St. Francis Institute of Technology
Borivli (West), Mumbai-400103

Information Technology Department

Academic Year: 2025-26   **Semester: V**
Class / Branch / Division: TE/IT/A&B   **Subject: DevOps Lab**

Practical Exam Question Bank

Sr. no.	List of experiments for practical exam
1.	In Jenkins, show changes in a project with the help of webhooks. Creation of webhook: Then copy this highlighted link and paste it in payload URL and set content type to application/json

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	For this, you need to fork the repository "jenkins-pipeline-tutorial" and go to the settings section and select webhooks **Payload URL *** https://hkdk.events/7r7f91ozaq8hsh **Content type *** application/json **Definition** Pipeline script from SCM **SCM** ? Git **Triggers** Set up automated actions that start your build based ☐ Build after other projects are built ? ☐ Build periodically ? ☑ GitHub hook trigger for GITScm polling ? ☑ Poll SCM ? Schedule ? H/5 * * * * **Repositories** ? **Repository URL** ? https://github.com/R15habh15/jenkins-pipeline-tutorial.git **Credentials** ? - none - Advanced ∨ + Add Repository

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	Now, before performing build now, create a new file in the same forked repository

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2.	To execute 20 Git commands 1) git –version 2) git init 3) git status

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```
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IEDriverServer.exe
        remoting/
        selenium-server-standalone-3.141.59.jar

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

4) git rev-parse —short HEAD

```
$ git rev-parse --short HEAD
cea6512
```

5) git clone

```
$ git clone https://github.com/R15habh15/MavenHelloWorld.git
Cloning into 'MavenHelloWorld'...
remote: Enumerating objects: 104, done.
remote: Counting objects: 100% (1/1), done.
remote: Total 104 (delta 0), reused 0 (delta 0), pack-reused 103 (from 2)
Receiving objects: 100% (104/104), 16.86 KiB | 958.00 KiB/s, done.
Resolving deltas: 100% (35/35), done.
```

6) git add

```
$ git add f1.txt

Rishabh@LAPTOP-8RCEBBNJ MINGW64 /c/RISHABH46 (mast
$ git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   f1.txt
```

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	7) git commit -m
	
	 ```$ git commit -m "Message"```
	 ```[master (root-commit) cea6512] Message```
	 ``` 1 file changed, 0 insertions(+), 0 deletions(-)```
	 ``` create mode 100644 f1.txt```
	
	 8) git log
	
	 ```$ git log```
	 ```commit cea651273ee73961feb304569411d85220c88e6b (HEAD -> master)```
	 ```Author: R15habh15 <rishabh.150305@gmail.com>```
	 ```Date: Sun Nov 2 15:29:29 2025 +0530```
	
	 9) git diff
	
	 ```$ git diff```
	
	 10) git branch
	
	 ```Rishabh@LAPTOP-8RCEBB```
	 ```$ git branch```
	 ```* master```
	
	 11) git stash
	
	 ```$ git stash```
	 ```No local changes to save```
	
	 12) git restore <filename>

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```
$ git restore f1.txt

Rishabh@LAPTOP-8RCEBBNJ MINGW64 /c/RISHABH46 (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IEDriverServer.exe
        MavenHelloWorld/
        remoting/
        selenium-server-standalone-3.141.59.jar

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

13)   git branch

```
Rishabh@LAPTOP-8RCEBBNJ MINGW64 /c/RISHABH46 (master)
$ git branch NEWBRanch

Rishabh@LAPTOP-8RCEBBNJ MINGW64 /c/RISHABH46 (master)
$ git branch
  NEWBRanch
* master
```

14)   git rm

```
Rishabh@LAPTOP-8RCEBBNJ MINGW64 /c/RISHABH46 (master)
$ git rm f1.txt
rm 'f1.txt'
```

15)   git tag

```
$ git tag TAG!

Rishabh@LAPTOP-8
$ git tag
TAG!
```
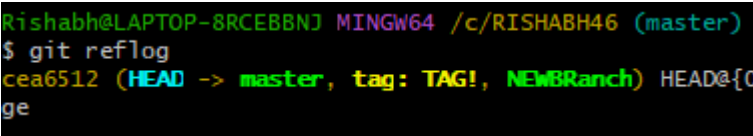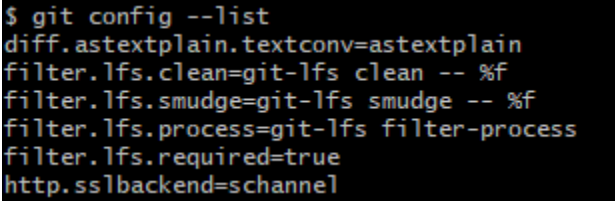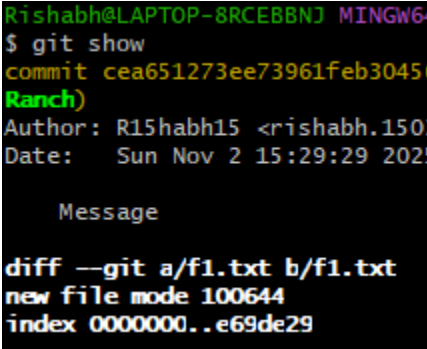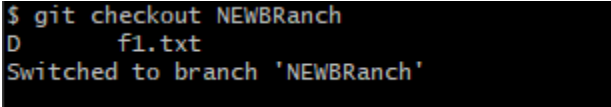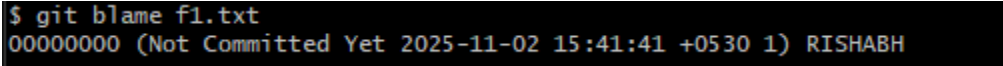
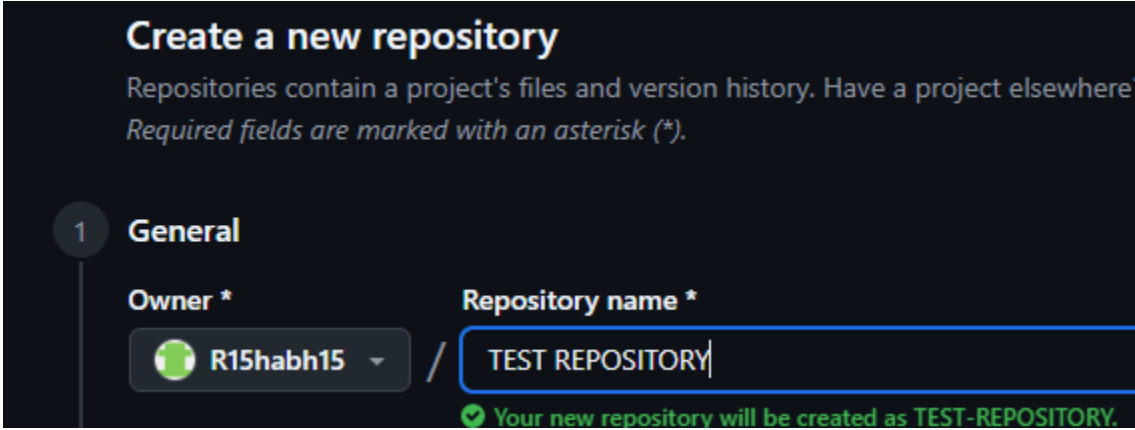## Information Technology Department
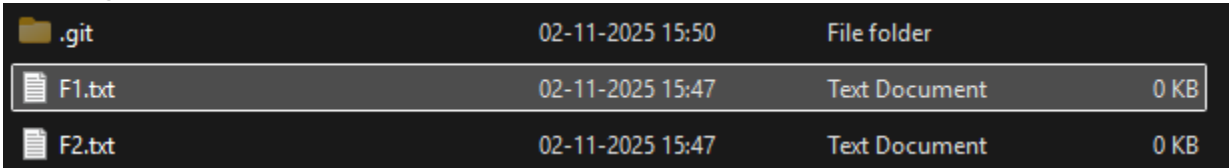
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	16) git reflog
	
	``
	Rishabh@LAPTOP-8RCEBBNJ MINGW64 /c/RISHABH46 (master)
	$ git reflog
	cea6512 (HEAD -> master, tag: TAG!, NEWBRanch) HEAD@{0
	ge
	``
	
	17) git config
	
	``
	$ git config --list
	diff.astextplain.textconv=astextplain
	filter.lfs.clean=git-lfs clean -- %f
	filter.lfs.smudge=git-lfs smudge -- %f
	filter.lfs.process=git-lfs filter-process
	filter.lfs.required=true
	http.sslbackend=schannel
	``
	
	18) git show
	
	``
	Rishabh@LAPTOP-8RCEBBNJ MINGW6
	$ git show
	commit cea651273ee73961feb3045
	Ranch)
	Author: R15habh15 <rishabh.150
	Date: Sun Nov 2 15:29:29 202
	
	    Message
	
	diff --git a/f1.txt b/f1.txt
	new file mode 100644
	index 0000000..e69de29
	``
	
	19) git checkout
	
	``
	$ git checkout NEWBRanch
	D f1.txt
	Switched to branch 'NEWBRanch'
	``
	
	20) git blame
	
	``
	$ git blame f1.txt
	00000000 (Not Committed Yet 2025-11-02 15:41:41 +0530 1) RISHABH
	``

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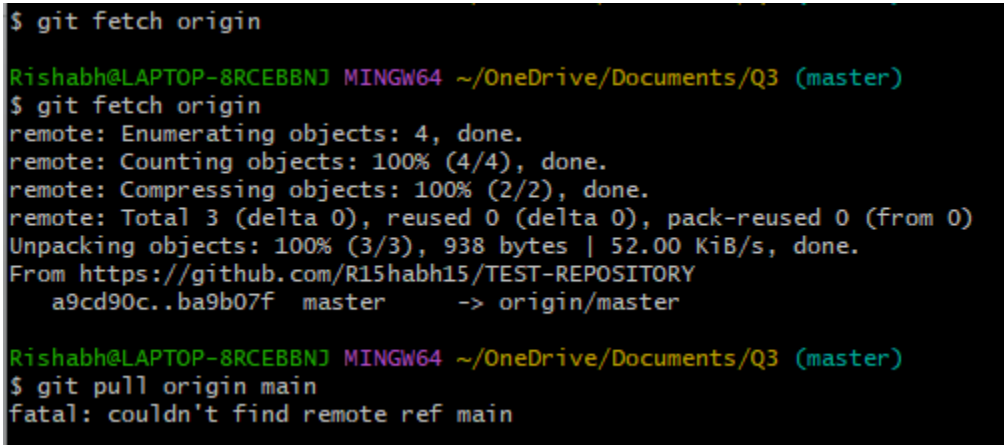Academic Year: 2025-26   Semester: V
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3.	To implement Pull, Push, fetch and merge operations between Git and GitHub.

Create a new repository

Repositories contain a project's files and version history. Have a project elsewhere
Required fields are marked with an asterisk (*).

1   **General**

Owner *   Repository name *

R15habh15   /   TEST REPOSITORY

✔ Your new repository will be created as TEST-REPOSITORY.

copy the github repo url

```
Rishabh@LAPTOP-8RCEBBNJ MINGW64 ~/OneDrive/Documents/Q3 (master)
$ git init
Initialized empty Git repository in C:/Users/Rishabh/OneDrive/Documents/Q3/.git/

Rishabh@LAPTOP-8RCEBBNJ MINGW64 ~/OneDrive/Documents/Q3 (master)
$ git remote add origin https://github.com/R15habh15/TEST-REPOSITORY

Rishabh@LAPTOP-8RCEBBNJ MINGW64 ~/OneDrive/Documents/Q3 (master)
$ git remote -v
origin  https://github.com/R15habh15/TEST-REPOSITORY (fetch)
origin  https://github.com/R15habh15/TEST-REPOSITORY (push)

Rishabh@LAPTOP-8RCEBBNJ MINGW64 ~/OneDrive/Documents/Q3 (master)
$ git add .

Rishabh@LAPTOP-8RCEBBNJ MINGW64 ~/OneDrive/Documents/Q3 (master)
$ git commit -m "Initial Commit"
[master (root-commit) a9cd90c] Initial Commit
 2 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 F1.txt
 create mode 100644 F2.txt
```

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	creating two files creating a file in github

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4.	To build a Java Project using Jenkins with parameters to perform some mathematical operations

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|         | ```java
class Q4 {
    public static void main(String[] args) {
        int a = Integer.parseInt(args[0]);
        int b = Integer.parseInt(args[1]);
        System.out.println("Sum: " + (a + b));
        System.out.println("Difference: " + (a - b));
    }
}
``` |

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	Project RishabhQ4 This build requires parameters: A 10 B 6 ``` C:\ProgramData\Jenkins\.jenkins\workspace\RishabhQ4>cd C:\Users\Rishabh\OneDrive\Documents\RISHABH C:\Users\Rishabh\OneDrive\Documents\RISHABH>javac Q4.java C:\Users\Rishabh\OneDrive\Documents\RISHABH>java Q4 10 6 Sum: 16 Difference: 4 C:\Users\Rishabh\OneDrive\Documents\RISHABH>exit 0 Finished: SUCCESS ```
5.	To implement windows batch command on a project in Jenkins (with and without parameters) a)Without Parameters

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	  b)With Parameters

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	Build Steps
	
	Automate your build process with ordered tasks like
	
	≡ **Execute Windows batch command** ?
	
	Command
	See the list of available environment variables
	
	`echo "First Name: %FName%"`
	`echo "Are you a Student? %Student%"`
	`echo "City: %City%"`
	
	`C:\ProgramData\Jenkins\.jenkins\workspace\RishabhQ5B>echo "First Name: Rishabh"`
	`"First Name: Rishabh"`
	
	`C:\ProgramData\Jenkins\.jenkins\workspace\RishabhQ5B>echo "Are you a Student? true"`
	`"Are you a Student? true"`
	
	`C:\ProgramData\Jenkins\.jenkins\workspace\RishabhQ5B>echo "City: Mumbai"`
	`"City: Mumbai"`
	
	`C:\ProgramData\Jenkins\.jenkins\workspace\RishabhQ5B>exit 0`
	`Finished: SUCCESS`

6.	To build any python project (python file) in Jenkins

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path copy of app.py

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	``` C:\ProgramData\Jenkins\.jenkins\workspace\RishabhQ6>cd C:\Users\Rishabh\OneDrive\Documents\RISHABH C:\Users\Rishabh\OneDrive\Documents\RISHABH>python app.py 120 C:\Users\Rishabh\OneDrive\Documents\RISHABH>exit 0 Finished: SUCCESS ```
7.	To build an Ant project in Jenkins and show how builds can be scheduled with some specific cron command Fork a repository "RPS-ANT by sheetalverma2" Source Code Management Connect and manage your code repository to automatica ○ None ● Git ? Repositories ? Repository URL ? https://github.com/R15habh15/RPS-ANT.git Credentials ? - none - Advanced ∨ Triggers Set up automated actions that ☐ Trigger builds remotely (e ☐ Build after other projects ☑ Build periodically ? Schedule ? H/5 * * * *

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	For every 4-5 minutes you must see the builds getting done
8.	To create a pipeline script (consisting of stages, parameters etc.) and build a pipeline of

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	jobs in Jenkins

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	Pipeline Script:
	
	``groovy
	pipeline {
	    agent any
	    stages{
	        stage("stage1"){
	            agent any
	                steps{
	                    echo "Laptop is owned by ${params.DEVICE_OWNER}"
	                }
	        }
	        stage("stage2"){
	            agent any
	                steps{
	                    echo "Hello Rishabh"
	                }
	        }
	    }
	}
	``

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9.	To fork a GitHub repository with Jenkinsfile and build a pipeline of jobs in Jenkins (Similar to Q1) You need to create webhooks in this as well, refer Q1 for creation of webhooks.

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10.	In Jenkins, create a slave node, connect it with master and build a project in slave node

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	Also set TCP port as Random. Go to this section by going to manage jenkins and select security **Agents** TCP port for inbound agents ? ◯ Fixed ⦿ Random ◯ Disable For creating a node go to manage jenkins and then select node option Number of executors ? 1 **New node** Remote root directory ? C:\RISHABH46 Node name Rishabh_Slave Labels ? b3 Type ⦿ Permanent Agent Adds a plain, permanent agent to Jer type if no other agent types apply — Usage ? Use this node as much as possible Launch method ? Launch agent by connecting it to the controller ◯ Copy Existing Node

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	Then you will get a screen consisting of different codes, there copy the windows code and paste it in cmd

Now , create a freestyle Job

Build Steps

Automate your build process with ordered tasks like code c

```
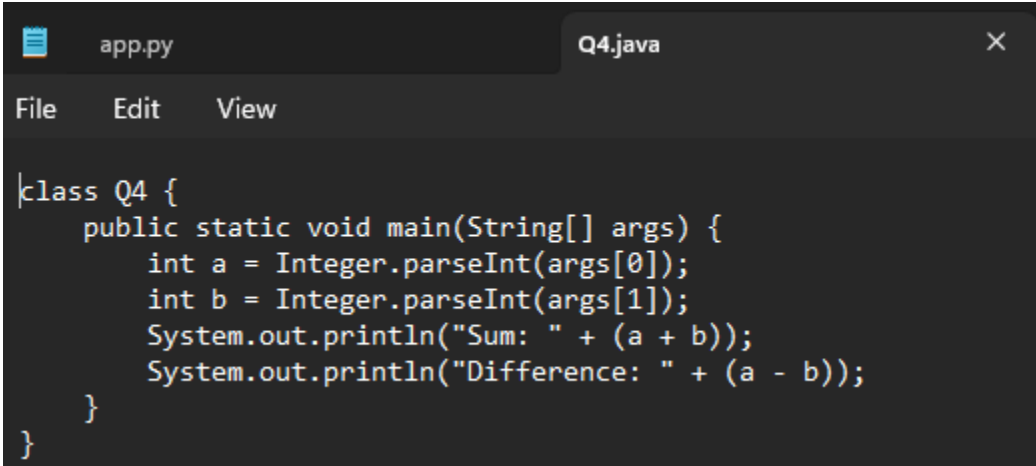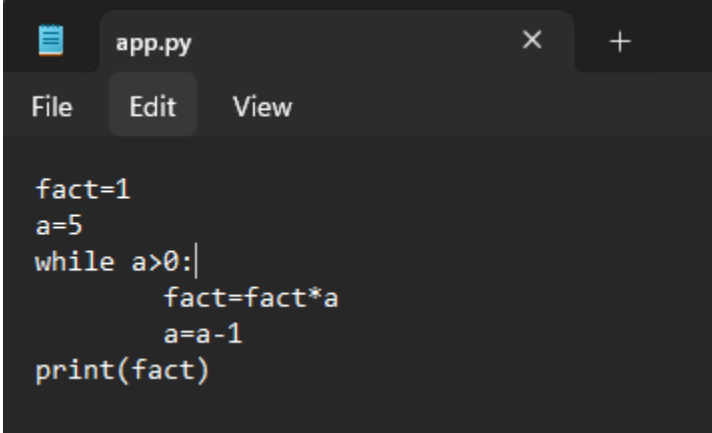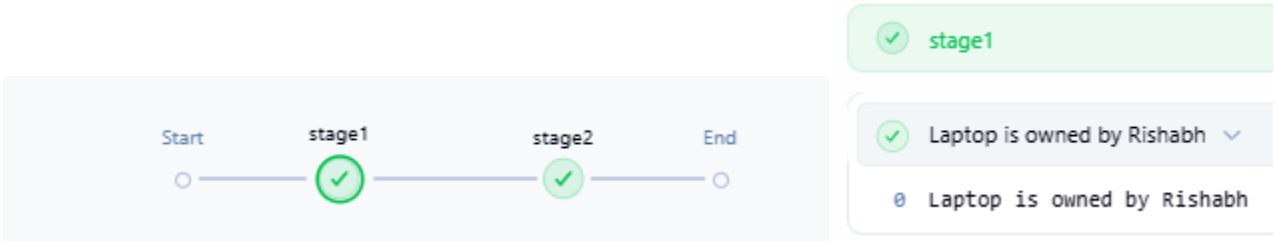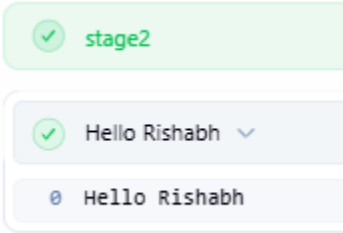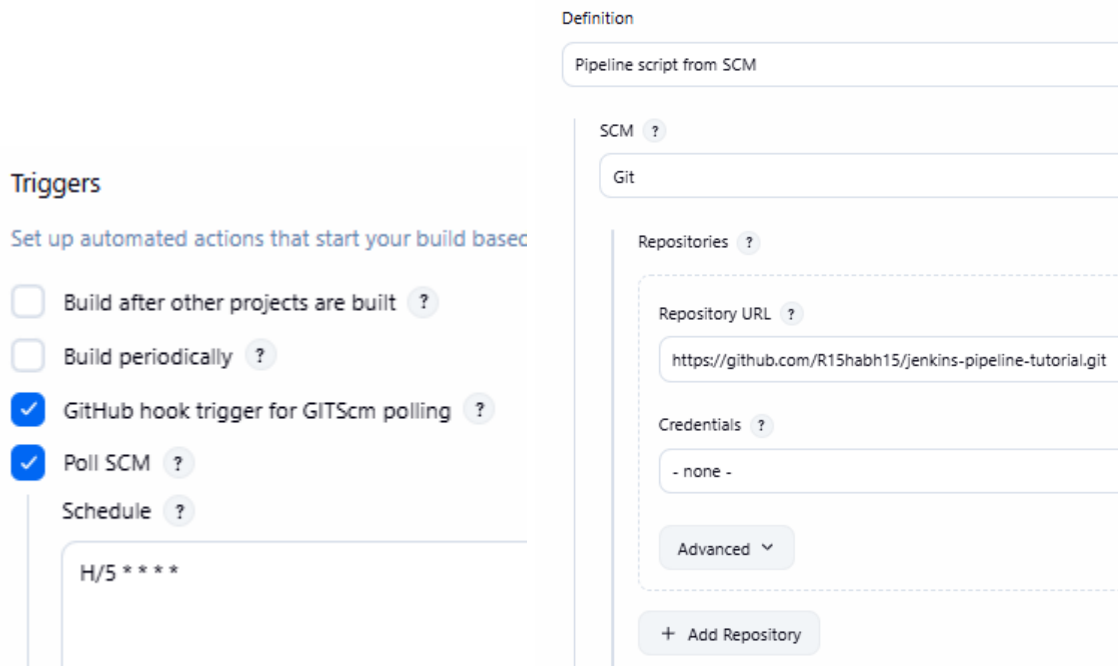curl.exe -sO http://localhost:8080/jnlpJars/agent.jar
java -jar agent.jar -url http://localhost:8080/ -secret 553a8a31257f15e7560cc9ee8d877ad30fd802b4fa9b3ebd23040d68a0578c4b -name "Rishabh_Slave" -webSocket -workDir "C:\RISHABH46"
```

```
C:\Users\Rishabh>curl.exe -sO http://localhost:8080/jnlpJars/agent.jar & java -jar agent.jar -url http://localhost:8080/
-secret 553a8a31257f15e7560cc9ee8d877ad30fd802b4fa9b3ebd23040d68a0578c4b -name "Rishabh_Slave" -webSocket -workDir "C:\
RISHABH46"
Nov 02, 2025 2:57:08 PM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
Nov 02, 2025 2:57:08 PM hudson.remoting.Launcher$CuiListener status
INFO: Connected
```

```
Started by user Rishabh Tripathi
Running as SYSTEM
Building remotely on Rishabh_Slave (b3) in workspace C:\RI
[RishabhQ10] $ cmd /c call C:\Users\Rishabh\AppData\Local\

C:\RISHABH46\workspace\RishabhQ10>echo "Hello RISHABH"
"Hello RISHABH"

C:\RISHABH46\workspace\RishabhQ10>exit 0
Finished: SUCCESS
```

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11.	To build an image for a web application using Dockerfile

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```
C:\Users\Rishabh\OneDrive\Documents\RISHABH\Q10>docker build -t image46 .
[+] Building 23.6s (10/10) FINISHED
 => [internal] load build definition from Dockerfile
 => => transferring dockerfile: 266B
 => WARN: MaintainerDeprecated: Maintainer instruction is deprecated in f
 => [internal] load metadata for docker.io/library/ubuntu:latest
 => [internal] load .dockerignore
 => => transferring context: 2B
 => [1/5] FROM docker.io/library/ubuntu:latest@sha256:66460d557b25769b102
 => => resolve docker.io/library/ubuntu:latest@sha256:66460d557b25769b102
 => [internal] load build context
 => => transferring context: 222B
 => [2/5] RUN apt update -y
 => [3/5] RUN apt install nginx -y
 => [4/5] COPY index.html /usr/share/nginx/html/index.html
 => [5/5] COPY index.html /var/www/html/index.html
 => exporting to image
 => => exporting layers
 => => exporting manifest sha256:11e7bf017a02b85e6b931c1b2c4fecf86c6d6355
 => => exporting config sha256:e5b6c3ffcc39b5cc3336c53a34090b361a1a86b10e
 => => exporting attestation manifest sha256:ffb2cdbedf2fc326db417a432116
 => => exporting manifest list sha256:69fea3a7e71e43eed1035a64a371feeb87e
 => => naming to docker.io/library/image46:latest
 => => unpacking to docker.io/library/image46:latest

1 warning found (use docker --debug to expand):
 - MaintainerDeprecated: Maintainer instruction is deprecated in favor of
```

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|  | ```
C:\Users\Rishabh\OneDrive\Documents\RISHABH\Q10>docker images
REPOSITORY    TAG        IMAGE ID        CREATED        SIZE
image46       latest     69fea3a7e71e    27 seconds ago  222MB
ubuntu        latest     66460d557b25    4 weeks ago     117MB

C:\Users\Rishabh\OneDrive\Documents\RISHABH\Q10>docker run -t -ip 8888:80 image46
```  localhost:8888  **Hello, Rishabh** |
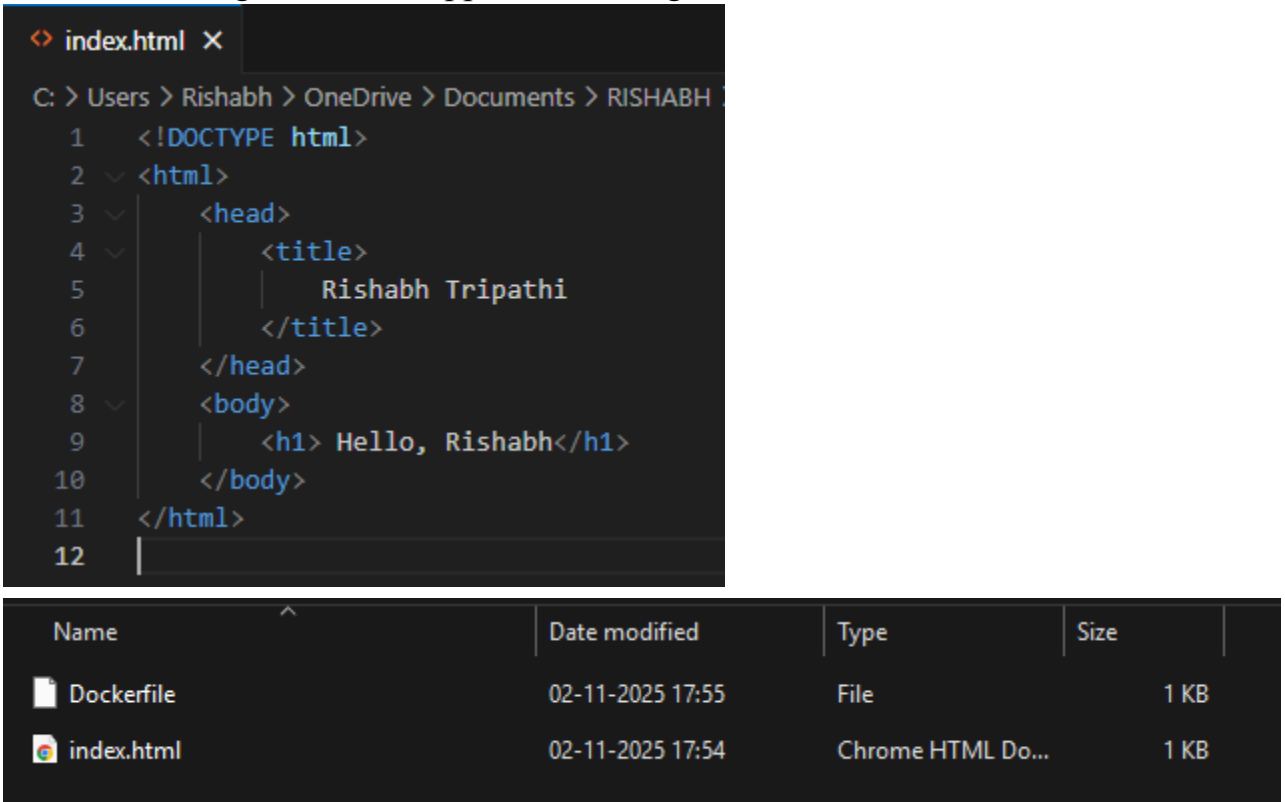| 12. | To create and run a test case on Chrome browser with Katalon selenium IDE addon **The extension Katalon Recorder (Selenium tests generator) says** Please enter the Test Suite's name RishabhD OK   Cancel |

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	Now press the record button and browse to any website (for eg trivago and perform search for any hotels) And then play the test case
13.	To execute 20 linux commands 1)ls 2) pwd

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| | ```
labex:RISHABH/ $ pwd
/home/labex/Desktop/RISHABH
```<br><br>3) cp<br>```
labex:RISHABH/ $ cp F1 F2
```<br><br>4) mkdir<br>```
labex:RISHABH/ $ mkdir FILES
labex:RISHABH/ $ ls
F1  F2  FILES
```<br><br>5) mv<br>```
labex:RISHABH/ $ mv F1 FILES
```<br><br>6) cd<br>```
labex:RISHABH/ $ cd FILES
labex:FILES/ $ ls
F1
```<br><br>7) rm<br>```
labex:RISHABH/ $ rm F2
labex:RISHABH/ $ ls
FILES
```<br><br>8) history |

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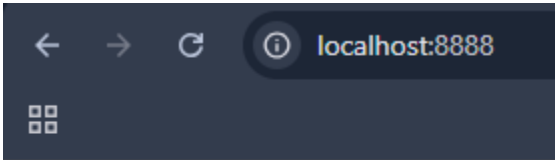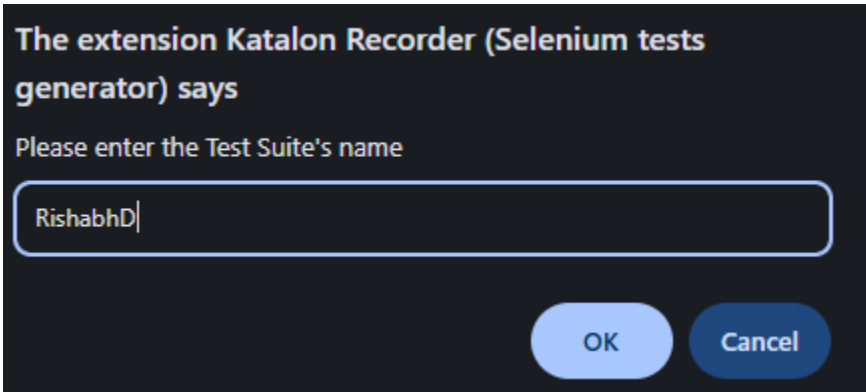
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Practical Exam Question Bank

Sr. no.	List of experiments for practical exam
	``labex:RISHABH/ $ history
1   hostnamectl hostname RIshabh
2   hostnamectl hostname Rishabh
3   sudo -v
5   pwd
6   ls F1
7   cp F1 F2
8   mkdir FILES
10   mv F1 FILES

``
9)df
``labex:RISHABH/ $ df

Filesystem   1K-blocks   Used Available Use% Mounted on
overlay   20971520   130160 20841360   1% /
tmpfs   65536   0   65536   0% /dev
tmpfs   8052896   0   8052896   0% /sys/fs/cgroup
shm   65536   0   65536   0% /dev/shm

``
10)du
``labex:RISHABH/ $ du

4   ./FILES
4   .
`` 11)free

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	```labex:RISHABH/ $ free total used free shared buff/cache available Mem: 16105792 6045868 4838168 125256 5221756 9597644 Swap: 0 0 0```
	12)uname -a
	```labex:RISHABH/ $ uname -a Linux 69073ff60f92ec70f168f68d 5.4.0-162-generic #17 1:31 UTC 2023 x86_64 x86_64 x86_64 GNU/Linux```
	13)man \<command name\>

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Practical Exam Question Bank

Sr. no.	List of experiments for practical exam
	  14)whatis 15)date

```
SUDO(8)                    BSD System Manager's Manual                    SUDO(8)

NAME
     sudo, sudoedit — execute a command as another user

SYNOPSIS
     sudo -h | -K | -k | -V
     sudo -v [-ABknS] [-g group] [-h host] [-p prompt] [-u user]
     sudo -l [-ABknS] [-g group] [-h host] [-p prompt] [-U user] [-u user]
           [command]
     sudo [-ABbEHnPS] [-C num] [-D directory] [-g group] [-h host] [-p prompt]
           [-R directory] [-r role] [-t type] [-T timeout] [-u user]
           [VAR=value] [-i | -s] [command]
     sudoedit [-ABknS] [-C num] [-D directory] [-g group] [-h host]
           [-p prompt] [-R directory] [-r role] [-t type] [-T timeout]
           [-u user] file ...

DESCRIPTION
     sudo allows a permitted user to execute a command as the superuser or an-
     other user, as specified by the security policy.  The invoking user's
     real (not effective) user-ID is used to determine the user name with
     which to query the security policy.

 Manual page sudo(8) line 1 (press h for help or q to quit)
```

14)whatis

```
labex:RISHABH/ $ whatis mkdir
mkdir (1)               - make directories
mkdir (2)               - create a directory
```

15)date

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|         | ```
labex:RISHABH/ $ date
Sun Nov  2 07:44:22 PM CST 2025
```<br>16)w<br>```
labex:RISHABH/ $ w
 19:44:26 up 58 days,  9:02,  0 users,  load average: 1.38, 1.14, 0.90
USER     TTY     FROM              LOGIN@   IDLE   JCPU   PCPU WHAT
```<br>17)echo<br>```
labex:RISHABH/ $ echo RISHABH
RISHABH
```<br>18)exit<br>19)head |

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Practical Exam Question Bank

Sr. no.	List of experiments for practical exam
	  20)Tail

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Sr. no.	List of experiments for practical exam
14.	To execute 20 docker commands 1) docker version 2) docker login 3) docker images

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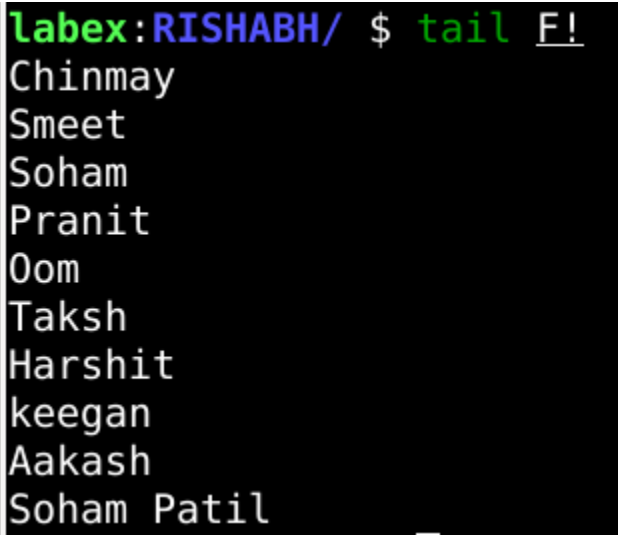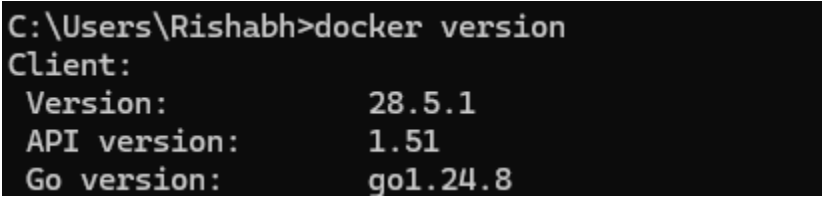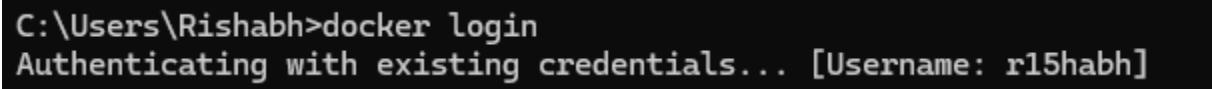
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Sr. no.	List of experiments for practical exam
|  | ```
C:\Users\Devops>docker images
REPOSITORY          TAG            IMAGE ID        CREATED         SIZE
teitb2              latest         1c523a303e67    20 hours ago    140MB
alby22/test         1              f374231e46f9    21 hours ago    78.1MB
test                1              7a94bef73dd6    21 hours ago    78.1MB
```<br><br>4)  docker pull image<br><br>```
C:\Users\Devops-1>docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
a1a21c96bc16: Download complete
Digest: sha256:728785b59223d755e3e5c5af178fab1be7031f3522c5ccd7a0b32b80d8248
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest

What's next:
    View a summary of image vulnerabilities and recommendations → docker sco

C:\Users\Devops-1>docker images
REPOSITORY            TAG                IMAGE ID        CREATED         SIZE
viyanngnx             latest             3ac15b7a6796    2 days ago      221MB
viyandabre/viyanimg   123                d19c035b576e    2 days ago      117MB
ubuntu                latest             728785b59223    8 days ago      117MB
fedora                latest             0c5ab5380e63    10 days ago     244MB
ubuntu                plucky             103c7471649a    13 days ago     116MB
ubuntu                rolling            103c7471649a    13 days ago     116MB
ubuntu                plucky-20250910    55250b41df8c    4 weeks ago     116MB
```<br><br>5)  Docker pull image-tag |

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Practical Exam Question Bank

Sr. no.	List of experiments for practical exam
| | ```
C:\Users\Devops-1>docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
a1a21c96bc16: Download complete
Digest: sha256:728785b59223d755e3e5c5af178fab1be7031f3522c5ccd7a0b32b80d82481
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest

What's next:
    View a summary of image vulnerabilities and recommendations → docker sco

C:\Users\Devops-1>docker images
REPOSITORY              TAG             IMAGE ID        CREATED         SIZE
viyanngnx               latest          3ac15b7a6796    2 days ago      221MB
viyandabre/viyanimg     123             d19c035b576e    2 days ago      117MB
ubuntu                  latest          728785b59223    8 days ago      117MB
fedora                  latest          0c5ab5380e63    10 days ago     244MB
ubuntu                  plucky          103c7471649a    13 days ago     116MB
ubuntu                  rolling         103c7471649a    13 days ago     116MB
ubuntu                  plucky-20250910 55250b41df8c    4 weeks ago     116MB
```<br>6) Docker images help<br>```
C:\Users\Devops>docker images --help

Usage:  docker images [OPTIONS] [REPOSITORY[:TAG]]

List images

Aliases:
  docker image ls, docker image list, docker images
```<br>7) docker run commands |

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Practical Exam Question Bank

Sr. no.	List of experiments for practical exam
|         | ```
C:\Users\Devops>docker run ubuntu

C:\Users\Devops>docker run --name rishabh -it ubuntu bash
root@b8022f6ba517:/# ls
bin  boot  dev  etc  home  lib  lib64  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
root@b8022f6ba517:/# mkdir Rishabh
root@b8022f6ba517:/# ls
Rishabh  bin  boot  dev  etc  home  lib  lib64  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
``` <br> 8) docker ps <br> ```
C:\Users\Devops>docker ps
CONTAINER ID   IMAGE     COMMAND    CREATED           STATUS               PORTS       NAMES
b8022f6ba517   ubuntu    "bash"     About a minute ago Up About a minute                rishabh
``` <br> 9) docker start <container_name> <br> ```
C:\Users\Devops>docker start b8022f6ba517
b8022f6ba517

C:\Users\Devops>docker ps
CONTAINER ID   IMAGE     COMMAND    CREATED        STATUS         PORTS       NAMES
b8022f6ba517   ubuntu    "bash"     6 minutes ago  Up 2 seconds               rishabh
``` <br> 10) docker pause <container_name> <br> ```
C:\Users\Devops>docker pause b8022f6ba517
b8022f6ba517

C:\Users\Devops>docker ps
CONTAINER ID   IMAGE     COMMAND    CREATED        STATUS                  PORTS       NAMES
b8022f6ba517   ubuntu    "bash"     3 minutes ago  Up 3 minutes (Paused)               rishabh
``` <br> 11) docker stop <container_name> <br> ```
C:\Users\Devops>docker stop b8022f6ba517
b8022f6ba517

C:\Users\Devops>docker ps
CONTAINER ID   IMAGE     COMMAND    CREATED    STATUS    PORTS       NAMES
``` <br> 12) docker top <container_name> |

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Sr. no.	List of experiments for practical exam
	``
C:\Users\Devops>docker top b8022f6ba517
UID   PID   PPID   C   STIME   TTY
TIME   CMD
root   683   663   0   04:27   ?
00:00:00   bash
```
13) docker stats <container_name>
```
C:\Users\Devops>docker stats b8022f6ba517
CONTAINER ID   NAME   CPU %   MEM USAGE / LIMIT   MEM %   NET I/O   BLOCK I/O   PIDS
b8022f6ba517   rishabh   0.00%   884KiB / 7.636GiB   0.01%   1.05kB / 0B   0B / 0B   1
CONTAINER ID   NAME   CPU %   MEM USAGE / LIMIT   MEM %   NET I/O   BLOCK I/O   PIDS
b8022f6ba517   rishabh   0.00%   884KiB / 7.636GiB   0.01%   1.05kB / 0B   0B / 0B   1
CONTAINER ID   NAME   CPU %   MEM USAGE / LIMIT   MEM %   NET I/O   BLOCK I/O   PIDS
b8022f6ba517   rishabh   0.00%   884KiB / 7.636GiB   0.01%   1.05kB / 0B   0B / 0B   1
CONTAINER ID   NAME   CPU %   MEM USAGE / LIMIT   MEM %   NET I/O   BLOCK I/O   PIDS
b8022f6ba517   rishabh   0.00%   884KiB / 7.636GiB   0.01%   1.05kB / 0B   0B / 0B   1
```
14) docker rm container
```
C:\Users\Devops>docker stop b8022f6ba517
b8022f6ba517

C:\Users\Devops>docker rm b8022f6ba517
b8022f6ba517

C:\Users\Devops>docker ps
CONTAINER ID   IMAGE   COMMAND   CREATED   STATUS   PORTS   NAMES
``` |

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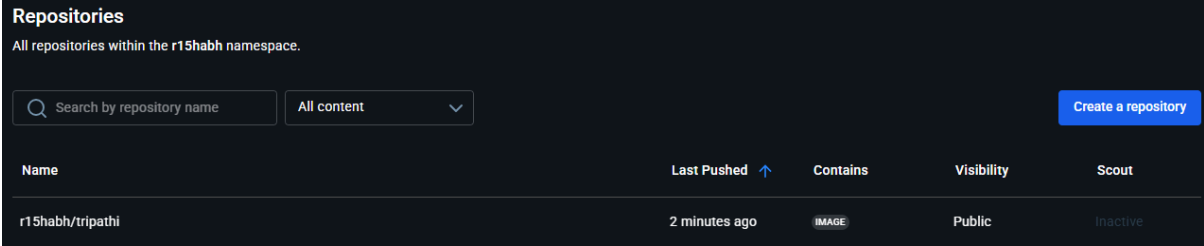
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	15) docker inspect image
	
	``
	C:\Users\Devops>docker inspect ubuntu
	[
	    {
	        "Id": "sha256:ce8f79aecc435fc0b22d4dd58c72836e330beddf204491eef3f91af51bc48ed7",
	        "RepoTags": [
	            "ubuntu:latest",
	            "ubuntu:noble-20250925"
	        ],
	        "RepoDigests": [
	            "ubuntu@sha256:728785b59223d755e3e5c5af178fab1be7031f3522c5ccd7a0b32b80d8248123"
	        ],
	        "Parent": "",
	        "Comment": "",
	        "Created": "2025-09-30T14:32:31.025115116Z",
	        "DockerVersion": "26.1.3",
	        "Author": "",
	        "Config": {
	            "Hostname": "",
	``
	
	16) docker rmi
	
	``
	C:\Users\Devops>docker rmi ubuntu:plucky-20250925.1
	Untagged: ubuntu:plucky-20250925.1
	Untagged: ubuntu@sha256:103c7471649a4fd9996fe73dff20f46082e4e0f0f6240c91954b8b09c38b6faf
	Deleted: sha256:482b635a13cd0d27889dd500478c02c6234417636ca69e5c0697ce8ae176504a
	Deleted: sha256:db7a323d9ab3a7e9ed601450a6b25a988da98763b5366f569783fe9dfc8887fd
	``
	
	17) docker commit
	
	``
	C:\Users\Devops>docker ps -a
	CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
	d0bf58da5f66 ubuntu "bash" 54 seconds ago Up 53 seconds tripathi
	``
	
	``
	  🔲 🟢 tripathi d0bf58da5f66 ubuntu:<none> - 0% 6 minutes ago ▯ ⋮ 🗑
	``
	
	``
	C:\Users\Devops>docker commit d0bf58da5f66 r15habh/tripathi:1
	sha256:3e10a5904d12d351a228aafeb886f923fb11533e9f64a82fb52ea6cdf24b1728
	``

Practical Exam Question Bank

Sr. no.	List of experiments for practical exam
	18) docker push
	19) docker history image
	20) docker logs <container_id>
	21) docker info
15.	To make a GitHub repository with your own Jenkinsfile and build a pipeline of jobs in

18) docker push

```
C:\Users\Devops>docker push r15habh/tripathi:1
The push refers to repository [docker.io/r15habh/tripathi]
65b08cd99c60: Mounted from alby22/test
1: digest: sha256:3019d2d65af5403c648d1be2a029e0a304106f9833b14b602d54d6f2fa396a54 size: 529
```

Repositories
All repositories within the **r15habh** namespace.

Name	Last Pushed ↑	Contains	Visibility	Scout
r15habh/tripathi	2 minutes ago	IMAGE	Public	Inactive

19) docker history image

```
C:\Users\Devops>docker history 220c18b642b8
IMAGE          CREATED         CREATED BY                                      SIZE      COMMENT
220c18b642b8   11 minutes ago  bash                                            0B
ce8f79aecc43   9 days ago      /bin/sh -c #(nop)  CMD ["/bin/bash"]            0B
<missing>      9 days ago      /bin/sh -c #(nop) ADD file:d9cb8116905a82675…   78.1MB
<missing>      9 days ago      /bin/sh -c #(nop)  LABEL org.opencontainers.…   0B
<missing>      9 days ago      /bin/sh -c #(nop)  LABEL org.opencontainers.…   0B
<missing>      9 days ago      /bin/sh -c #(nop)  ARG LAUNCHPAD_BUILD_ARCH     0B
<missing>      9 days ago      /bin/sh -c #(nop)  ARG RELEASE                  0B
```

20) docker logs <container_id>

```
C:\Users\Rishabh>docker logs f3eb1c6f2e63db37c6392927f4b499d19c5f4e05f5e4005e7b44ee33558
```

21) docker info

```
C:\Users\Rishabh>docker info
Client:
 Version:    28.5.1
 Context:    desktop-linux
```

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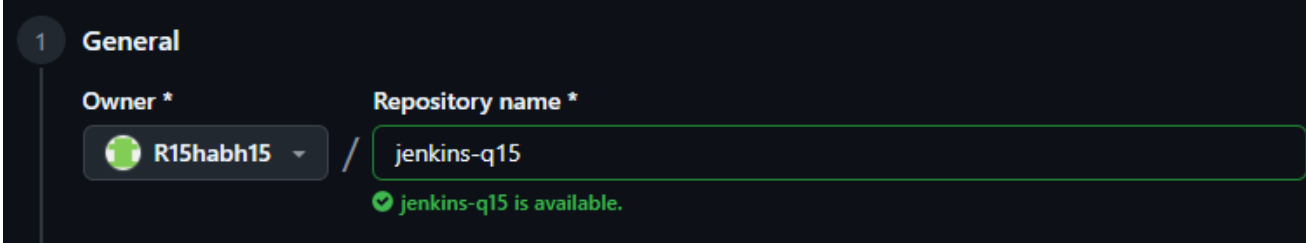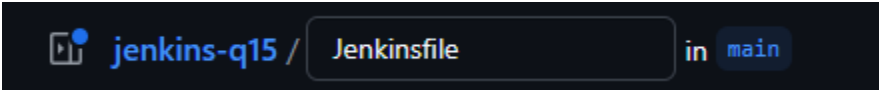
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	Jenkins
	First Create a Github repository , make it public and write create a file named "Jenkinsfile" without any extensions
	
	Write the code below in this file:
	`pipeline {`
	`  agent any`
	`  stages {`
	`    stage('Build') {`
	`      steps {`
	`        echo "Building project for Rishabh"`
	`      }`
	`    }`
	`    stage('Test') {`
	`      steps {`
	`        echo "Running tests..."`
	`      }`
	`    }`

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	```stage('Deploy') { steps { echo "Deploying build..." } } } }```

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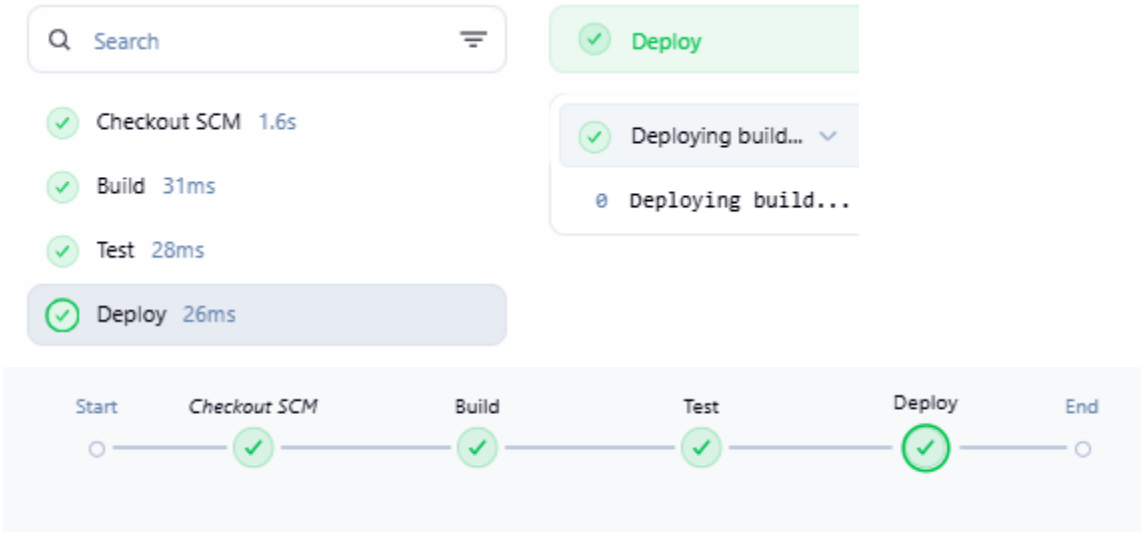**Information Technology Department**

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16.	To build any python project (python script) in Jenkins

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|  | **Build Steps**<br><br>Automate your build process with ordered tasks like code compilation, testing, and deployment.<br><br>≡ **Execute Python script** ?<br><br>Script<br>See the list of available environment variables<br><br>```python
fact=1
a=5
while a>0:
    fact=fact*a
    a=a-1
print(fact)
```<br><br>```
Started by user Rishabh Tripathi
Running as SYSTEM
Building on the built-in node in workspace C:\ProgramData\Jenkins\.jenkins\worksp
[RishabhQ16] $ python C:\Windows\TEMP\jenkins9930150743568897007.py
120
Finished: SUCCESS
``` |
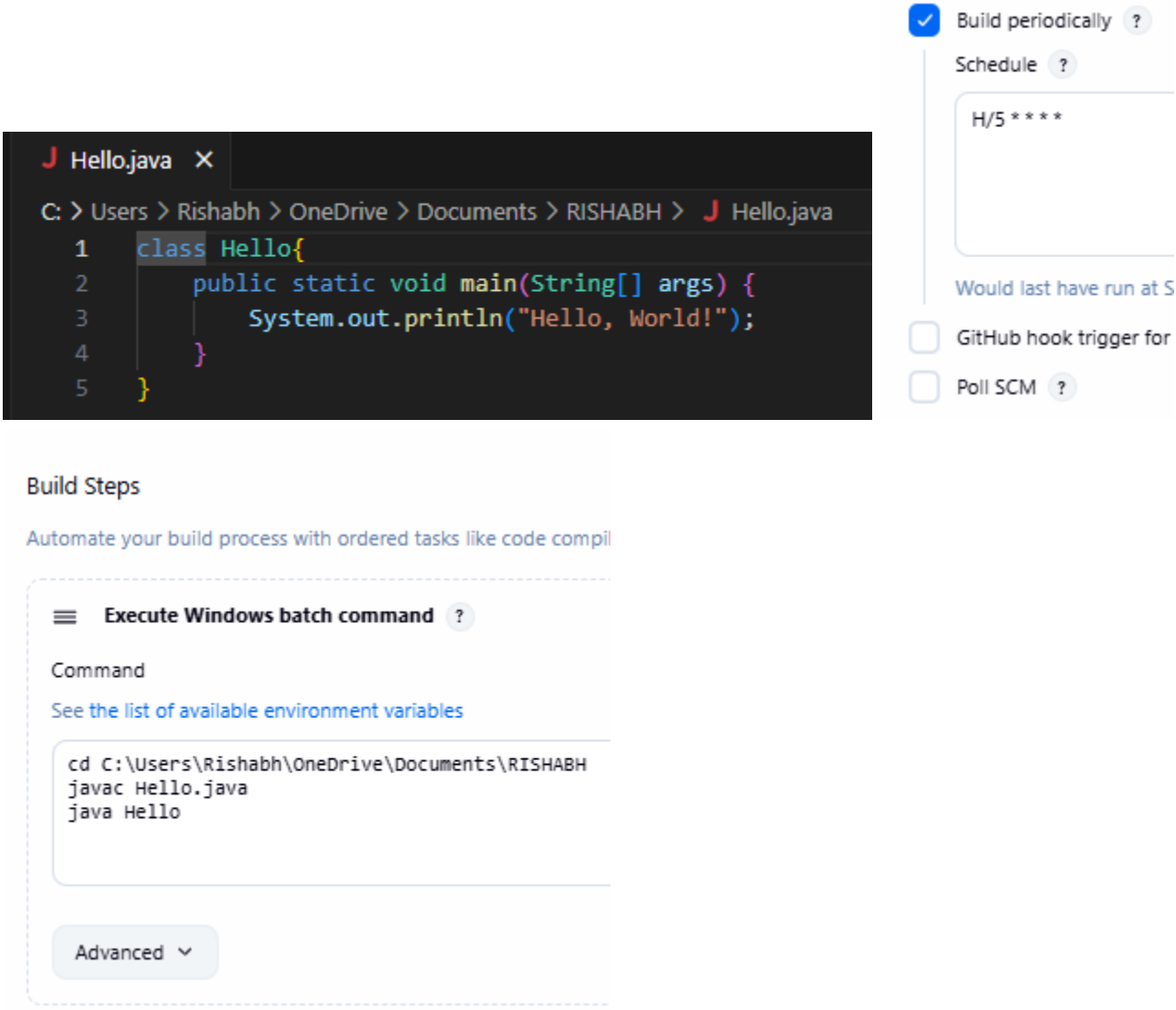| 17. | To build a Java Project without parameters and show how builds can be scheduled with some specific cron command |

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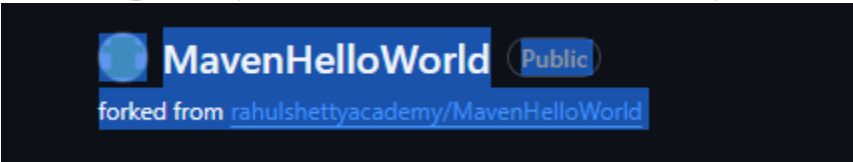
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Practical Exam Question Bank

Sr. no.	List of experiments for practical exam
| | ```
C:\Users\Rishabh\OneDrive\Documents\RISHABH>java Hello
Hello, World!

C:\Users\Rishabh\OneDrive\Documents\RISHABH>exit 0
Finished: SUCCESS
```<br><br>⊘ #4 1:31 PM<br>⊘ #3 1:27 PM<br><br>For every 4-5 minutes you must see the builds getting done |
| 18. | To build a Maven project in Jenkins and show how builds can be scheduled with some specific cron command
Fork a repository named "MavenHelloWorld" by rahulshettyacademy

MavenHelloWorld (Public)
forked from rahulshettyacademy/MavenHelloWorld |

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	Build
	
	Root POM ?
	
	pom.xml
	
	☑ Build periodically ?
	Schedule ?
	H/5 * * * *
	
	Goals and options ?
	
	clean compile package
	
	Advanced ⌄
	
	[INFO] Finished at: 2025-11
	[INFO] --------------------
	Waiting for Jenkins to fini
	[JENKINS] Archiving C:\Prog
	[JENKINS] Archiving C:\Prog
	[JENKINS] Archiving C:\Prog
	[JENKINS] Archiving C:\Prog
	[JENKINS] Archiving C:\Prog
	channel stopped
	Finished: SUCCESS
	
	verify the war file by following below steps:
	Search for the below ss in the console output
	
	`[INFO] Building war: C:\ProgramData\Jenkins\.jenkins\workspace\RishabhQ18\webapp\target\webapp.war`
	
	Now run in the command prompt as
	dir <PATH Present in the above ss>
	
	``
	C:\Users\Rishabh>dir C:\ProgramData\Jenkins\.jenkins\workspace\RishabhQ18\webapp\target\webapp.war
	 Volume in drive C is Windows-SSD
	 Volume Serial Number is EEE6-AE09
	
	 Directory of C:\ProgramData\Jenkins\.jenkins\workspace\RishabhQ18\webapp\target
	
	02-11-2025 15:18 2,056 webapp.war
	               1 File(s) 2,056 bytes
	               0 Dir(s) 230,336,651,264 bytes free
	`` |