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SRN: PES2UG21CS315

SEC:6F

Assignment 4(a)

TASK1

1.screenshot of the running Docker Container after installing Jenkins

```
PS C:\Users\Praka\Downloads\Jenkins_lab-main\Dockefile> docker run -p 8090:8080 -p 50002:50000 -it jenkins:PES2UG21CS315
Running from: /usr/share/jenkins/jenkins.war
webroot: /var/jenkins_home/war
2024-03-05 13:46:35.122+0000 [id=1] INFO winstone.Logger#logInternal: Beginning extraction from war file
2024-03-05 13:46:41.581+0000 [id=1] WARNING o.e.j.s.handler.ContextHandler#setContextPath: Empty contextPath
2024-03-05 13:46:41.719+0000 [id=1] INFO org.eclipse.jetty.server.Server#doStart: jetty-10.0.18; built: 2023-10-27T01:59:58.245Z; git: 8545fd9bf4cd0d
0838f626b405fd4963441546b7; jvm 17.0.10+7
2024-03-05 13:46:42.271+0000 [id=1] INFO o.e.j.w.StandardDescriptorProcessor#visitServlet: NO JSP Support for /, did not find org.eclipse.jetty.jsp.J
ettyJspServlet
2024-03-05 13:46:42.348+0000 [id=1] INFO o.e.j.s.DefaultSessionIdManager#doStart: Session workerName=node0
2024-03-05 13:46:43.218+0000 [id=1] INFO hudson.WebAppMain#contextInitialized: Jenkins home directory: /var/jenkins_home found at: EnvVars.masterEnvV
ars.get("JENKINS_HOME")
2024-03-05 13:46:43.624+0000 [id=1] INFO o.e.j.s.handler.ContextHandler#doStart: Started w.@4d192aef{Jenkins v2.440.1,/,file:///var/jenkins_home/war/
AVAILABLE}[/var/jenkins_home/war]
2024-03-05 13:46:43.649+0000 [id=1] INFO o.e.j.server.AbstractConnector#doStart: Started ServerConnector@78365cfa{HTTP/1.1, (http/1.1)}{0.0.0.0:8080}
2024-03-05 13:46:43.683+0000 [id=1] INFO org.eclipse.jetty.server.Server#doStart: Started Server@5644dc81{STARTING}[10.0.18,sto=0] @10068ms
2024-03-05 13:46:43.685+0000 [id=27] INFO winstone.Logger#logInternal: Winstone Servlet Engine running: controlPort=disabled
2024-03-05 13:46:44.028+0000 [id=35] INFO jenkins.InitReactorRunner$1#onAttained: Started initialization
2024-03-05 13:46:44.078+0000 [id=33] INFO jenkins.InitReactorRunner$1#onAttained: Listed all plugins
2024-03-05 13:46:45.475+0000 [id=33] INFO jenkins.InitReactorRunner$1#onAttained: Prepared all plugins
2024-03-05 13:46:45.484+0000 [id=33] INFO jenkins.InitReactorRunner$1#onAttained: Started all plugins
2024-03-05 13:46:45.493+0000 [id=34] INFO jenkins.InitReactorRunner$1#onAttained: Augmented all extensions
2024-03-05 13:46:45.844+0000 [id=44] INFO jenkins.InitReactorRunner$1#onAttained: System config loaded
2024-03-05 13:46:45.845+0000 [id=46] INFO jenkins.InitReactorRunner$1#onAttained: System config adapted
2024-03-05 13:46:45.850+0000 [id=39] INFO jenkins.InitReactorRunner$1#onAttained: Loaded all jobs
2024-03-05 13:46:45.855+0000 [id=48] INFO jenkins.InitReactorRunner$1#onAttained: Configuration for all jobs updated
2024-03-05 13:46:45.965+0000 [id=61] INFO hudson.util.Retrier#start: Attempt #1 to do the action check updates server
2024-03-05 13:46:46.433+0000 [id=37] 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:

47f59bbef4df4a75a8f24c32d8867b5c

This may also be found at: /var/jenkins_home/secrets/initialAdminPassword
```

```
*****
*****
2024-03-05 13:51:59.128+0000 [id=37] INFO jenkins.InitReactorRunner$1#onAttained: Completed initialization
2024-03-05 13:51:59.949+0000 [id=26] INFO hudson.Lifecycle.Lifecycle#onReady: Jenkins is fully up and running
2024-03-05 13:52:29.808+0000 [id=61] INFO h.m.DownloadService$Downloadable#load: Obtained the updated data file for hudson.tasks.Maven.MavenInstaller
2024-03-05 13:52:29.819+0000 [id=61] INFO hudson.util.Retrier#start: Performed the action check updates server successfully at the attempt #1
2024-03-05 13:55:11.958+0000 [id=22] INFO hudson.PluginManager#install: Starting installation of a batch of 21 plugins plus their dependencies
2024-03-05 13:55:11.990+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of ionicons-api for plugin cloudbees-folder
2024-03-05 13:55:12.000+0000 [id=96] INFO h.model.UpdateCenter$DownloadJobsRun: Starting the installation of ionicons-api on behalf of admin
2024-03-05 13:55:12.000+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of token-macro for plugin build-timeout
2024-03-05 13:55:12.003+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of json-path-api for plugin token-macro
2024-03-05 13:55:12.004+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of structs for plugin token-macro
2024-03-05 13:55:12.005+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of workflow-step-api for plugin token-macro
2024-03-05 13:55:12.008+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of plain-credentials for plugin credentials-binding
2024-03-05 13:55:12.009+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of credentials for plugin plain-credentials
2024-03-05 13:55:12.009+0000 [id=96] INFO h.m.UpdateCenter$UpdateCenterConfiguration#download: Downloading ionicons-api
2024-03-05 13:55:12.021+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of ssh-credentials for plugin credentials-binding
2024-03-05 13:55:12.023+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of trilead-api for plugin ssh-credentials
2024-03-05 13:55:12.024+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of gson-api for plugin trilead-api
2024-03-05 13:55:12.025+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of workflow-api for plugin timestamp
2024-03-05 13:55:12.027+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of scm-api for plugin workflow-api
2024-03-05 13:55:12.029+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of commons-lang3-api for plugin timestamp
2024-03-05 13:55:12.032+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of matrix-project for plugin ws-cleanups
2024-03-05 13:55:12.037+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of script-security for plugin matrix-project
2024-03-05 13:55:12.039+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of caffeine-api for plugin script-security
2024-03-05 13:55:12.040+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of junit for plugin matrix-project
2024-03-05 13:55:12.042+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of jackson2-api for plugin junit
2024-03-05 13:55:12.043+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of jaxb for plugin jackson2-api
2024-03-05 13:55:12.043+0000 [id=22] INFO hudson.model.UpdateSite$PluginDeploy: Adding dependent install of javax-activation-api for plugin jaxb
```

Task 2

1.Picture showing the console output after the build is successful

Dashboard > PES2UG21CS315-1 > #2 > Console Output

- Status
- Changes
- Console Output
- View as plain text
- Edit Build Information
- Delete build '#2'
- Git Build Data
- Previous Build

Console Output

```
Started by user Nagaveni L G
Running as SYSTEM
Building in workspace /var/jenkins_home/workspace/PES2UG21CS315-1
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /var/jenkins_home/workspace/PES2UG21CS315-1/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/NAGAVENIGOWDA/PES2UG21CS315_NAGAVENI_LG_Jenkins # timeout=10
Fetching upstream changes from https://github.com/NAGAVENIGOWDA/PES2UG21CS315_NAGAVENI_LG_Jenkins
> git --version # timeout=10
> git --version # 'git version 2.39.2'
> git fetch --tags --force --progress -- https://github.com/NAGAVENIGOWDA/PES2UG21CS315_NAGAVENI_LG_Jenkins +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 28fc1b2b186736eeb35fbeb0fa692e2b4df9734e (origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f 28fc1b2b186736eeb35fbeb0fa692e2b4df9734e # timeout=10
Commit message: "initial commit"
> git rev-list --no-walk 28fc1b2b186736eeb35fbeb0fa692e2b4df9734e # timeout=10
[PES2UG21CS315-1] $ /bin/sh -xe /tmp/jenkins5873065491381684546.sh
+ make -C main
make: Entering directory '/var/jenkins_home/workspace/PES2UG21CS315-1/main'
make: 'hello_exec' is up to date.
make: Leaving directory '/var/jenkins_home/workspace/PES2UG21CS315-1/main'
Finished: SUCCESS
```

2. Picture showing the Stable state of the task in Build History of Jenkins

Jenkins

Dashboard > All > Build History

- New Item
- People
- Build History
- Manage Jenkins
- My Views

Build History of Jenkins

| S | Build | Time Since ↑ | Status |
|---|--------------------|--------------|--------|
| ✓ | PES2UG21CS315-1 #2 | 2 min 49 sec | stable |
| ✓ | PES2UG21CS315-1 #1 | 5 min 15 sec | stable |

Icon legend Atom feed for all Atom feed for failures Atom feed for just latest builds

Build Queue

No builds in the queue.

Build Executor Status

1 Idle
2 Idle

Task3

1. Console output of second job

Jenkins

Dashboard > PES2UG21CS315-2 > #1 > Console Output

- Status
- Changes
- Console Output
- View as plain text
- Edit Build Information
- Delete build '#1'

Console Output

```
Started by upstream project "PES2UG21CS315-1" build number 3
originally caused by:
Started by user Nagaveni L G
Running as SYSTEM
Building in workspace /var/jenkins_home/workspace/PES2UG21CS315-2
[PES2UG21CS315-2] $ /bin/sh -xe /tmp/jenkins6351848753950402179.sh
+ /var/jenkins_home/workspace/PES2UG21CS315-1/main/hello_exec
Hello, World!
Hello, Jenkins
I have successfully built and run
Finished: SUCCESS
```

2. Status page of first job

Dashboard

PES2UG21CS315-1

Status

Changes

Workspace

Build Now

Configure

Delete Project

Git Polling Log

GitHub

Rename

Build History

Filter...

#3

Mar 5, 2024, 3:39 PM

#2

Mar 5, 2024, 3:31 PM

#1

Mar 5, 2024, 3:29 PM

Atom feed for all

Atom feed for failures

✓

PES2UG21CS315-1

Add description

Disable Project

Downstream Projects

✓ PES2UG21CS315-2

Permalinks

- Last build (#3), 6 min 58 sec ago
- Last stable build (#3), 6 min 58 sec ago
- Last successful build (#3), 6 min 58 sec ago
- Last completed build (#3), 6 min 58 sec ago

3.Build History of Jenkins

Dashboard

All

Build History

New Item

People

Build History

Manage Jenkins

My Views

Build Queue

No builds in the queue

Build Executor Status

1 Idle

2 Idle

Build History of Jenkins

| S | Build | Time Since | Status |
|---|--------------------|--------------|--------|
| ✓ | PES2UG21CS315-2 #1 | 7 min 51 sec | stable |
| ✓ | PES2UG21CS315-1 #3 | 7 min 59 sec | stable |
| ✓ | PES2UG21CS315-1 #2 | 15 min | stable |
| ✓ | PES2UG21CS315-1 #1 | 18 min | stable |

Icon: S M L

Icon legend

Atom feed for all

Atom feed for failures

Atom feed for just latest builds

4.Jenkins Dashboard

Dashboard

New Item

People

Build History

Manage Jenkins

My Views

Build Queue

No builds in the queue

Build Executor Status

1 Idle

2 Idle

All

+

Add description

| S | W | Name | Last Success | Last Failure | Last Duration |
|---|---|-----------------|-----------------|--------------|---------------|
| ✓ | ☀ | PES2UG21CS315-1 | 8 min 38 sec #3 | N/A | 1.9 sec |
| ✓ | ☀ | PES2UG21CS315-2 | 8 min 30 sec #1 | N/A | 0.11 sec |

Icon: S M L

Icon legend

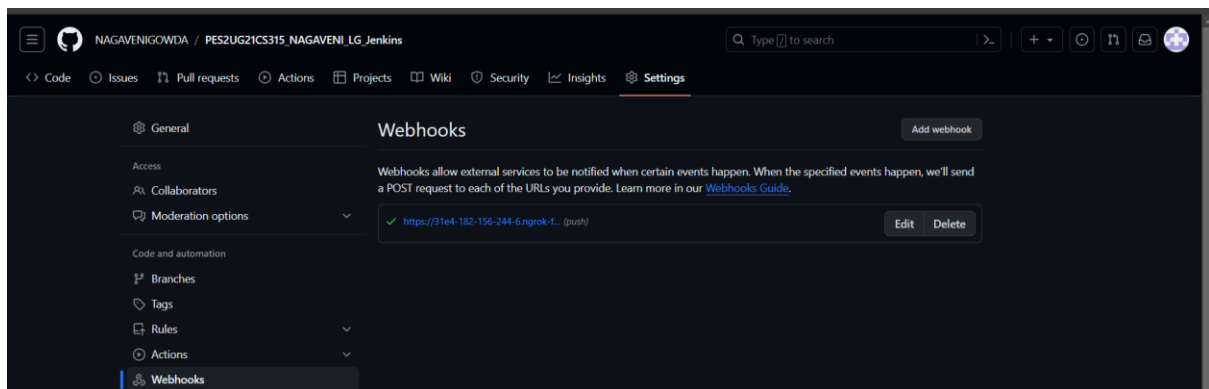
Atom feed for all

Atom feed for failures

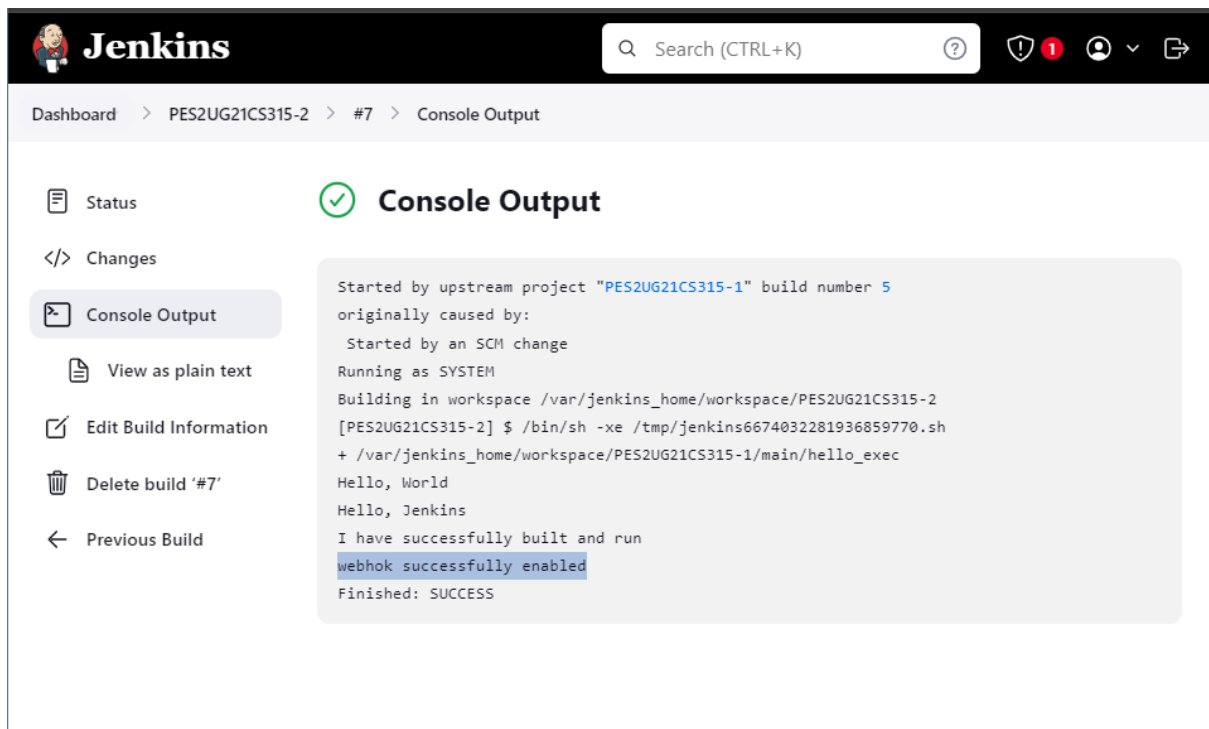
Atom feed for just latest builds

TASK 4

1.Webhook added to your GitHub repository



2. Console Output of second job displaying the change made in hello.cpp file.



TASK 5

1.Code/script written to create basic pipeline using GitHub repository

PES2UG21CS315 NAGAVENI LG Jenkins / Jenkinsfile

in main

Edit

Preview

Code 55% faster with GitHub Copilot

```

1 pipeline{
2   agent any
3   stages {
4     stage('Clone repository'){
5       steps{
6         checkout([$class: 'GitSCM',
7           branches:[[name:'*/main']],
8           userRemoteConfigs :[[url:'https://github.com/NAGAVENIGOWDA/PES2UG21CS315_NAGAVENI_LG_Jenkins.git']]])
9       }
10    }
11    stage('Build'){
12      steps{
13        sh 'g++ main/hello.cpp -o output'
14      }
15    }
16    stage('Test'){
17      steps {
18        sh './output'
19      }
20    }
21    stage('Deploy'){
22      steps{
23        echo 'deploy'
24      }
25    }
26  }
27  post{
28    failure{
29      error 'Pipeline failed'
30    }
31  }
32 }
33

```

2. Output of working created pipeline, the screenshot should include

- Stage view / Execution status of pipeline with all stages succeeded
- Verify Declarative: Post Actions stage for handling failures.

Jenkins

Search (CTRL+K)

Nagaveni L G

log out

Dashboard > PES2UG21CS315 >

Status

Changes

Build Now

Configure

Delete Pipeline

Full Stage View

Rename

Pipeline Syntax

Build History

Filter...

29

Mar 6, 2024, 12:07 PM

42

Mar 6, 2024, 12:04 PM

41

Mar 6, 2024, 10:57 AM

Atom feed for all

Atom feed for failures

✓ PES2UG21CS315

Add description

Disable Project

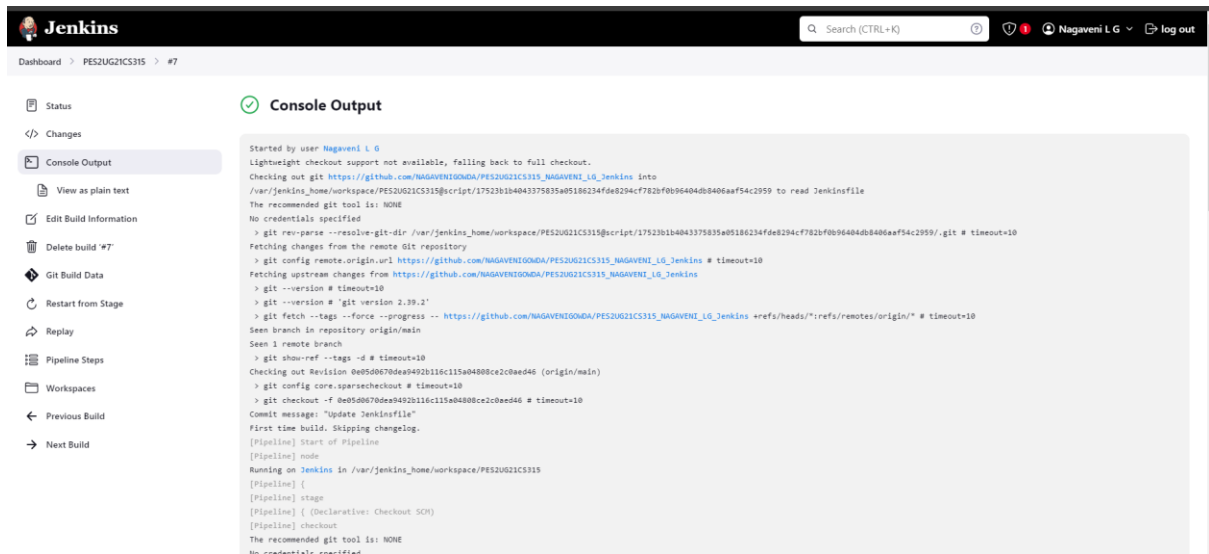
Stage View

| | Declarative: Checkout SCM | Clone repository | Build | Test | Deploy | Declarative: Post Actions |
|--|---------------------------|------------------|-------|-------|--------|---------------------------|
| Average stage times: (Average full run time: ~7s) | 1s | 1s | 1s | 314ms | 138ms | 153ms |
| 45 Mar 06 17:37 3 commits | 2s | 1s | 483ms | 116ms | 91ms | 153ms |
| 47 Mar 06 17:34 No Changes | 1s | 1s | 513ms | 186ms | | |

Permalinks

- Last build (#7), 3 min 22 sec ago
- Last stable build (#7), 3 min 22 sec ago
- Last successful build (#7), 3 min 22 sec ago
- Last completed build (#7), 3 min 22 sec ago

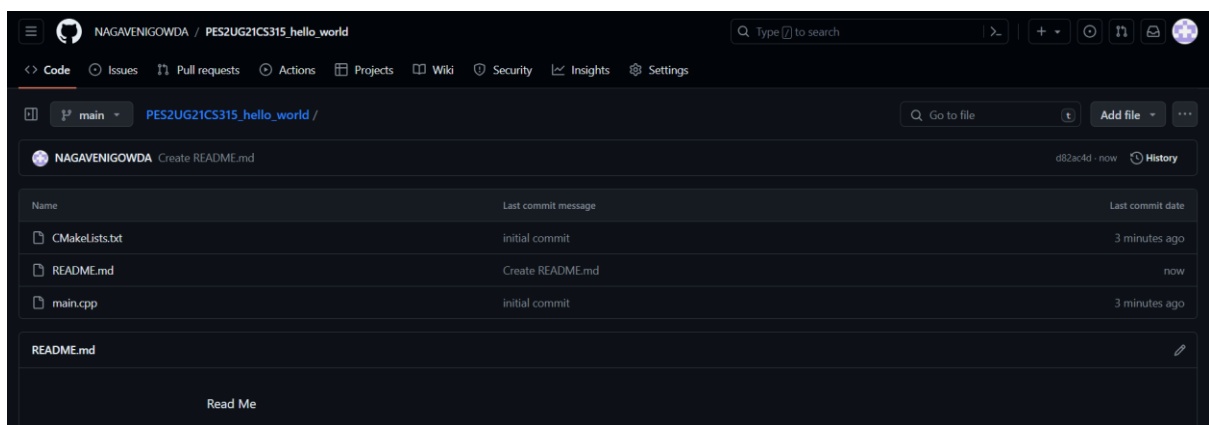
3. Console Output of the Pipeline



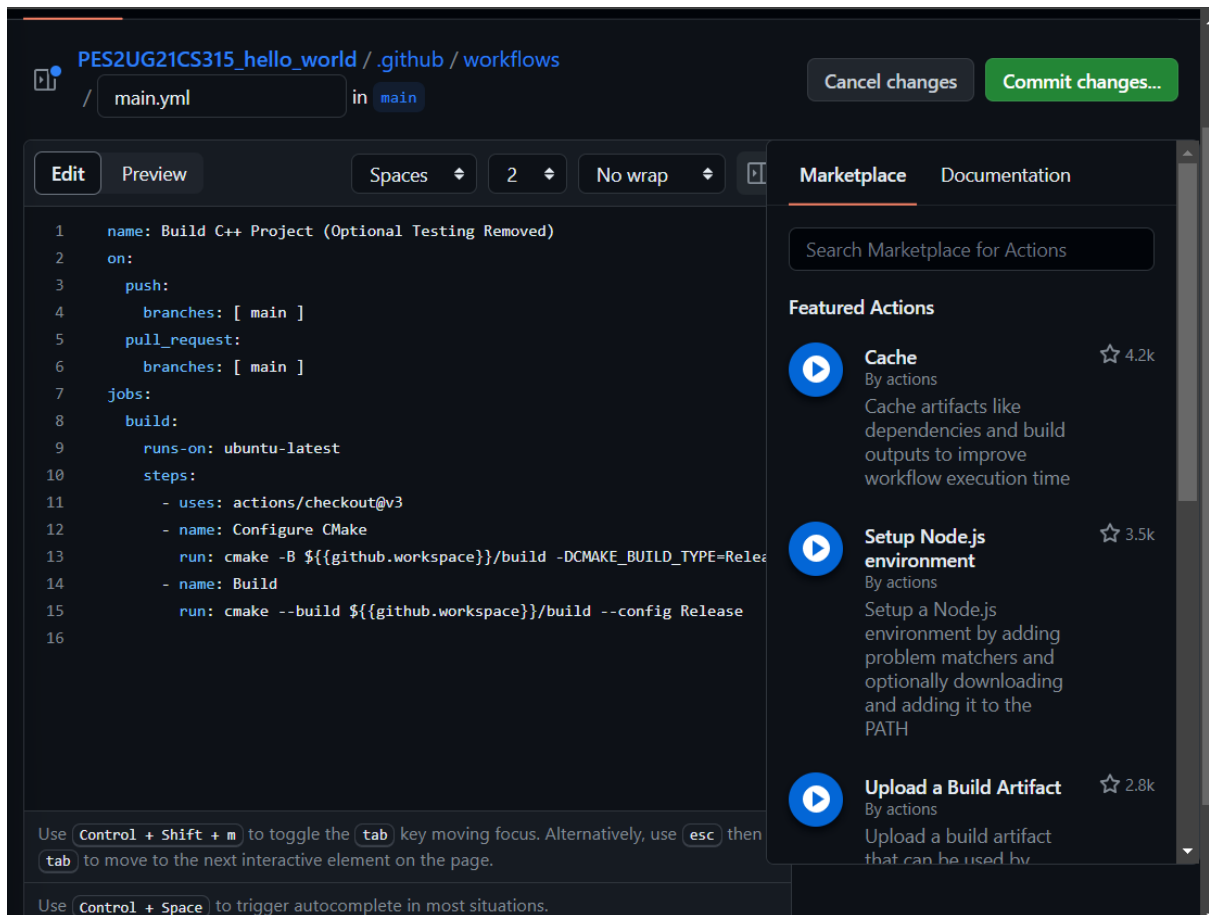
4. https://github.com/NAGAVENIGOWDA/PES2UG21CS315_NAGAVENI_LG_Jenkins/tree/main

Assignment - 4(b)

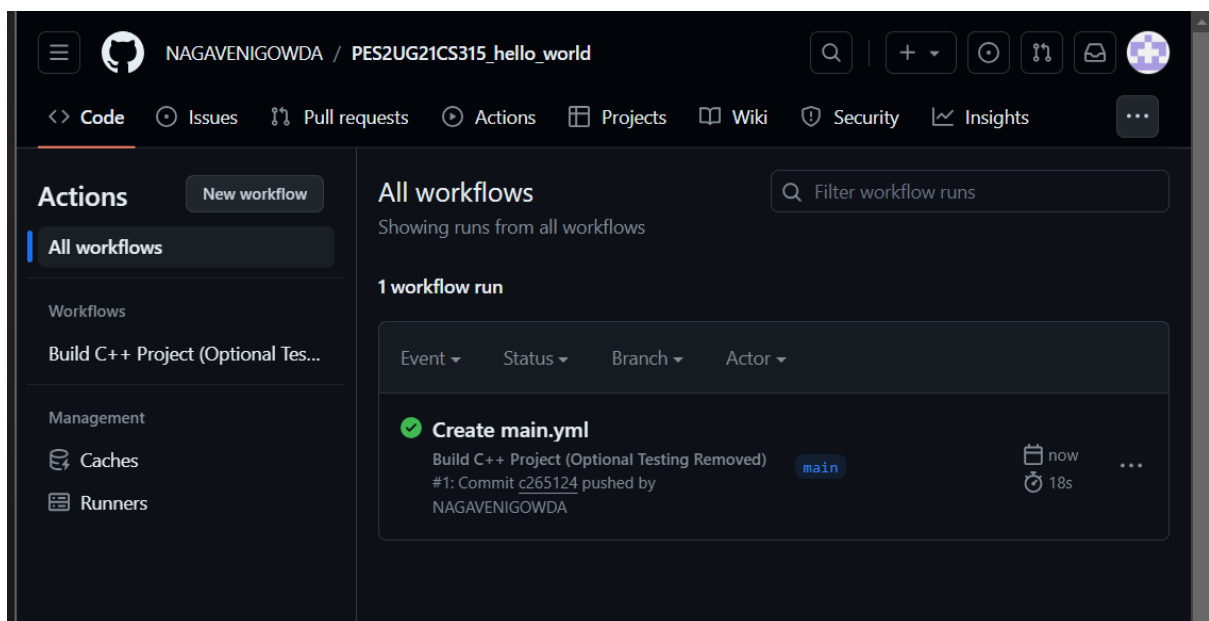
(a) Take a screenshot of the repository in the manner given below after the two files have been uploaded onto the repository and name it (a)



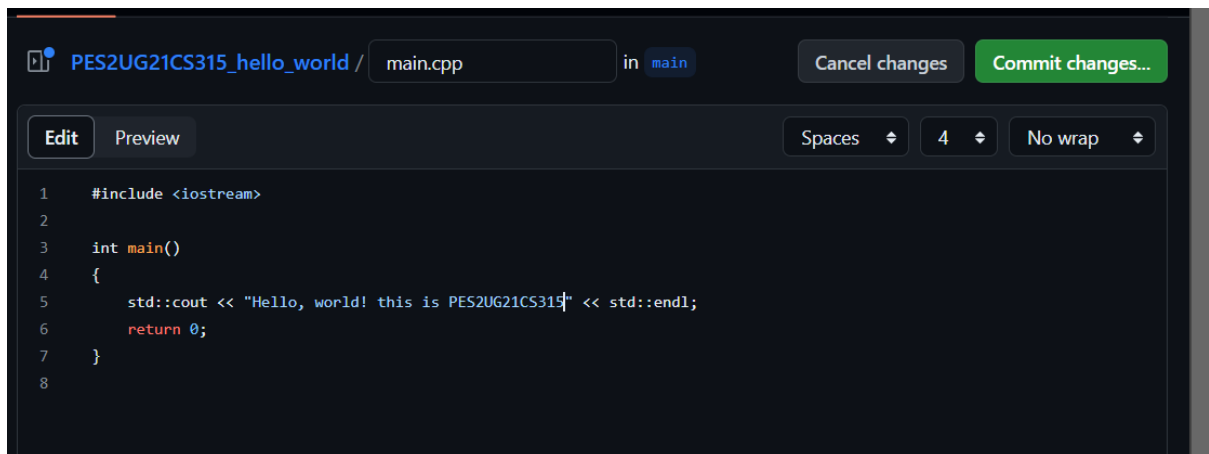
(b) Take a screenshot of the code after it has been pasted onto the workflow and name it (b)



(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)

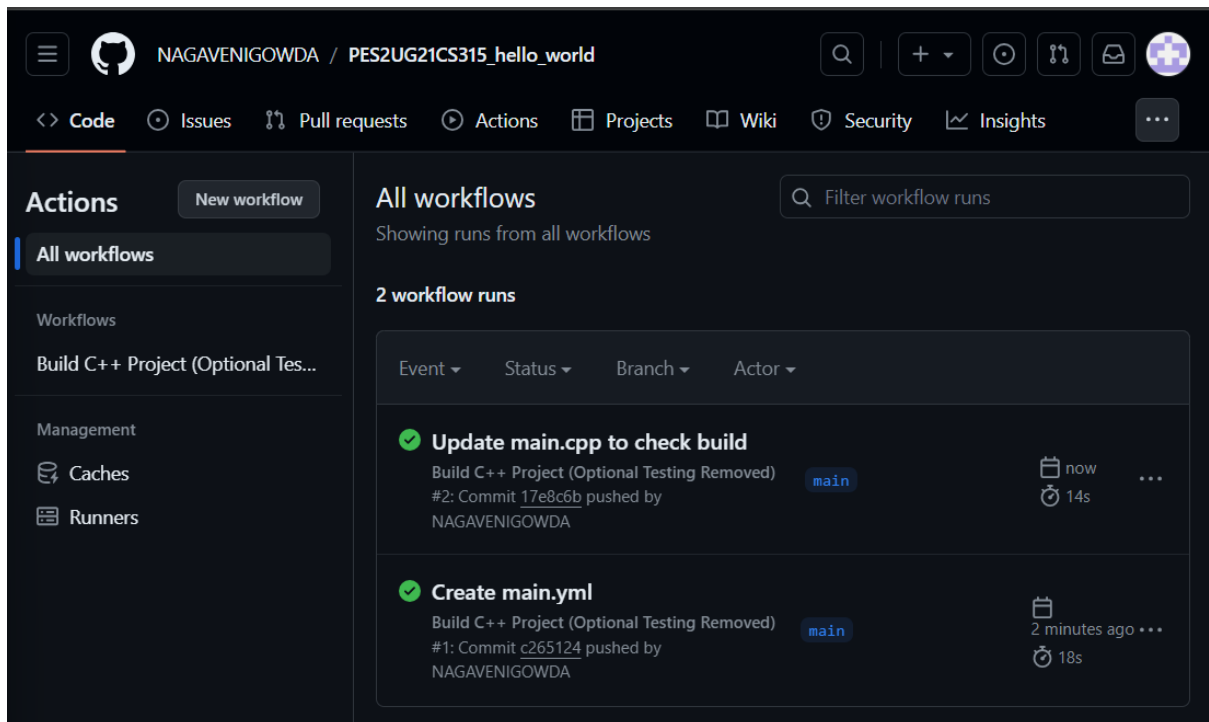


The screenshot shows a code editor interface for a file named `main.cpp` in the repository `PES2UG21CS315_hello_world`. The editor is in the `Edit` mode. The code is a simple C++ program that prints "Hello, world! this is PES2UG21CS315" and returns 0. The code is as follows:

```
1 #include <iostream>
2
3 int main()
4 {
5     std::cout << "Hello, world! this is PES2UG21CS315" << std::endl;
6     return 0;
7 }
8
```

At the top right, there are buttons for `Cancel changes` and `Commit changes...`. Below the code editor, there are tabs for `Edit` and `Preview`, and settings for `Spaces` (4) and `No wrap`.

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



The screenshot shows the GitHub Actions workflow runs page for the repository `PES2UG21CS315_hello_world`. The page displays two workflow runs, both of which have passed successfully.

Actions

- [New workflow](#)
- [All workflows](#)

Workflows

- [Build C++ Project \(Optional Tes...](#)

Management

- [Caches](#)
- [Runners](#)

All workflows

Showing runs from all workflows

2 workflow runs

| Event | Status | Branch | Actor | Run Name | Run ID | Run Time | Run Status |
|-------|---------|--------|---------------|--------------------------------|--------------------|---------------|------------|
| Push | Success | main | NAGAVENIGOWDA | Update main.cpp to check build | #2: Commit 17e8c6b | now | 14s |
| Push | Success | main | NAGAVENIGOWDA | Create main.yml | #1: Commit c265124 | 2 minutes ago | 18s |