the top left. A search bar and user profile 'PES1UG22CS815_ManasTawade' are in the top right. The left sidebar contains navigation links: 'Status', 'Changes', 'Console Output' (selected), 'View as plain text', 'Edit Build Information', 'Delete build #3', and 'Git Build Data'. The main content area, titled 'Console Output', shows the following log:

```

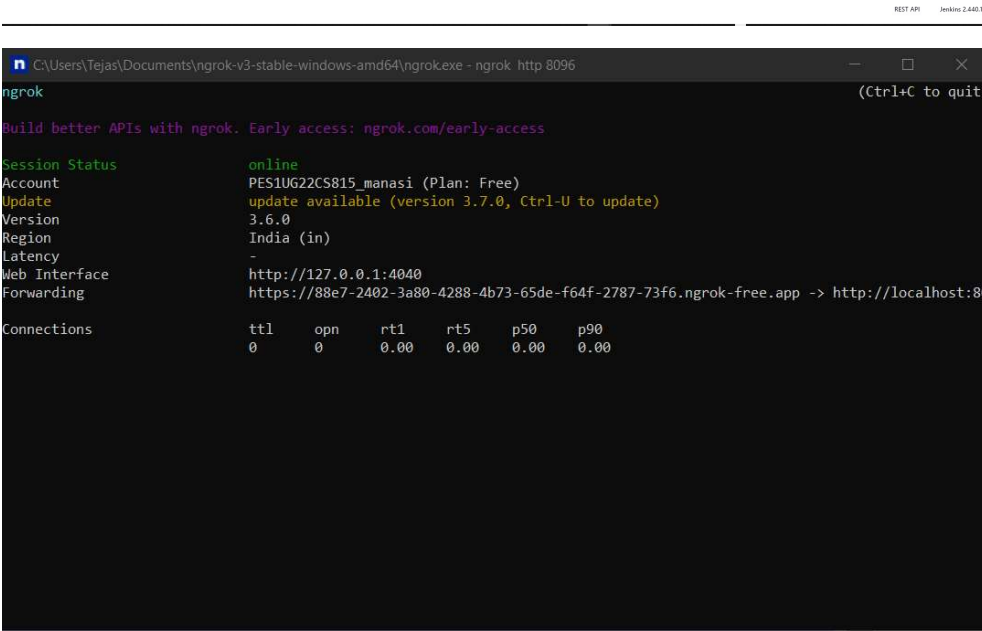
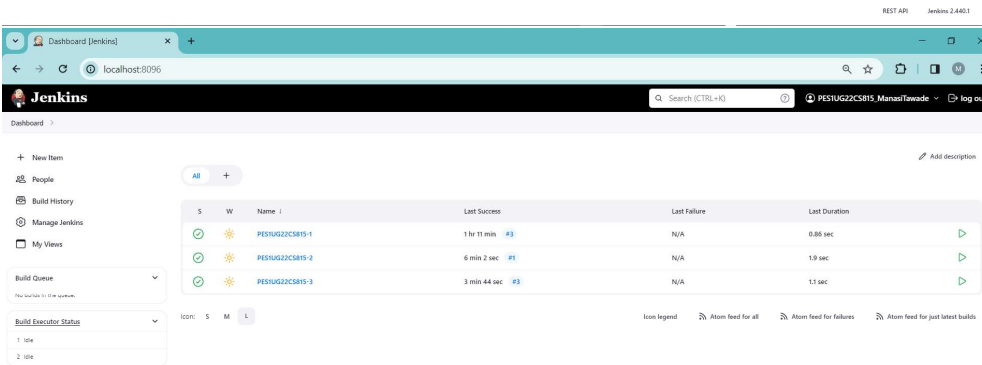
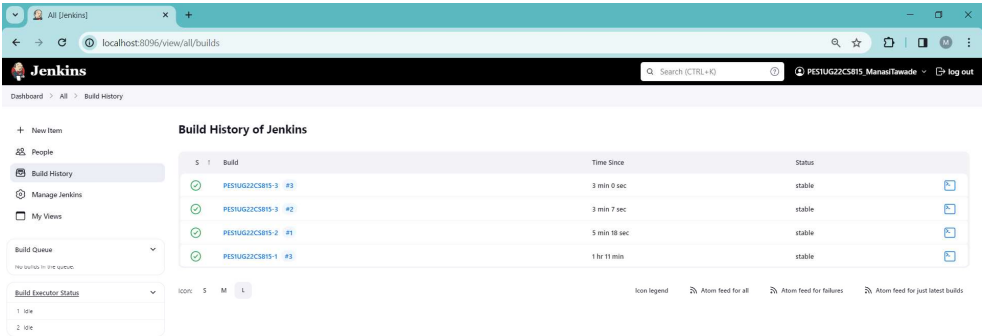
Started by user: PES1UG22CS815_ManasTawade
Running as SYSTEM
Building in workspace /var/jenkins_home/workspace/PES1UG22CS815-1
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /var/jenkins_home/workspace/PES1UG22CS815-1/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/ManasTawade/PES1UG22CS815_Jenkins.git # timeout=10
Fetching upstream changes from https://github.com/ManasTawade/PES1UG22CS815_Jenkins.git
> git --version # timeout=10
> git --version # 'git version 2.39.2'
> git fetch --tags --force --progress -- https://github.com/ManasTawade/PES1UG22CS815_Jenkins.git # ref=refs/heads/*;remotes/origin/* # timeout=10
Seen branch in repository origin/main
Seen 1 remote branch
> git show-ref --tags -d # timeout=10
Checking out Revision bf0e5517f804227846dd6d95b330e615a89ea4d1 (origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f bf0e5517f804227846dd6d95b330e615a89ea4d1 # timeout=10
Commit message: "Add files via upload"
> git rev-list --no-walk bf0e5517f804227846dd6d95b330e615a89ea4d1 # timeout=10
[PES1UG22CS815-1] $ bin/sh -xe /tmp/jenkins16361082176391570802.sh
+ make -C main
make: Entering directory '/var/jenkins_home/workspace/PES1UG22CS815-1/main'
make: 'hello.exe' is up to date.
make: Leaving directory '/var/jenkins_home/workspace/PES1UG22CS815-1/main'
Finished: SUCCESS

```

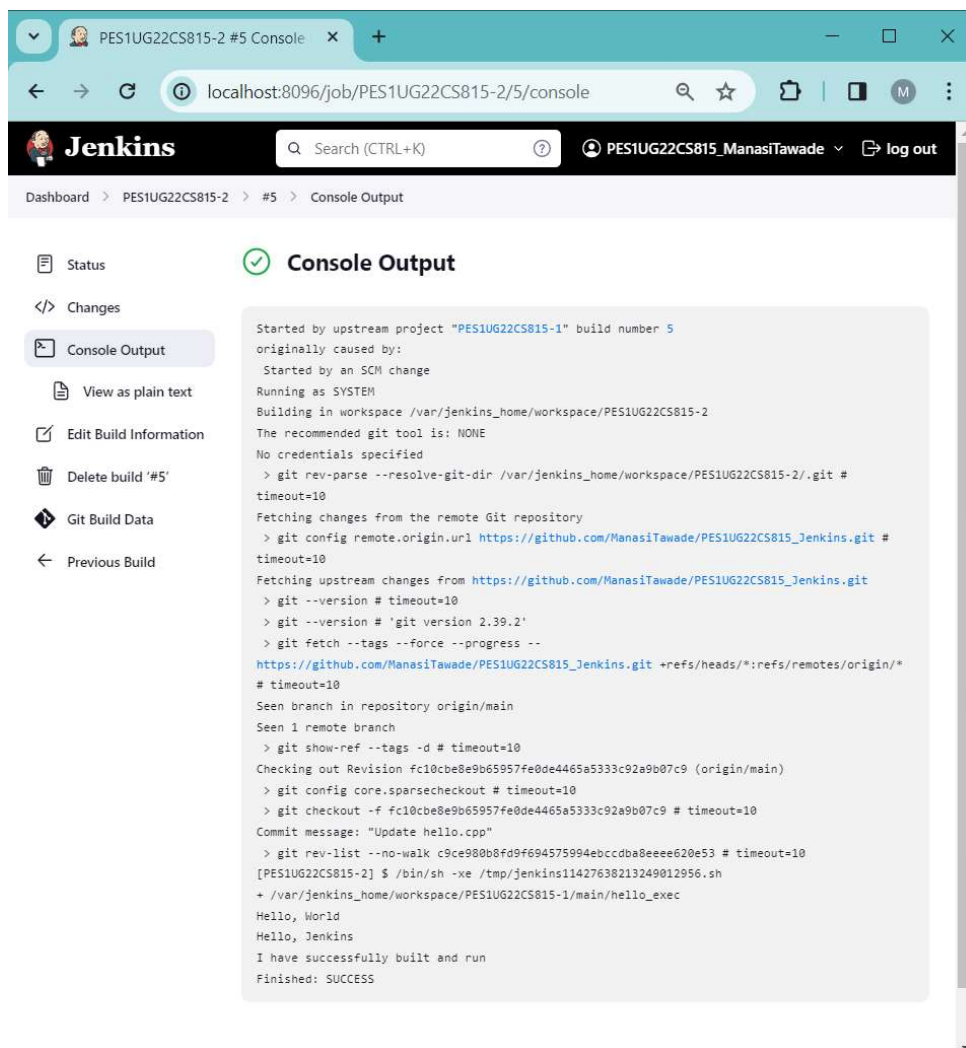
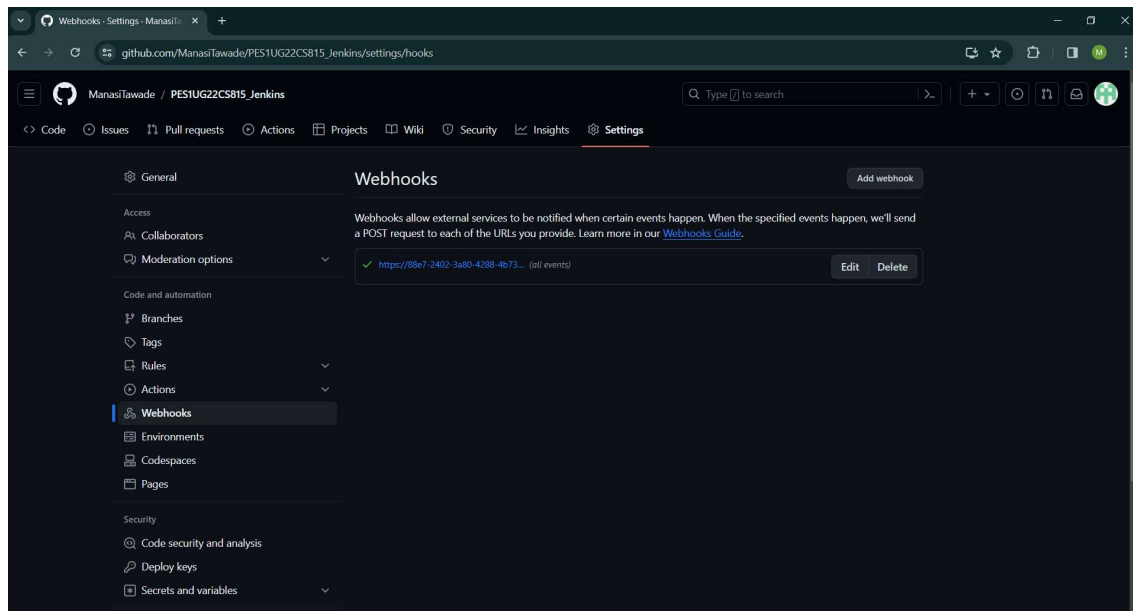
Manasi Tawade
(PES1UG22CS815)

Task-3

The screenshot displays the Jenkins web interface for a job named 'PES1UG22CS815-1'. The browser's address bar shows the URL 'localhost:8096/job/PES1UG22CS815-1/'. The Jenkins logo and name are in the top left. A search bar and user information 'PES1UG22CS815_MansaiTawade' are in the top right. The left sidebar contains navigation links: Status (selected), Changes, Workspace, Build Now, Configure, Delete Project, Git Polling Log, GitHub, and Rename. The main content area has a title 'PES1UG22CS815-1' with a green checkmark icon. Below it is a 'Permalinks' section with a bulleted list of links to different build stages, each with a timestamp of '1 hr 10 min ago'. At the bottom, there is a 'Build History' section with a 'Filter...' input and a table showing one build from 'Mar 5, 2024, 3:39 PM'. The status of the build is '21' with a green icon. The bottom right corner shows 'REST API' and 'Jenkins 2.440.1'.



Task-4



Task-5

github.com/ManasiTawade/PES1UG22CS815_Jenkins/blob/main/Jenkinsfile

ManasiTawade Update Jenkinsfile

ac40139 · now History

Code Blame 36 lines (36 loc) · 525 Bytes Code 55% faster with GitHub Copilot

```
1 pipeline {
2   agent {
3     docker {
4       image 'node:14'
5     }
6   }
7   stages {
8     stage('Clone repository') {
9       steps {
10        git branch: 'main',
11        url: 'https://github.com/cusers/https://github.com/ManasiTawade/PES1UG22CS815_Jenkins.git'
12      }
13    }
14    stage('Install dependencies') {
15      steps {
16        sh 'npm install'
17      }
18    }
19    stage('Build application') {
20      steps {
21        sh 'npm run build'
22      }
23    }
24    stage('Test application') {
25      steps {
26        sh 'npm test'
27      }
28    }
29    stage('Push Docker image') {
30      steps {
31        sh 'docker build -t <user>/<image>:$BUILD_NUMBER.'
32      }
33    }
34  }
35}
```

PES1UG22CS815-3 [Jenkins]

localhost:8096/job/PES1UG22CS815-3/

Search (CTRL+K)

PES1UG22CS815, ManasiTawade log out

Dashboard > PES1UG22CS815-3 >

Status

Changes

Build Now

Configure

Delete Pipeline

Full Stage View

Rename

Pipeline Syntax

Build History trend

Filter...

1

Mar 9, 2024, 8:53 AM

1423

1

complete

2

Mar 9, 2024, 8:53 AM

1423

2

complete

3

Mar 9, 2024, 8:48 AM

1418

1

complete

4

Mar 9, 2024, 8:47 AM

1417

no changes

5

Mar 9, 2024, 8:44 AM

6

Mar 9, 2024, 7:58 AM

7

Mar 9, 2024, 7:58 AM

Stage View

Average stage times: (Average full run time: ~15s)

| | Declarative Checkout SCM | Build | Test | Deploy | Declarative Post Actions |
|---|--------------------------|-------|-------|--------|--------------------------|
| 1 | 1s | 10s | 393ms | 102ms | |
| 2 | 1s | 7s | 82ms | 81ms | 116ms |
| 3 | 2s | 8s | 58ms | 56ms | 94ms |
| 4 | 1s | 437ms | 108ms | 94ms | 96ms |

Permalinks

- Last build (#3), 3 min 3 sec ago
- Last stable build (#3), 3 min 3 sec ago
- Last successful build (#3), 3 min 3 sec ago
- Last completed build (#3), 3 min 3 sec ago

The screenshot shows the Jenkins web interface. The browser address bar indicates the URL is `localhost:8096/job/PES1UG22CS815-2/5/console`. The Jenkins header includes a search bar and a user profile for `PES1UG22CS815_ManasiTawade` with a `log out` button. The breadcrumb navigation shows the path: `Dashboard > PES1UG22CS815-2 > #5 > Console Output`.

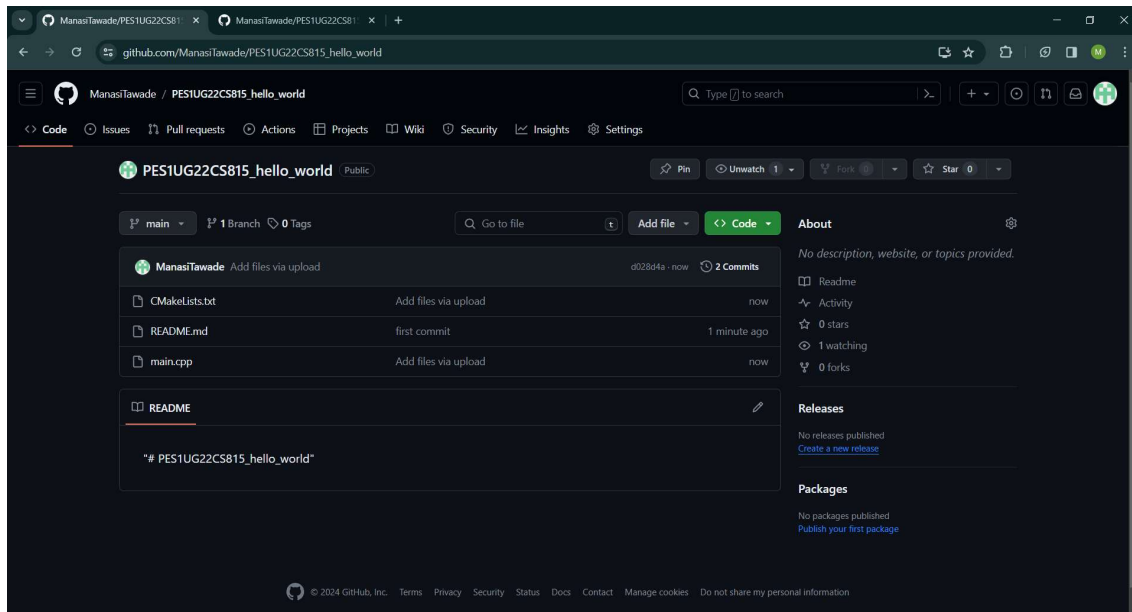
On the left sidebar, the `Console Output` tab is selected. Other visible options include `Status`, `Changes`, `View as plain text`, `Edit Build Information`, `Delete build '#5'`, `Git Build Data`, and `Previous Build`.

The main area displays the `Console Output` for build #5, which is a successful build. The output text is as follows:

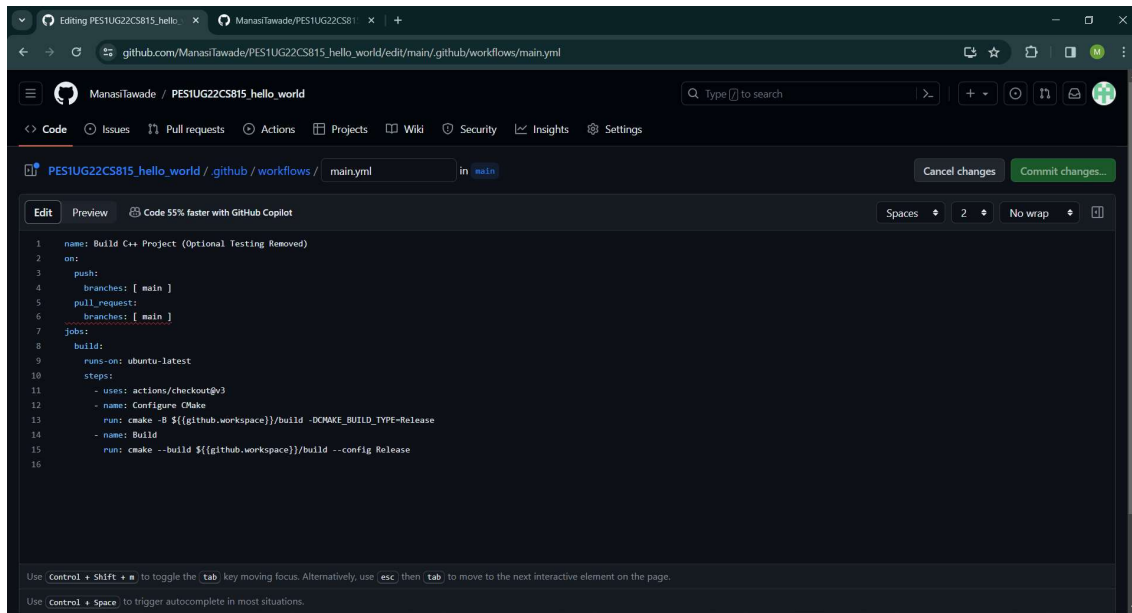
```
Started by upstream project "PES1UG22CS815-1" build number 5
originally caused by:
  Started by an SCM change
Running as SYSTEM
Building in workspace /var/jenkins_home/workspace/PES1UG22CS815-2
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /var/jenkins_home/workspace/PES1UG22CS815-2/.git #
timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/ManasiTawade/PES1UG22CS815_Jenkins.git #
timeout=10
Fetching upstream changes from https://github.com/ManasiTawade/PES1UG22CS815_Jenkins.git
> git --version # timeout=10
> git --version # 'git version 2.39.2'
> git fetch --tags --force --progress --
https://github.com/ManasiTawade/PES1UG22CS815_Jenkins.git +refs/heads/*:refs/remotes/origin/*
# timeout=10
Seen branch in repository origin/main
Seen 1 remote branch
> git show-ref --tags -d # timeout=10
Checking out Revision fcl0cbe8e9b65957fe0de4465a5333c92a9b07c9 (origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f fcl0cbe8e9b65957fe0de4465a5333c92a9b07c9 # timeout=10
Commit message: "Update hello.cpp"
> git rev-list --no-walk c9ce980b8fd9f694575994ebccdba8eeeee620e53 # timeout=10
[PES1UG22CS815-2] $ /bin/sh -xe /tmp/jenkins11427638213249012956.sh
+ /var/jenkins_home/workspace/PES1UG22CS815-1/main/hello_exec
Hello, World
Hello, Jenkins
I have successfully built and run
Finished: SUCCESS
```

4(b) GitHub Actions Building A CI Pipeline With GitHub Actions

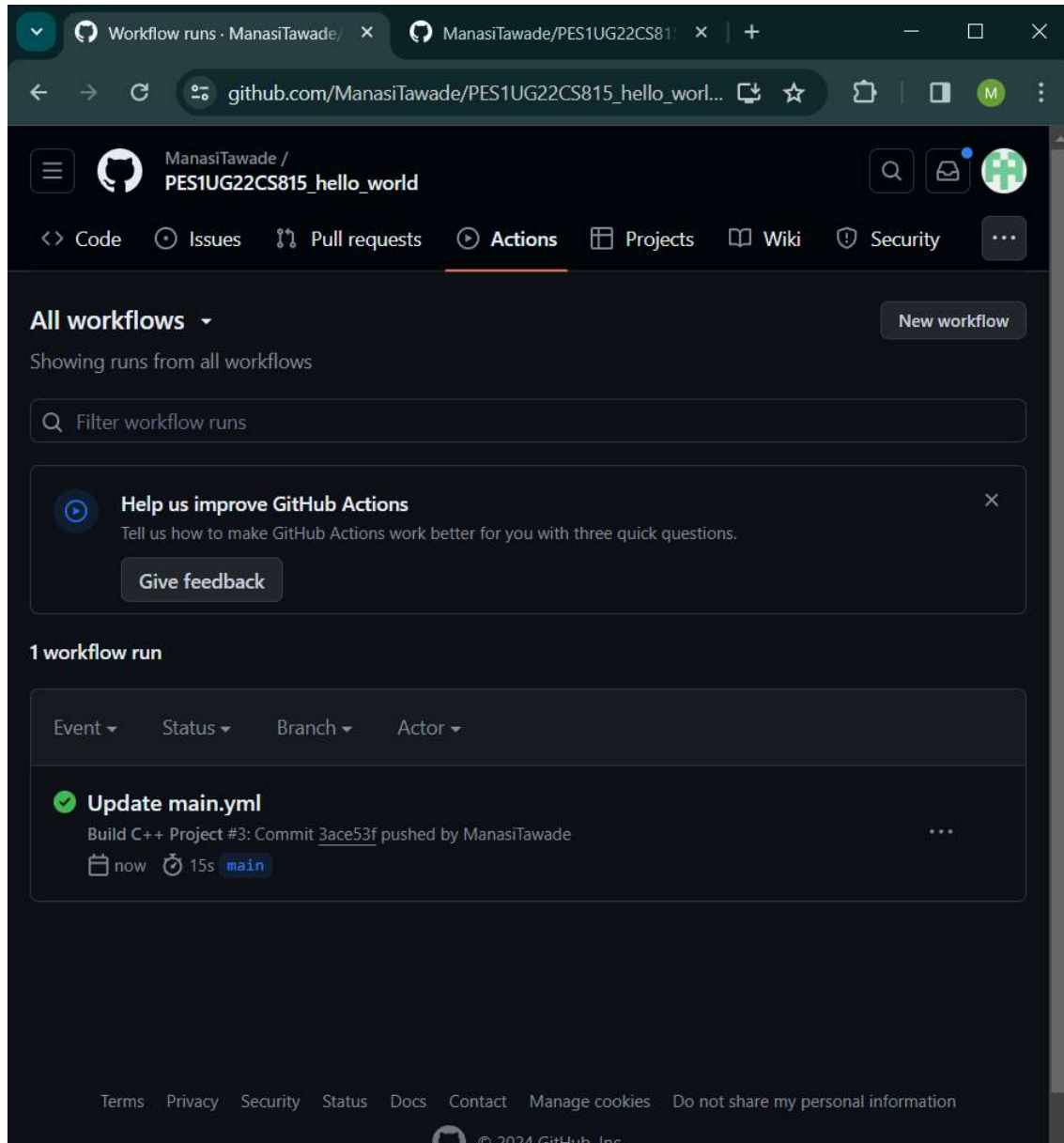
(a) Take a screenshot of the repository in the manner given below after the two files have been uploaded onto the repository and name it



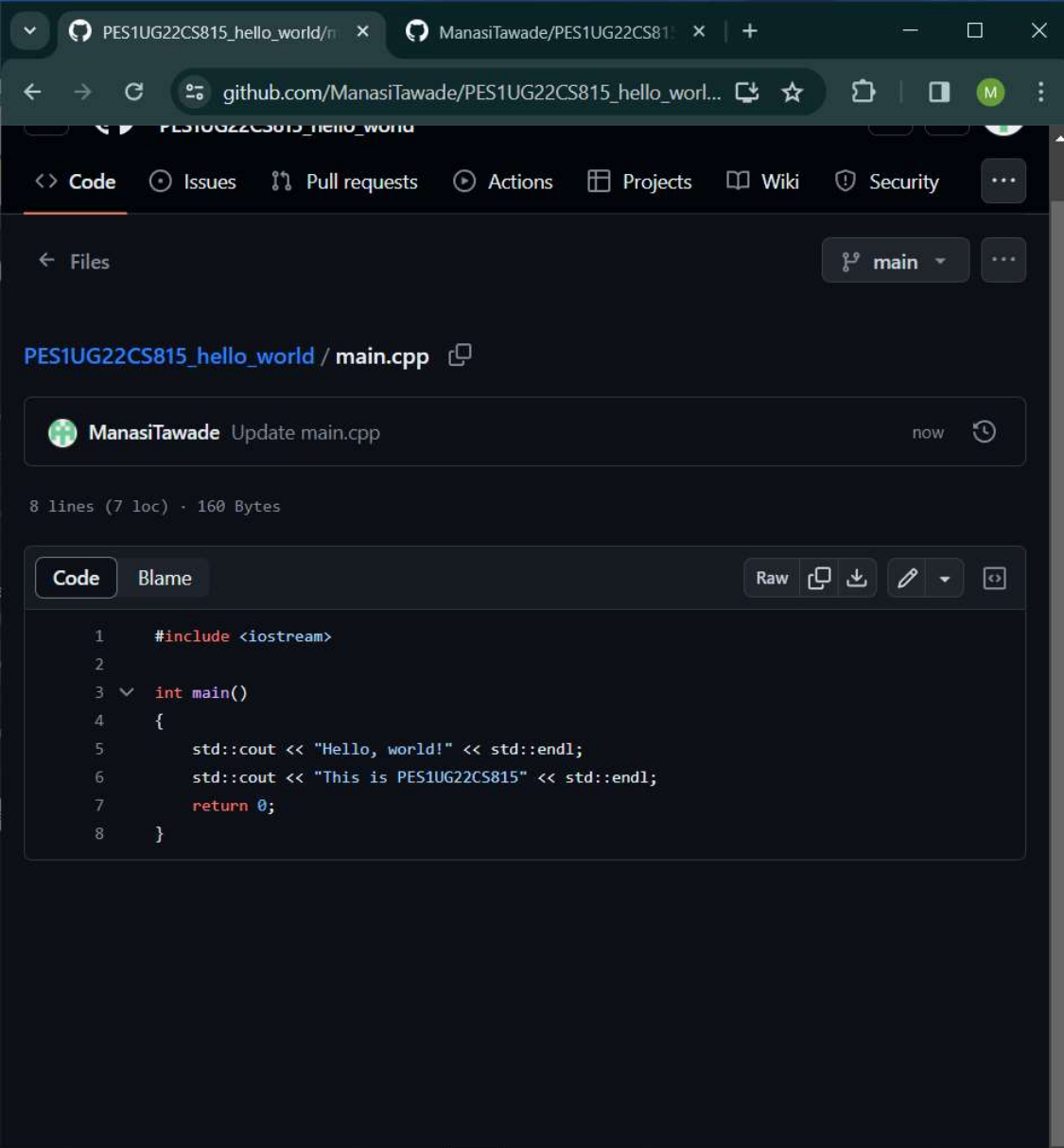
(b) Take a screenshot of the code after it has been pasted onto the workflow and name it (b)



(c). Take a screenshot as given below indicating that the build is successful and name it (c)



(d) Take a screenshot as given below after making the change in the main.cpp file and name it (d)



The screenshot shows a web browser displaying a GitHub repository page for 'PES1UG22CS815_hello_world'. The repository is owned by 'ManasiTawade'. The file 'main.cpp' is selected, showing its commit history and code. The code is as follows:

```
1  #include <iostream>
2
3  int main()
4  {
5      std::cout << "Hello, world!" << std::endl;
6      std::cout << "This is PES1UG22CS815" << std::endl;
7      return 0;
8  }
```

The file is 8 lines (7 loc) and 160 Bytes. The commit history shows a single commit by 'ManasiTawade' titled 'Update main.cpp' made 'now'.

(e) Take a screenshot of the status of the build after it has passed and name it (e)

