Task Description:
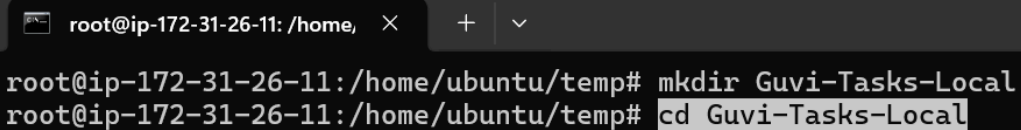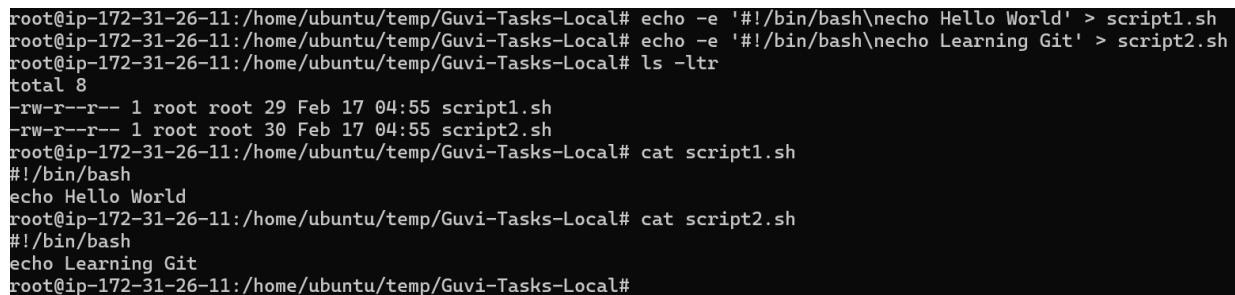
Establish a new directory, populate it with script files, initiate an empty repository on GitHub, convert the local directory into a Git repository, and link it to GitHub for pushing the code into the repository.Perform merge, rebase, stash commands in following github repo.

Created a new directory:

Created two scripts files(script1.sh,script2.sh):

Initialize a Git repository locally:

```
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git init
hint: Using 'master' as the name for the initial branch. This default branch name
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint:   git config --global init.defaultBranch <name>
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint:
hint:   git branch -m <name>
Initialized empty Git repository in /home/ubuntu/temp/Guvi-Tasks-Local/.git/
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git config --global init.defaultBranch main
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git branch -m main
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git status
On branch main

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        script1.sh
        script2.sh

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

Go to GitHub and **create a new repository** (empty) named `Guvi-Tasks-Local` and `Add`
`the remote repository`:

```
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git remote add origin https://github.com/sudheerttech-eng/Guvi-Tasks-Local.g
it
```

Added and committed files:

```
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git add .
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git commit -m "Initial commit with scripts"
[main (root-commit) 1375022] Initial commit with scripts
 Committer: root <root@ip-172-31-26-11.ec2.internal>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly:

    git config --global user.name "Your Name"
    git config --global user.email you@example.com

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

 2 files changed, 4 insertions(+)
 create mode 100644 script1.sh
 create mode 100644 script2.sh
```

Accessed the github through ssh and Push to GitHub:

```
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# ssh -i ~/.ssh/id_ed25519_github -T git@github.com
Hi sudheerttech-eng! You've successfully authenticated, but GitHub does not provide shell access.
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git remote set-url origin git@github.com:sudheerttech-eng/Guvi-Task
it
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git branch -M main
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git push -u origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 2 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 325 bytes | 325.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:sudheerttech-eng/Guvi-Tasks-Local.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local#
```

Git stash:

If you make changes but want to temporarily save them without committing

```
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# echo "echo Extra line" >> script1.sh
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# cat script1.sh
#!/bin/bash
echo Hello World
echo Extra line
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git stash
Saved working directory and index state WIP on main: 1375022 Initial commit with scripts
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git stash list
stash@{0}: WIP on main: 1375022 Initial commit with scripts
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git stash apply
On branch main
Your branch is up to date with 'origin/main'.

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:   script1.sh

no changes added to commit (use "git add" and/or "git commit -a")
```

Using Merge:

Create a new branch(Feature) and file:

```
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git checkout -b feature-branch
Switched to a new branch 'feature-branch'
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# echo "echo Feature line" >> script2.sh
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git add script2.sh
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git commit -m "Added feature line in sc
[feature-branch 0c84fe4] Added feature line in script2.sh
 Committer: root <root@ip-172-31-26-11.ec2.internal>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly:

    git config --global user.name "Your Name"
    git config --global user.email you@example.com

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

 1 file changed, 1 insertion(+)
```
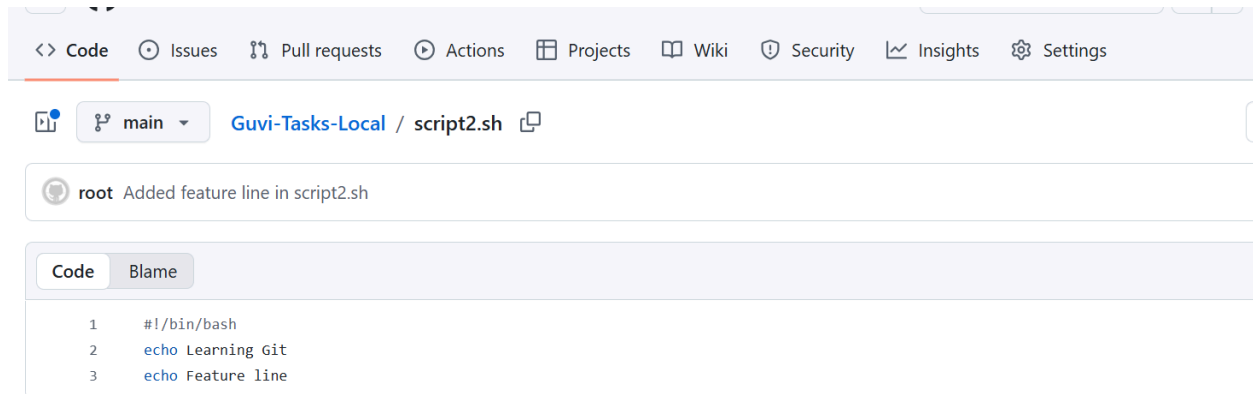
Go back to main branch and merge:

```
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git checkout main
M       script1.sh
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git merge feature-branch
Updating 1375022..0c84fe4
Fast-forward
 script2.sh | 1 +
 1 file changed, 1 insertion(+)
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local#
```

This merges changes from `feature-branch` into `main`.

```
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# cat script2.sh
#!/bin/bash
echo Learning Git
echo Feature line
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local#
```



```
<> Code    ⊙ Issues    ⇂↑ Pull requests    ⊙ Actions    ⊞ Projects    📖 Wiki    ⊘ Security    ⟋ Insights    ⚙ Settings
```

⌥ ⑂ main ▾   Guvi-Tasks-Local / script2.sh ⎘

🐙 root Added feature line in script2.sh

Code	Blame

```
1    #!/bin/bash
2    echo Learning Git
3    echo Feature line
```

Using rebase:

Suppose you made another branch(bugfix-branch):

```
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git checkout -b bugfix-branch
Switched to a new branch 'bugfix-branch'
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# echo "echo Bugfix line" >> script1.sh
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git add script1.sh
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git commit -m "Bugfix in script1.sh"
[bugfix-branch dc8369c] Bugfix in script1.sh
 Committer: root <root@ip-172-31-26-11.ec2.internal>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly:

    git config --global user.name "Your Name"
    git config --global user.email you@example.com

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

 1 file changed, 2 insertions(+)
```

Rebase onto main:git pull origin main:

```
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git checkout main
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git pull origin main
From github.com:sudheerttech-eng/Guvi-Tasks-Local
 * branch            main       -> FETCH_HEAD
Already up to date.
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git checkout bugfix-branch
Switched to branch 'bugfix-branch'
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git rebase main
Current branch bugfix-branch is up to date.
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git branches
git: 'branches' is not a git command. See 'git --help'.
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git branch
* bugfix-branch
  feature-branch
  main
```

Rebase rewrites `bugfix-branch` commits on top of main's latest commits.
Resolve any conflicts if prompted, then:

```
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git checkout main
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git merge bugfix-branch
Updating 0c84fe4..dc8369c
Fast-forward
 script1.sh | 2 ++
 1 file changed, 2 insertions(+)
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# cat script1.sh
#!/bin/bash
echo Hello World
echo Extra line
echo Bugfix line
```

Push final changes:

```
root@ip-172-31-26-11:/home/ubuntu/temp/Guvi-Tasks-Local# git push origin main
Everything up-to-date
```