



Continuing Education Program  
Center for Computing and Information Technology  
Fakultas Teknik Universitas Indonesia

## Using GitHub and Jenkins for Website Hotel

### Group 3

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Class : 3SC4

CEP CCIT

FAKULTAS TEKNIK UNIVERSITAS INDONESIA

2019

# **PROJECT ON**

*Using GitHub and Jenkins for Website Hotel*

## **Developed by**

- 1. Ryan Ibrahim Pratama**
- 2. Muhammad Farhan Alfikri**

The logo of NIIT (National Institute of Information Technology) is displayed in a bold, blue, sans-serif font. The letters are thick and blocky, with the 'N' and 'I' being particularly prominent.

## **Using GitHub and Jenkins for Website Hotel**

Batch Code : 3SC4

Start Date : January 25<sup>th</sup> 2021

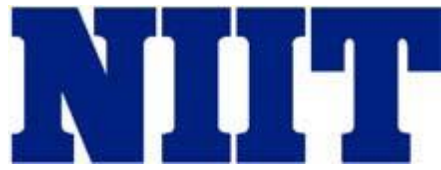
End Date : January 28<sup>th</sup> 2021

Name of Faculty : Mr. Tri Agus Riyadi, S.Kom, M.T

Names of Developer :

1. Ryan Ibrahim Pratama
2. Muhammad Farhan Alfikri

Date of Submission: January 28<sup>th</sup> 2021



## **CERTIFICATE**

This is to certify that this report titled “Using GitHub and Jenkins for Website Hotel” embodies the original work done by Ryan Ibrahim Pratama and Farhan. Project in partial fulfillment of their course requirement at NIIT.

Coordinator:

Mr. Tri Agus Riyadi, S.Kom, M.T

## ACKNOWLEDGEMENT

First of all, thanks to Almighty God because of the help of God, authors finished writing the paper entitled “Using GitHub and Jenkins for Website Hotel” right in the calculated time.

The purpose in writing this paper is to fulfill the assignment that given by Mr. Tri Agus Riyadi, S.Kom, M.T as lecturer in CEP-CCIT FTUI.

In arranging this paper, the writer truly get lots challenges and obstructions but with help of many individuals who can't be mentioned one by one, those obstructions could have passed. Writer also realized there are still many mistakes in process of writing this paper.

Because of that, the writer says thank to all individuals who helps in the process of writing this paper. Hopefully God replies all helps and bless all. The writer realized that this paper is still not perfect in arrangement and the content. Then the writer hopes the criticism from the readers can help the writer in perfecting the next paper. Last but not the least hopefully, this paper can help the readers to gain more knowledge about This project.

# SYSTEM ANALYSIS

## **System Summary:**

The project entitled "Using GitHub and Jenkins for Hotel Websites" was created so that developers can more easily work in groups, namely collaborating with other developers in an orderly and neat manner.

This program is made to store files that have been created and edited simultaneously with other developers. In this writing, the author uses html and css files that are integrated with GitHub and Jenkins.

on GitHub the developer can develop files simultaneously, and in Jenkins the developer can see the final build of the project.

# TECHNOLOGY USED

Technology used to support the project:

## **1. GitHub**

GitHub is a development platform. From open source to business, you can host and review code, manage projects and build software. GitHub is a shared web host service for software development projects that uses Git version control systems and internet hosting services. It is widely used for computer code.

## **2. Git Bash**

Git for Windows provides a Bash emulation used to run Git from the command line. Bash is an acronym for Bourne Again Shell. A shell is a terminal application used to interface with an operating system through written commands.

## **3. Jenkins**

Jenkins is the leading open source automation server, Jenkins provides hundreds of plugins to support building, deploying and automating any project.

It is a server-based application and requires a web server like Apache Tomcat. 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 developer can accelerate their software development process, as Jenkins can automate build and test at a rapid rate.


# DEVOPS IMPLEMENTATION


## GitHub Repository

Create a new repository

Owner \*

Repository name \*


 ryanip17 ▾


/ project 

Owner / fill Repository name

Great repository names are short and memorable. Need inspiration? How about [animated-octo-fortnight?](#)

Description (optional)

☒  **Public**  
Anyone on the internet can see this repository. You choose who can commit.

☐  **Private**  
You choose who can see and commit to this repository.


Choose Public

**Initialize this repository with:**  
Skip this step if you're importing an existing repository.

☒ **Add a README file**  
This is where you can write a long description for your project. [Learn more.](#)

☐ **Add .gitignore**  
Choose which files not to track from a list of templates. [Learn more.](#)

☐ **Choose a license**  
A license tells others what they can and can't do with your code. [Learn more.](#)

This will set  **main** as the default branch. Change the default name in your [settings](#).

Create repository

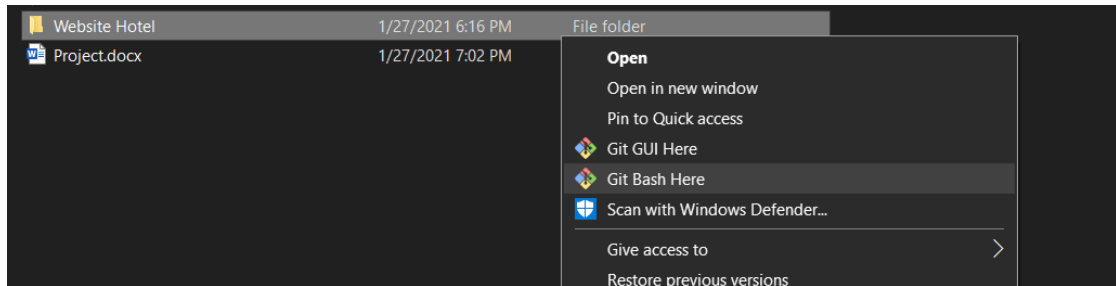
Click "Create Repository"



# DEVOPS IMPLEMENTATION

## Runnig Git Bash

1. Click “Git Bash Here” on the file folder.



2. Command for configuring name and email

```
MINGW64:/c/Users/Ryan/Documents/3SC4/materi pak tar/project 2/Website H...
Ryan@Ryan MINGW64 ~/Documents/3SC4/materi pak tar/project 2/Website Hotel (maste
r)
$ git config --global user.name "RYAN"

Ryan@Ryan MINGW64 ~/Documents/3SC4/materi pak tar/project 2/Website Hotel (maste
r)
$ git config --global user.email "ryan123ibrahim@gmail.com"

Ryan@Ryan MINGW64 ~/Documents/3SC4/materi pak tar/project 2/Website Hotel (maste
r)
```

3. Create a git repository on files, this command is used to start a new repository.

```
$ git init
Initialized empty Git repository in C:/Users/Ryan/Documents/3SC4/materi pak tar/
project 2/Website Hotel/.git/
```

4. Fill in the file with the project.

Name	Date Modified	Type	Size
.git	1/27/2021 7:21 PM	File folder	
css	1/27/2021 6:16 PM	File folder	
images	1/27/2021 6:16 PM	File folder	
makalah	1/27/2021 6:16 PM	File folder	
Deluxe.html	6/30/2020 8:55 AM	Chrome HTML Do...	7 KB
gallery.html	6/30/2020 8:55 AM	Chrome HTML Do...	6 KB
index.html	7/6/2020 7:58 AM	Chrome HTML Do...	10 KB
Presidential.html	6/30/2020 8:56 AM	Chrome HTML Do...	7 KB
profile.html	6/30/2020 2:04 PM	Chrome HTML Do...	4 KB
Room.html	6/30/2020 8:56 AM	Chrome HTML Do...	8 KB
Standard.html	6/30/2020 8:56 AM	Chrome HTML Do...	7 KB

# DEVOPS IMPLEMENTATION

5. Run "git status" command, This command lists all the files that have to be committed.

```
Ryan@Ryan MINGW64 ~/Documents/3SC4/materi pak tar/project 2/Website Hotel (master)
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        Deluxe.html
        Presidential.html
        Room.html
        Standard.html
        css/
        gallery.html
        images/
        index.html
        makalah/
        profile.html

nothing added to commit but untracked files present (use "git add" to track)
```

6. Run the command "git add." to add all inserted source files.

```
Ryan@Ryan MINGW64 ~/Documents/3SC4/materi pak tar/project 2/Website Hotel (master)
$ git add .
```

7. Then, run the command "git commit -m "First Commit (add all source file)"

```
Ryan@Ryan MINGW64 ~/Documents/3SC4/materi pak tar/project 2/Website Hotel (master)
$ git commit -m "First Commit (add all source file)"
[master (root-commit) a5f736c] First Commit (add all source file)
50 files changed, 2166 insertions(+)
create mode 100644 Deluxe.html
create mode 100644 Presidential.html
create mode 100644 Room.html
create mode 100644 Standard.html
create mode 100644 css/booking.css
create mode 100644 css/footer.css
create mode 100644 css/gallery.css
create mode 100644 css/profile.css
create mode 100644 css/room.css
create mode 100644 css/style.css
```

8. Run the command "git log" to see the status of any additions / changes that have been made.

```
Ryan@Ryan MINGW64 ~/Documents/3SC4/materi pak tar/project 2/Website Hotel (master)
$ git log
commit a5f736cd4cd159626462ed51fba5839b42fc8dc7 (HEAD -> master)
Author: RYAN <ryan123ibrahim@gmail.com>
Date:   Wed Jan 27 19:52:11 2021 +0700

    First Commit (add all source file)
```

# DEVOPS IMPLEMENTATION

9. Attempting to modify the contents of the file. Then run the command "git status" to see if any files were edited.

```
Ryan@Ryan MINGW64 ~/Documents/3SC4/materi pak tar/project 2/Website Hotel (master)
$ git status
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   index.html
```

10. Run the command "git add index.html" then give it the commit, and we can see it through the command "git log".

```
Ryan@Ryan MINGW64 ~/Documents/3SC4/materi pak tar/project 2/Website Hotel (master)
$ git add index.html

Ryan@Ryan MINGW64 ~/Documents/3SC4/materi pak tar/project 2/Website Hotel (master)
$ git commit -m "Second commit (Modified file index.html)"
[master 252c03f] Second commit (Modified file index.html)
 1 file changed, 1 insertion(+), 1 deletion(-)

Ryan@Ryan MINGW64 ~/Documents/3SC4/materi pak tar/project 2/Website Hotel (master)
$ git log
commit 252c03f0b8289d95c6f84dc35a9516a793a7b8be (HEAD -> master)
Author: RYAN <ryan123ibrahim@gmail.com>
Date:   Wed Jan 27 20:08:39 2021 +0700

    Second commit (Modified file index.html)

commit a5f736cd4cd159626462ed51fba5839b42fc8dc7
Author: RYAN <ryan123ibrahim@gmail.com>
Date:   Wed Jan 27 19:52:11 2021 +0700

    First Commit (add all source file)
```

11. Run the command "git diff (id commit)" to see the detailed modification that was changed.

```
Ryan@Ryan MINGW64 ~/Documents/3SC4/materi pak tar/project 2/Website Hotel (master)
$ git diff a5f736cd4cd159626462ed51fba5839b42fc8dc7
diff --git a/index.html b/index.html
index f23f461..f7d2081 100644
--- a/index.html
+++ b/index.html
@@ -32,7 +32,7 @@
     <div class="background" style="margin: 0;">
       
       <div class="text1">
-         <h2>Quality is priority</h2>
+         <h2>Quality is priority!</h2>
         <hr>
       </div>
     </div>
```

## DEVOPS IMPLEMENTATION

12. Remote to the GitHub repository by executing the command "git remote add origin (repository address)". Then, run the "git push -u origin main" command to enter data into the repository.

```
Ryan@Ryan MINGW64 ~/Documents/3SC4/materi pak tar/project 2/Website Hotel (master)
$ git remote add origin https://github.com/ryanip17/project.git

Ryan@Ryan MINGW64 ~/Documents/3SC4/materi pak tar/project 2/Website Hotel (master)
$ git branch -M main

Ryan@Ryan MINGW64 ~/Documents/3SC4/materi pak tar/project 2/Website Hotel (main)
$ git push -u origin main
Enumerating objects: 60, done.
Counting objects: 100% (60/60), done.
Delta compression using up to 8 threads
Compressing objects: 100% (59/59), done.
Writing objects: 100% (59/59), 21.34 MiB | 255.00 KiB/s, done.
Total 59 (delta 9), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (9/9), done.
To https://github.com/ryanip17/project.git
17f471f..cac9291 main -> main
Branch 'main' set up to track remote branch 'main' from 'origin'.
```

13. When the developer run "git log" after modified the file with 2 user developer, and pull the data from github, and the developer can see the log.

```
Ryan@Ryan MINGW64 ~/Documents/3SC4/materi pak tar/project 2/Website Hotel (master)
$ git log
commit 920fdb8a67492ceeedac5a7fd8476f524a0faef (HEAD -> master, origin/master)
Author: Farhanalfikri0411 <55526178+Farhanalfikri0411@users.noreply.github.com>
Date: Thu Jan 28 08:15:05 2021 +0700

    Update file room.html

    modified css internal and change some text

commit 229ca3911b666e873070f7dbc76918fc493e1164
Author: ryanip17 <77739013+ryanip17@users.noreply.github.com>
Date: Thu Jan 28 08:08:45 2021 +0700

    Delete Files

    this file is not of part html css

commit 037e04e1c95103b42d7f84950c1bfd2d432397c9
Merge: cac9291 939dd37
Author: ryanip17 <77739013+ryanip17@users.noreply.github.com>
Date: Thu Jan 28 07:14:17 2021 +0700

    Merge pull request #1 from Farhanalfikri0411/patch-1

...skipping...
commit 920fdb8a67492ceeedac5a7fd8476f524a0faef (HEAD -> master, origin/master)
Author: Farhanalfikri0411 <55526178+Farhanalfikri0411@users.noreply.github.com>
Date: Thu Jan 28 08:15:05 2021 +0700

    Update file room.html

    modified css internal and change some text

commit 229ca3911b666e873070f7dbc76918fc493e1164
Author: ryanip17 <77739013+ryanip17@users.noreply.github.com>
Date: Thu Jan 28 08:08:45 2021 +0700

    Delete Files

    this file is not of part html css
```

```
Author: ryanip17 <77739013+ryanip17@users.noreply.github.com>
Date: Thu Jan 28 08:08:45 2021 +0700

    Delete Files

    this file is not of part html css

commit 037e04e1c95103b42d7f84950c1bfd2d432397c9
Merge: cac9291 939dd37
Author: ryanip17 <77739013+ryanip17@users.noreply.github.com>
Date: Thu Jan 28 07:14:17 2021 +0700

    Merge pull request #1 from Farhanalfikri0411/patch-1

    Update footer.css

commit 939dd37cb1ead21b8f830a430c60c076cd27e9a
Author: Farhanalfikri0411 <55526178+Farhanalfikri0411@users.noreply.github.com>
Date: Thu Jan 28 07:12:14 2021 +0700

    Update footer.css

    update size form in footer

commit cac92910576081926c88a5ac4e806aff9b581fc
Merge: 252c03f 17f471f
Author: RYAN <ryan123ibrahim@gmail.com>
Date: Wed Jan 27 20:26:48 2021 +0700

    Merge branch 'main' of https://github.com/ryanip17/project

    the commit.
```

# DEVOPS IMPLEMENTATION

## The "commit" section on GitHub

### 1 . Branch main

main

Commits on Jan 28, 2021

Merge pull request #3 from ryanip17/master ryanip17 committed 21 seconds ago	Verified	54b4d9a	<>
Update file room.html Farhanalfikri0411 committed 31 minutes ago	Verified	920fdb8	<>
Delete Files ryanip17 committed 38 minutes ago	Verified	229ca39	<>
Merge pull request #2 from ryanip17/master ryanip17 committed 1 hour ago	Verified	aa87354	<>
Merge pull request #1 from Farhanalfikri0411/patch-1 ryanip17 committed 2 hours ago	Verified	037e04e	<>
Update footer.css Farhanalfikri0411 committed 2 hours ago	Verified	939dd37	<>

Commits on Jan 27, 2021

Merge branch 'main' of https://github.com/ryanip17/project RYAN committed 12 hours ago	cac9291	<>
Second commit (Modified file index.html) RYAN committed 13 hours ago	252c03f	<>
First Commit (add all source file) RYAN committed 13 hours ago	a5f736c	<>
Initial commit ryanip17 committed 14 hours ago	Verified 17f471f	<>

### 2. Branch master

master

Commits on Jan 28, 2021

Update file room.html Farhanalfikri0411 committed 22 minutes ago	Verified	920fdb8	<>
Delete Files ryanip17 committed 29 minutes ago	Verified	229ca39	<>
Merge pull request #1 from Farhanalfikri0411/patch-1 ryanip17 committed 1 hour ago	Verified	037e04e	<>
Update footer.css Farhanalfikri0411 committed 1 hour ago	Verified	939dd37	<>

Commits on Jan 27, 2021

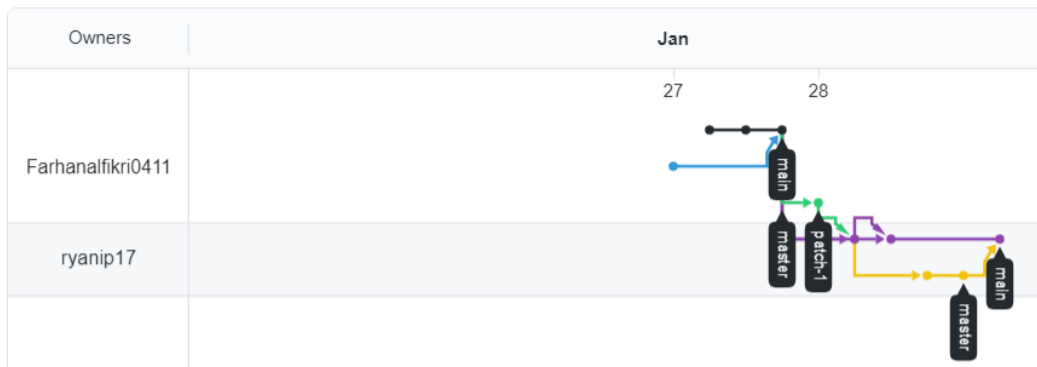
Merge branch 'main' of https://github.com/ryanip17/project RYAN committed 12 hours ago	cac9291	<>
Second commit (Modified file index.html) RYAN committed 12 hours ago	252c03f	<>
First Commit (add all source file) RYAN committed 13 hours ago	a5f736c	<>
Initial commit ryanip17 committed 14 hours ago	Verified 17f471f	<>

# DEVOPS IMPLEMENTATION

## Network Graph

### Network graph

Timeline of the most recent commits to this repository and its network ordered by most recently pushed to.

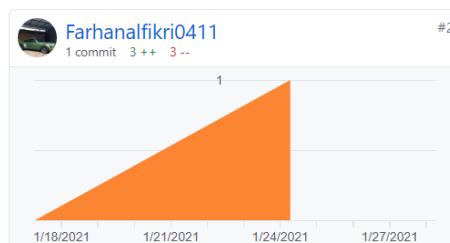
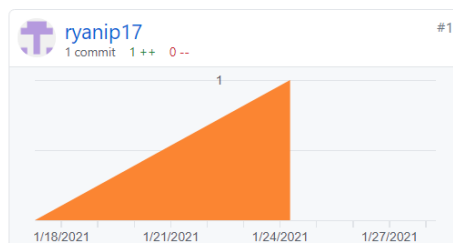
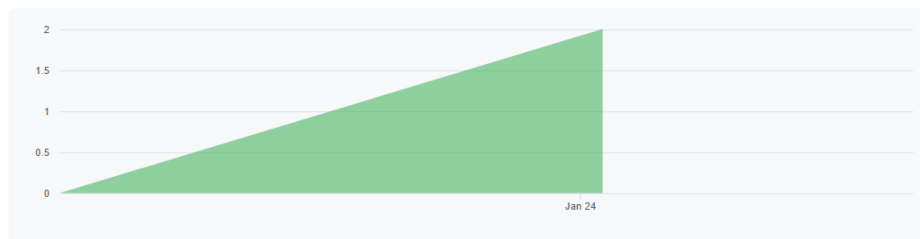


## Contributors

Jan 17, 2021 – Jan 28, 2021

Contributions: Commits ▾

Contributions to main, excluding merge commits



# DEVOPS IMPLEMENTATION

## Github Repository

The screenshot shows a GitHub repository page for 'ryanip17 / project'. The repository is in the 'main' branch and has 2 branches and 0 tags. The repository size is 54848b, and it was updated 1 minute ago with 10 commits. The repository contains a list of files and folders, including 'css', 'images', 'Deluxe.html', 'Presidential.html', 'README.md', 'Room.html', 'Standard.html', 'gallery.html', 'index.html', and 'profile.html'. The 'README.md' file is selected, showing the text 'project'. The repository is described as 'This is a collection of files about the hotel website that will be worked on together with 2 users so that development is organized.' The repository has no releases published and no packages published. The contributors are 'ryanip17' and 'Farhanalfitri0411'. The languages section shows HTML at 76.9% and CSS at 23.1%.

ryanip17 / project

< Code Issues Pull requests Actions Projects Wiki Security Insights Settings

main 2 branches 0 tags Go to file Add file Code

ryanip17 Merge pull request #3 from ryanip17/master 54848b 1 minute ago 10 commits

css	Update footer.css	2 hours ago
images	First Commit (add all source file)	13 hours ago
Deluxe.html	First Commit (add all source file)	13 hours ago
Presidential.html	First Commit (add all source file)	13 hours ago
README.md	Initial commit	14 hours ago
Room.html	Update file room.html	33 minutes ago
Standard.html	First Commit (add all source file)	13 hours ago
gallery.html	First Commit (add all source file)	13 hours ago
index.html	Second commit (Modified file index.html)	13 hours ago
profile.html	First Commit (add all source file)	13 hours ago

README.md

project

About

This is a collection of files about the hotel website that will be worked on together with 2 users so that development is organized.

Readme

Releases

No releases published  
Create a new release

Packages

No packages published  
Publish your first package

Contributors 2

ryanip17  
Farhanalfitri0411

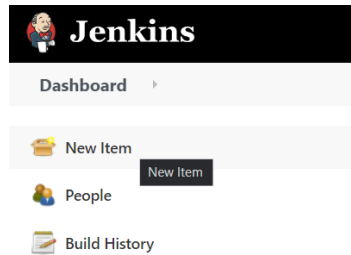
Languages

HTML 76.9% CSS 23.1%

# DEVOPS IMPLEMENTATION

## Jenkins Configuration


1. Click New item at Dashboard




2. Enter an item name, and click Freestyle Project, and then click “ok”

**Enter an item name**


» Required field

**Freestyle project**


This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.

**Pipeline**

Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.

**Multi-configuration project**

Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.

**Folder**

Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders.

**OK**



# DEVOPS IMPLEMENTATION

3. Go to tab Source Code Management, and choose git :

- Fill in the data Repository URL
- Fill in the data Branch Specifier

The screenshot shows the 'Source Code Management' tab in Jenkins. The 'Git' radio button is selected. Under 'Repositories', the 'Repository URL' is set to 'https://github.com/ryanip17/project.git' and 'Credentials' is set to '- none -'. There are 'Advanced...' and 'Add Repository' buttons. Under 'Branches to build', the 'Branch Specifier (blank for \'any\')' is set to '\*/main', and there is an 'Add Branch' button. A red 'x' icon is visible next to the branch specifier field.

4. Click tab Build Triggers and choose Poll SCM and fill the schedule, and then click “save”

The screenshot shows the 'Build Triggers' tab in Jenkins. The 'Poll SCM' checkbox is checked. The 'Schedule' field contains 'H/20 \* \* \* \*'. Below the schedule field, it says 'Would last have run at Thursday, January 28, 2021 8:56:27 AM ICT; would next run at Thursday, January 28, 2021 9:16:27 AM ICT.' There is also an 'Ignore post-commit hooks' checkbox.

# DEVOPS IMPLEMENTATION

## 5. Click Build Now , and check at Build History, then go to Console Output

### - Console Output ( branch main )



#### Console Output

```
Started by user Ryan Ibrahim Pratama
Running as SYSTEM
Building in workspace C:\Windows\system32\config\systemprofile\AppData\Local\Jenkins\.jenkins\workspace\project
The recommended git tool is: NONE
No credentials specified
> git.exe rev-parse --is-inside-work-tree # timeout=10
Fetching changes from the remote Git repository
> git.exe config remote.origin.url https://github.com/ryanip17/project.git # timeout=10
Fetching upstream changes from https://github.com/ryanip17/project.git
> git.exe --version # timeout=10
> git --version # 'git version 2.30.0.windows.2'
> git.exe fetch --tags --force --progress -- https://github.com/ryanip17/project.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git.exe rev-parse "refs/remotes/origin/main^{commit}" # timeout=10
Checking out Revision 54b4d0aa8ba16b19a8fa19516ac4e87e2fc3487f (refs/remotes/origin/main)
> git.exe config core.sparsecheckout # timeout=10
> git.exe checkout -f 54b4d0aa8ba16b19a8fa19516ac4e87e2fc3487f # timeout=10
Commit message: "Merge pull request #3 from ryanip17/master"
First time build. Skipping changelog.
Finished: SUCCESS
```

### - Console Output ( branch master)



#### Console Output

```
Started by user Ryan Ibrahim Pratama
Running as SYSTEM
Building in workspace C:\Windows\system32\config\systemprofile\AppData\Local\Jenkins\.jenkins\workspace\project2
The recommended git tool is: NONE
No credentials specified
> git.exe rev-parse --is-inside-work-tree # timeout=10
Fetching changes from the remote Git repository
> git.exe config remote.origin.url https://github.com/ryanip17/project.git # timeout=10
Fetching upstream changes from https://github.com/ryanip17/project.git
> git.exe --version # timeout=10
> git --version # 'git version 2.30.0.windows.2'
> git.exe fetch --tags --force --progress -- https://github.com/ryanip17/project.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git.exe rev-parse "refs/remotes/origin/master^{commit}" # timeout=10
Checking out Revision 920fdb8a67492ceeedac5a7fd8476f524a0faef (refs/remotes/origin/master)
> git.exe config core.sparsecheckout # timeout=10
> git.exe checkout -f 920fdb8a67492ceeedac5a7fd8476f524a0faef # timeout=10
Commit message: "Update file room.html"
First time build. Skipping changelog.
Finished: SUCCESS
```

## ACTIVITY LIST

No	Activity	Start date	End date	Person(s) involved
1	Creating Repository in GitHub	25/01/2021	25/01/2021	Ryan & Farhan
2	Run command with Git Bash	26/01/2020	27/01/2020	Ryan & Farhan
3	Push to GitHub Repository	26/01/2020	27/01/2020	Ryan & Farhan
4	Collaborator and modified the file	27/01/2020	27/01/2020	Ryan & Farhan
5	Create an item on Jenkins	28/01/2020	28/01/2020	Ryan & Farhan
6	Build the project jenkins	28/01/2020	28/01/2020	Ryan & Farhan