1. Setting Up and Basic Commands

Initialize a new Git repository in a directory. Create a new file and add it to the staging area and commit the changes with an appropriate commit message.

```
Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git init
Reinitialized existing Git repository in C:/Users/Admin/.git/
Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ yi bms.txt

Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git add bms.txt
warning: in the working copy of 'bms.txt', LF will be replaced by C
RLF the next time Git touches it

Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git commit -m "message here"
[master 52957d5] message here
2 files changed, 3 insertions(+)
create mode 100644 bms.txt
create mode 100644 bms.txt
create mode 100644 file_name.txt

Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git log --oneline --decorate
$ 2957d5 (HEAD) -> master) message here
4 fbe7c4 go oni fghj
90d90ae go on
19b7dcf come on
c7d7176 Revert "file created yes done"
f4c0f87 file created
b51fc53 commited edited to cherry-pick
b5bd5d2 commited
4905F9F Revert "file revert again edited"
92b473e file revert
14b8853 file created
5997213 third commit
0ee0c6f second commit
72f1fc first commit
92dda7bd expl0
93d4b5e file
82eaf55a file sometjhing
e255462 file2
0cbff53 file
95eaf544 (tag: v2.0) BMSIT
fae57ff file-4
e0cbce4 file-3
94c278f someone
43b7058 (tag: v1.0) someone
21b22f0 commit-1
e3a6a40 Commit-1
e3a6a40 Commit-1
e3a6a40 Commit-1
e3a6a60 commit-1
e3a
```

2.Creating and Managing Branches

Create a new branch named "feature-branch." Switch to the "master" branch. Merge the "featurebranch" into "master."

```
git branch
f2
      feature
     feature_branch
     pallavi
     ps11
     something
Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git checkout -b pallu
Switched to a new branch 'pallu'
 $ vi p1.txt
   .dmin@DESKTOP-JNFTPH6 MINGW32 ~ (pallu)
$ git add p1.txt
warning: in the working copy of 'p1.txt', LF will be replaced by CRLF the next time Git touches it
Admin@DESKTOP-JNFTPH6 MINGW32 ~ (pallu)

$ git commit -m "commit message here"

[pallu a91f6f6] commit message here

1 file changed, 1 insertion(+)

create mode 100644 p1.txt
$ git checkout master
Switched to branch 'master'
D Desktop/pallavi/home.txt
Admin@DESKTOP-JNFTPH6 MINGW32 ~

§ git merge pallu

Updating 52957d5..a91f6f6

Fast-forward

p1.txt | 1 +

1 file changed, 1 insertion(+)

create mode 100644 p1.txt
    git log --oneline
git log --oneline
91f6f6 (HEAD -> master, pallu) commit message here
2957d5 (pallavi) message here
fbe7c4 go oni fghj
   fbe7c4 go oni fghj
0d90ae go on
9b7dcf come on
7d7176 Revert "file created yes done"
4c0f87 file created
51fc33 commited edited to cherry-pick
5bd5d2 commited
905f9f Revert "file revert again edited"
2b473e file revert
4b8853 file created
b97213 third commit
ee0c6f second commit
a7f1fc first commit
dda7bd exp10
3d4b5e file
eaf55a file sometjhing
255462 file2
cbff53 file
9fadd4 (tag: v2.0) BMSIT
ae57ff file-4
0cbce4 file-3
4c278f someone
        278f someone
7058 (tag: v1.0) someone
22f0 commit-1
ac80 commit-1
c4d4 Commit-1
               Oc (psll) what is this here
9 message here
                   Git
(origin/main) Create hhu.txt
```

3. Creating and Managing Branches

Write the commands to stash your changes, switch branches, and then apply the stashed changes.

```
S git checkout = b"need"
Switched to a new branch 'newl'
AdmindDESKTOP-JNFTPH6 MINGW32 ~ (newl)
$ vi n2.txt

AdmindDESKTOP-JNFTPH6 MINGW32 ~ (newl)
$ git add n2.txt
warning: in the working copy of 'n2.txt', LF will be replaced by CRLF the next time Git touches in
AdmindDESKTOP-JNFTPH6 MINGW32 ~ (newl)
$ git stash save 'message here24'
Saved working directory and index state On newl: message here24

AdmindDESKTOP-JNFTPH6 MINGW32 ~ (newl)
$ git checkout master
Switched to branch 'master'

AdmindDESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git stash apply

warning: could not open directory 'Application Data/': Permission denied
warning: could not open directory 'Cookies/': Permission denied
warning: could not open directory 'Ny Documents/': Permission denied
warning: could not open directory 'Ny Documents/': Permission denied
warning: could not open directory 'Ny Documents/': Permission denied
warning: could not open directory 'PintHood/': Permission denied
warning: could not open directory 'PintHood/': Permission denied
warning: could not open directory 'SendTo/': Permission denied
warning: cou
```

4. Collaboration and Remote Repositories

Clone a remote Git repository to your local machine.

Step1:go to Created github accout.

Step2:go to created repository in git hub.

Step3:go to Created file.

Step4:go to "Code" button.

Step5:copy url from "HTTPS" Tab.

Step6:GO TO GIT BASH

```
Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)

$ git clone "https://github.com/pyresearch/notebooks.git"
Cloning into 'notebooks'...
remote: Enumerating objects: 168, done.
remote: Counting objects: 100% (21/21), done.
remote: Compressing objects: 100% (13/13), done.
remote: Total 168 (delta 13), reused 8 (delta 8), pack-reused 147 (from 1)
Receiving objects: 100% (168/168), 16.27 MiB | 1.10 MiB/s, done.
Resolving deltas: 100% (79/79), done.
```

5.Collaboration and Remote Repositories

Fetch the latest changes from a remote repository and rebase your local branch onto the updated remote branch.

```
admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
admin@DESKTOP-JNFTPH6 MINGW32 ~/pallavi24 (master)
admin@DESKTOP-JNFTPH6
```

NEXT come to github:

Step1:Create a respository.

Step2:Create a file commit changes.

```
Admin@DESKTOP-JNFTPH6 MINGW32 ~/pallavi24 (pallav)
$ git remote add origin "https://github.com/PallaviGangadhar/gitbe.git"
error: remote origin already exists.

Admin@DESKTOP-JNFTPH6 MINGW32 ~/pallavi24 (pallav)
$ git fetch origin

Admin@DESKTOP-JNFTPH6 MINGW32 ~/pallavi24 (pallav)
$ git rebase origin/main
```

6.Collaboration and Remote Repositories

Write the command to merge "feature-branch" into "master" while providing a custom commit message for the merge.

```
Admin@DESKTOP-JNFTPH6 MINCW32 ~ (master)
$ git checkout -b exam
Switched to a new branch 'exam'

Admin@DESKTOP-JNFTPH6 MINCW32 ~ (exam)
$ vi f24.txt

Admin@DESKTOP-JNFTPH6 MINCW32 ~ (exam)
$ git add f24.txt
warning: in the working copy of 'f24.txt', LF will be replaced by CRLF
hes it

Admin@DESKTOP-JNFTPH6 MINCW32 ~ (exam)
$ git commit -m "<something>"
[exam 3039b39] <something>
3 files changed, 4 insertions(+)
create mode 100644 f24.txt
create mode 100644 f1.txt
create mode 100644 f1.txt
create mode 100644 n1.txt
create mode 100644 n1.txt
create mode 100644 n2.txt

Admin@DESKTOP-JNFTPH6 MINCW32 ~ (exam)
$ git checkout master
Switched to branch 'master'
D besktop/pallavi/home.txt

Admin@DESKTOP-JNFTPH6 MINCW32 ~ (master)
$ git merge exam -m "csomething over>"
Updating a91f6f6..3039b39
Fast-forward (no commit created; -m option ignored)
f24.txt | 2 ++
n1.txt | 1 +
n2.txt | 1 +
n2.txt | 1 +
n3 files changed, 4 insertions(+)
create mode 100644 f1.txt
create mode 100644 n2.txt

Admin@DESKTOP-JNFTPH6 MINCW32 ~ (master)
$ git log
commit 3039b393d59614bee242c510936d3b00259a6ff5 (HEAD -> master, exam)
Author: pallavi@gmial.com <pallavi122422005@gmail.com>
Date: Wed Jan 29 12:12:27 2025 +0530

<something>
commit message here

Admin@DESKTOP-JNFTPH6 MINCW32 ~ (master)
Something>
commit message here
```

7 Git Tags and Releases

Write the command to create a lightweight Git tag named "v1.0" for a commit in your local repository.

```
Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git add fi.txt
warning: in the working copy of 'fi.txt', LF will be replaced by CRLF th
e next time Git touches it

Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git commit -m "BMSIT"
[master f660dad] BMSIT
1 file changed, 1 insertion(+)
create mode 100644 fi.txt

Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git tag v1.0
fatal: tag 'v1.0' already exists

Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git tag v2.0
fatal: tag 'v2.0' already exists

Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git tag v24.0

Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git tag v24.0

Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git log --oneline
f660dad (HEAD -> master, tag: v24.0) BMSIT
3039b39 (exam) <something>
a91f6f6 (pallu, new1, new) commit message here
52957d5 (pallavi) message here
4fbe7c4 go oni fghj
90d90ae go on
19b7dcf come on
c7d7176 Revert "file created yes done"
f440f87 file created
b51fc53 commited edited to cherry-pick
b5bd5d2 commited
4005567 Payerr "file revert again edited"
```

8 Advanced Git Operations

Write the command to cherry-pick a range of commits from "source-branch" to the current branch.

```
dmin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
   $ vi 1.txt
      dmin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
 $ git add 1.txt
 warning: in the working copy of '1.txt', LF will be replaced by CRLF the next time Git touches it
Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git commit -m "file.txt"
[master 90f6be4] file.txt
2 files changed, 2 insertions(+)
create mode 100644 1.txt
create mode 100644 file12.txt
   Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
 $ vi 2.txt
   Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
  $ git add 2.txt
 warning: in the working copy of '2.txt', LF will be replac
ed by CRLF the next time Git touches it
 Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git commit -m "file2.txt"
[master 42bc823] file2.txt
1 file changed, 1 insertion(+)
create mode 100644 2.txt
Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git log --oneline
42bc823 (HEAD -> master) file2.txt
90f6be4 file.txt
f660dad (tag: v24.0) BMSIT
3039b39 (exam) <something>
a91f6f6 (pallu, new1, new) commit message here
52957d5 (pallavi) message here
4fbe7c4 go oni fghj
90d90ae go on
19b7dcf come on
c7d7176 Revert "file created yes done"
f4c0f87 file created
b51fc53 commited edited to cherry-pick
b5bd5d2 commited
4905f9f Revert "file revert again edited"
92b473e file revert
      dmin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git cherry-pick 3039b39
warning: could not open directory 'Application Data/': Permission denied warning: could not open directory 'Cookies/': Permission denied warning: could not open directory 'Local Settings/': Permission denied warning: could not open directory 'My Documents/': Permission denied warning: could not open directory 'NetHood/': Permission denied warning: could not open directory 'PrintHood/': Permission denied warning: could not open directory 'Recent/': Permission denied warning: could not open directory 'SendTo/': Permission denied warning: could not open directory 'Start Menu/': Permission denied warning: could not open directory 'Templates/': Permission denied on branch master 'You are currently cherry-picking commit 3039b39.

(all conflicts fixed: run "git cherry-pick --continue")

(use "git cherry-pick --skip" to skip this patch)

(use "git cherry-pick --abort" to cancel the cherry-pick operation)
                                                                                                     32 ~ (master)
    changes not staged for commit:

(use "git add/rm <file>..." to update what will be committed)

(use "git restore <file>..." to discard changes in working directory)
      ntracked files:
          (use "git add <file>..." to include in what will be committed)
Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master|CHERRY-PICKING)
$ git commit --allow-empty
warning: could not open directory 'Application Data/': Permission denied
warning: could not open directory 'Cookies/': Permission denied
warning: could not open directory 'Local Settings/': Permission denied
warning: could not open directory 'My Documents/': Permission denied
warning: could not open directory 'NetHood/': Permission denied
warning: could not open directory 'PintHood/': Permission denied
warning: could not open directory 'Recent/': Permission denied
warning: could not open directory 'SendTo/': Permission denied
warning: could not open directory 'Start Menu/': Permission denied
warning: could not open directory 'Templates/': Permission denied
[master 73911df] hd<something>
Date: Wed Jan 29 12:12:27 2025 +0530
```

Given a commit ID, how would you use Git to view the details of that specific commit, including the

author, date, and commit message?

```
vi f45.txt
 $ git add f45.txt
 warning: in the working copy of 'f45.txt', LF will be replaced by CRLF the
Git touches it
  Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
§ git commit -m "file"
[master e186822] file
1 file changed, 1 insertion(+)
create mode 100644 f45.txt
   o git log --oneline
186822 (HEAD -> master) file
3911df hd<something>
  el86822 (HEAU -> master) file
73911df hd<something>
42bc823 file2.txt
90f6be4 file.txt
f660dad (tag: v24.0) BMSIT
3039b39 (exam) <something>
a91f6f6 (pallu, newl, new) commit message here
52957d5 (pallavi) message here
4fbe7c4 go oni fghj
90d90ae go on
7d7176 Revert "file created yes done"
f4c0f87 file created
b5ifc53 commited edited to cherry-pick
b5bd5d2 commited
4905f9f Revert "file revert again edited"
92b473e file revert
14b8853 file created
b697213 third commit
0ee0c6f second commit
7a7f1fc first commit
    a/flfc first commit ddda/bd exp10 ddda/bd exp10 ddb5e file eaf55a file sometjhing 255462 file2 cbff53 file 9fadd4 (tag: v2.0) BMSIT ae57ff file-4 ocbce4 file-3 dc278f someone
    4c278f someone
3b7058 (tag: v1.0) someone
1b22f0 commit-1
     d8ac80 commit-1
e3c4d4 Commit-1
    116f9c (ps11) what is this here
9232c9 message here
    23b09b (origin/main) Create hhu.txt
   dmin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
g git show 3039b39
commit 3039b393d59614bee242c510936d3b00259a6ff5 (exa
           in@DESKTOP-JNFTPH6 MINGW32 ~ (master)
 $ git show 3039b39
Ommit 3039b393d59614bee242c510936d3b00259a6ff5 (exam)

Author: pallavi@gmial.com <pallavi12242005@gmail.com>

Date: Wed Jan 29 12:12:27 2025 +0530
            <something>
diff --git a/f24.txt b/f24.txt
new file mode 100644
index 0000000..12a836e
--- /dev/null
+++ b/f24.txt
diff --git a/n1.txt b/n1.txt

new file mode 100644

index 0000000..8576d43

--- /dev/null

+++ b/n1.txt
diff -git a/n2.txt b/n2.txt

new file mode 100644

index 0000000..897e86a

--- /dev/null

+++ b/n2.txt
 $ git log -n1 3039b39
Jagic 109 - 11 303905 3059614bee242c510936d3b00259a6ff5 (exam)
Author: pallavi@gmial.com <pallavi12242005@gmail.com>
Date: Wed Jan 29 12:12:27 2025 +0530
            <something>
```

10 Analysing and Changing Git History

Write the command to list all commits made by the author "JohnDoe" between "2023-01-01" and

"2023-12-31."

```
Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ vi f44.txt

Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git add f44.txt
warning: in the working copy of 'f44.txt', LF will be replaced by CRLF the

Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git commit -m "exp10"
[master b223602] exp10
1 file changed, 1 insertion(+)
create mode 100644 f44.txt
```

```
Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)

$ git show
commit b2236020197e95616ca1706d8e7c21fb1d35d758 (HEAD -> master)
Author: pallavi@gmial.com <pallavi12242005@gmail.com>
Date: Wed Jan 29 12:36:43 2025 +0530

exp10

diff --git a/f44.txt b/f44.txt
new file mode 100644
index 0000000..b5f2971
--- /dev/null
+++ b/f44.txt
@@ -0,0 +1 @@
+nijhgft
```

```
Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)

$ git log --author='pallavi' --since ="2024-01-01" --until="2024-12-01"

commit b116f9cad9484e68e3008d2f10410f690ddda651 (psl1)

Author: pallavi@gmial.com <pallavi12242005@gmail.com>
Date: Wed Nov 20 19:43:42 2024 +0530

what is this here

commit 69232c910054d52ef92096b80a07151e7dfaa75f

Author: pallavi@gmial.com <pallavi12242005@gmail.com>
Date: Wed Nov 20 19:38:32 2024 +0530

message here

commit 284d177a9811e27c4dd19c35f2be95fed8f27846

Author: pallavi@gmial.com <pallavi12242005@gmail.com>
Date: Wed Nov 20 18:23:06 2024 +0530

Git
```

11 Analysing and Changing Git History

Write the command to display the last five commits in the repository's history.

```
JNFTPH6 MINGW32 ~ (master)
  vi pl.txt
 Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
§ vi p.txt
  dmin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git add p.txt
warning: in the working copy of 'p.txt', LF will be replaced
Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)

$ git commit -m "file created"

[master bc2e44d] file created

1 file changed, 1 insertion(+)

create mode 100644 p.txt
$ git show
commit bc2e44d57aa6335e67da1f764c9f8fed7c7d4413 (HEAD -> mas:
Author: pallavi@gmial.com <pallavi12242005@gmail.com>
Date: Wed Jan 29 12:50:18 2025 +0530
      file created
diff —git a/p.txt b/p.txt
new file mode 100644
index 0000000..46a9e0e
--- /dev/null
+++ b/p.txt
$ git log --oneline --decorate
bc2e44d (HEAD -> master) file created
b223602 exp10
$ git show a91f6f6
commit a91f6f672f4357208659747d46e8cdf94988ba58 (pallu, new1, new)
Author: pallavi@gmial.com <pallavi12242005@gmail.com>
Date: Wed Jan 29 11:21:16 2025 +0530
       commit message here
diff —git a/p1.txt b/p1.txt
new file mode 100644
index 0000000..9c154a6
    - /dev/null
+++ b/p1.txt
  i am pallavi
       in@DESKTOP-JNFTPH6 MINGW32 ~ (master)
file created
commit b2236020197e95616ca1706d8e7c21fb1d35d758
Author: pallavi@gmial.com <pallavi12242005@gmail.com>
Date: Wed Jan 29 12:36:43 2025 +0530
        exp10
commit e1868222251c8b3b1dfb6f7a2062d8a570f77eaf
Author: pallavi@gmial.com <pallavi12242005@gmail.com>
Date: Wed Jan 29 12:33:43 2025 +0530
commit 73911df3a1458fc0e8b8b0f8d2357b1fed90e1e7
Author: pallavi@gmial.com <pallavi12242005@gmail.com>
Date: Wed Jan 29 12:12:27 2025 +0530
        hd<something>
commit 42bc823410ef21e475509950bf9e87c8d0cf9630
Author: pallavi@gmial.com <pallavi12242005@gmail.com>
Date: Wed Jan 29 12:27:13 2025 +0530
```

file2.txt

Write the command to undo the changes introduced by the commit with the ID "abc123".

```
Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
 § vi f67.txt
  Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
 $ git add f67.tx
 fatal: pathspec 'f67.tx' did not match any files
 Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
 $ git add f67.txt
 warning: in the working copy of 'f67.txt', LF will be replace
Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git commit -m "file"
[master f78a7e2] file
   1 file changed, 1 insertion(+) create mode 100644 f67.txt
  Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
  commit f78a7e26801e568ce715277eac6e9d803e54a848 (HEAD -> mast
Author: pallavi@gmial.com <pallavi12242005@gmail.com>
Date: Wed Jan 29 12:56:59 2025 +0530
          file
diff —git a/f67.txt b/f67.txt
new file mode 100644
index 0000000..a293026
--- /dev/null
 +++ b/f67.txt
   @ -0,0 +1 @@
  Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git log --oneline --decorate
f78a7e2 (HEAD -> master) file
bc2e44d file created
 b223602 exp10
e186822 file
73911df hd<something>
 42bc823 file2.txt
90f6be4 file.txt
f660dad (tag: v24.0) BMSIT
3039b39 (exam) <something>
 a91f6f6 (pallu, new1, new) commit message here
52957d5 (pallavi) message here
 4fbe7c4 go oni fghj
90d90ae go on
19b7dcf come on
c7d7176 Revert "file created yes done"
 f4cOf87 file created
b51fc53 commited edited to cherry-pick
b5bd5d2 commited
 de34d4 Commit-1
de34d4 Commit-1
b116f9c (psll) what is this here
69232c9 message here
284d177 Git
d23b09h (price
  23b09b (origin/main) Create hhu.txt
Admin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
$ git revert 3039b39
warning: could not open directory 'Application Data/': Permission denied warning: could not open directory 'Local Settings/': Permission denied warning: could not open directory 'My Documents/': Permission denied warning: could not open directory 'NetHood/': Permission denied warning: could not open directory 'PrintHood/': Permission denied warning: could not open directory 'Recent/': Permission denied warning: could not open directory 'SendTo/': Permission denied warning: could not open directory 'Start Menu/': Permission denied warning: could not open directory 'Templates/': Permission denied warning: could not open directory 'Templates/': Permission denied [master 8de8319] Revert "<something> again changed"
3 files changed, 4 deletions(-) delete mode 100644 f24.txt delete mode 100644 n1.txt delete mode 100644 n2.txt
   dmin@DESKTOP-JNFTPH6 MINGW32 ~ (master)
```