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**COGNIZANT DNP 3.0 WEEK1 TASK CSE Cybersecurity**

## **Exercise 1: Introduction to Version Control**

### **Objective:**

Initialize a new Git repository and commit your first file.

### **Instructions:**

1. Create a new directory for your project.

```
DELL@KARTHIKREDDY MINGW64 ~  
$ mkdir karthik_c
```

2. Navigate into the directory.

```
DELL@KARTHIKREDDY MINGW64 ~  
$ cd karthik_c
```

3. Initialize a new Git repository in the directory.

```
DELL@KARTHIKREDDY MINGW64 ~/karthik_c  
$ git init  
Initialized empty Git repository in C:/Users/DELL/karthik_c/.git/
```

4. Create a new file named file1.txt and add some content to it.

```
DELL@KARTHIKREDDY MINGW64 ~/karthik_c (master)  
$ echo "This is the first file." > file1.txt
```

5. Add the file to the staging area.

```
DELL@KARTHIKREDDY MINGW64 ~/karthik_c (master)  
$ git commit -m "Initial commit with file1.txt"  
[master (root-commit) a1139b7] Initial commit with file1.txt  
1 file changed, 1 insertion(+)  
create mode 100644 file1.txt
```

6. Commit the file with a commit message.

```
DELL@KARTHIKREDDY MINGW64 ~/karthik_c (master)  
$ git commit -m "Initial commit with file1.txt"  
[master (root-commit) a1139b7] Initial commit with file1.txt  
1 file changed, 1 insertion(+)  
create mode 100644 file1.txt
```

## Exercise 2: Understanding Git

### Objective:

Clone an existing repository and explore its history.

### Instructions:

1. Clone a public repository from a platform like GitHub.

```
DELL@KARTHIKREDDY MINGW64 ~/karthik_c (master)
$ git clone https://github.com/git/git.git
Cloning into 'git'...
remote: Enumerating objects: 371962, done.
remote: Counting objects: 100% (432/432), done.
remote: Compressing objects: 100% (208/208), done.
remote: Total 371962 (delta 252), reused 387 (delta 224), pack-reused 371530
Receiving objects: 100% (371962/371962), 244.19 MiB | 13.93 MiB/s, done.
Resolving deltas: 100% (280042/280042), done.
Updating files: 100% (4509/4509), done.
```

- 2.
3. Navigate into the cloned repository.

```
DELL@KARTHIKREDDY MINGW64 ~/karthik_c (master)
$ cd git
```

4. Check the commit history.

```
DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (master)
$ git log
commit 39bf06adf96da25b87c9aa7d35a32ef3683eb4a4 (HEAD -> master, tag: v2.46.0, origin/master, origin/HEAD)
Author: Junio C Hamano <gitster@pobox.com>
Date: Mon Jul 29 07:14:09 2024 -0700

    Git 2.46

    Signed-off-by: Junio C Hamano <gitster@pobox.com>
```

5. Show changes introduced by a specific commit.

```

DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (master)
$ git show d44ce6ddd5f1b8c5f5a18abed22ada1b48e893ba
commit d44ce6ddd5f1b8c5f5a18abed22ada1b48e893ba
Author: Junio C Hamano <gitster@pobox.com>
Date: Mon Jul 22 14:17:55 2024 -0700

    Doc: fix Asciidoctor css workaround

The previous step introduced docinfo.html to be used to tweak the
CSS used by the asciidoctor, that by default renders <code> inside
<pre> as a block element, breaking the SYNOPSIS section of a few
pages that adopted a new convention we use since Git 2.45.

But in this project, HTML files are all generated. We do not force
any human to write HTML by hand, which is an unusual and cruel
punishment. "*.html" is in the .gitignore file, and "make clean"
removes them. Having a tracked .html file makes "make clean" make
the tree dirty by removing the tracked docinfo.html file.

Let's do an obvious, minimum and stupid workaround to generate that
file at runtime instead. The mark-up is being rethought in a major
way for the next development cycle, and the CSS workaround we added
in the previous step may have to adjusted, possibly in a large way,
anyway.

Signed-off-by: Junio C Hamano <gitster@pobox.com>

diff --git a/Documentation/.gitignore b/Documentation/.gitignore
index d11567fbbe..a48448de32 100644
--- a/Documentation/.gitignore
+++ b/Documentation/.gitignore
@@ -1,6 +1,5 @@
*.xml
*.html
-!/docinfo.html
*.[1-8]
*.made
*.texi
diff --git a/Documentation/Makefile b/Documentation/Makefile
index 78e407e4bd..371d56eb5e 100644

```

## Exercise 3: Setting Up Git

### Objective:

Set up Git configuration and verify it.

### Instructions:

1. Set your username for Git.

```

DELL@KARTHIKREDDY MINGW64 ~/karthik_c (master)
$ git config --global user.name "karthik reddy"

```

2. Set your email for Git.

```

DELL@KARTHIKREDDY MINGW64 ~/karthik_c (master)
$ git config --global user.email "cc9868@srmist.edu.in"

```

3. Verify your configuration settings.

```
DELL@KARTHIKREDDY MINGW64 ~/karthik_c (master)
$ 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=openssl
http.sslcainfo=C:/Program Files/Git/mingw64/etc/ssl/certs/ca-bundle.crt
core.autocrlf=true
core.fscache=true
core.symlinks=false
pull.rebase=false
credential.helper=manager
credential.https://dev.azure.com.usehttppath=true
init.defaultbranch=master
user.name=karthik reddy
user.email=cc9868@srmist.edu.in
core.repositoryformatversion=0
core.filemode=false
core.bare=false
core.logallrefupdates=true
core.symlinks=false
core.ignorecase=true
```

## Exercise 4: Basic Git Commands

### Objective:

Practice basic Git commands by modifying files and tracking changes.

### Instructions:

1. Create a new file named file2.txt and add some content to it.
2. Add the file to the staging area.
3. Commit the new file with a commit message.
4. Modify the existing file1.txt and add more content to it.
5. Add the modified file to the staging area.
6. Commit the changes with a commit message.
7. View the current status of your repository.
8. View the differences between your working directory and the repository.

```

DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (master)
$ echo "this is the second file." > file2.txt

DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (master)
$ git add file2.txt
warning: in the working copy of 'file2.txt', LF will be replaced by CRLF the next time Git touches it

DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (master)
$ git commit -m "added file2.txt"
[master 7d6ca24105] added file2.txt
1 file changed, 1 insertion(+)
create mode 100644 file2.txt

DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (master)
$ echo "adding more content to file1.txt" >> file1.txt

DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (master)
$ git add file1.txt
warning: in the working copy of 'file1.txt', LF will be replaced by CRLF the next time Git touches it

DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (master)
$ git commit -m "updated file1.txt with more content"
[master c3f8fb5e32] updated file1.txt with more content
1 file changed, 1 insertion(+)
create mode 100644 file1.txt

DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 2 commits.
(use "git push" to publish your local commits)

nothing to commit, working tree clean

DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (master)
$ git diff

```

## Exercise 5: Branching and Merging

### Objective:

Create a new branch, make changes, and merge it back to the main branch.

### Instructions:

1. Create a new branch named new-feature.
2. Switch to the new branch (if not already switched).
3. Create a new file named feature.txt and add some content to it.
4. Add the file to the staging area.
5. Commit the new file with a commit message.
6. Switch back to the main branch.
7. Merge the new-feature branch into the main branch.
8. Resolve any conflicts if they arise and commit the merge.

```

DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (master)
$ git checkout -b new-slave
Switched to a new branch 'new-slave'

DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (new-slave)
$ echo "this is a slave feature" > slave.txt

DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (new-slave)
$ git add slave.txt
warning: in the working copy of 'slave.txt', LF will be replaced by CRLF the next time Git touches it

DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (new-slave)
$ git commit -m "added slave.txt in new-slave branch"
[new-slave d98842848b] added slave.txt in new-slave branch
1 file changed, 1 insertion(+)
create mode 100644 slave.txt

DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (new-slave)
$ git checkout master
Switched to branch 'master'
Your branch is ahead of 'origin/master' by 2 commits.
(use "git push" to publish your local commits)

DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (master)
$ git merge new-slave
Updating c3f8fb5e32..d98842848b
Fast-forward
 slave.txt | 1 +
1 file changed, 1 insertion(+)
create mode 100644 slave.txt

```

## Exercise 6: Remote Repositories

### Objective:

Add a remote repository and push your local changes.

### Instructions:

1. Add a remote repository URL to your local Git repository.
2. Push your local changes to the remote repository.

```

DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (master)
$ git remote add hemanth https://github.com/chinthalapallikarthikreddy/cognizantt

DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (master)
$ git push -u hemanth master
Enumerating objects: 360812, done.
Counting objects: 100% (360812/360812), done.
Delta compression using up to 8 threads
Compressing objects: 100% (84760/84760), done.
Writing objects: 100% (360812/360812), 236.22 MiB | 16.44 MiB/s, done.
Total 360812 (delta 273695), reused 360794 (delta 273684), pack-reused 0 (from 0)
remote: warning: object cf88c1feab31ac3c7a9606681672c64d4140b79: badFilemode: contains bad file modes
remote: warning: object f403f5914294bd2769c9ebab7607d90abee915ab: badFilemode: contains bad file modes
remote: warning: object f519f8e9742f9e2f37cecdf3e93338d843471580: badFilemode: contains bad file modes
remote: warning: object a869cb0789d8ad87f04d28dd9b703f3ff343a4a7: badFilemode: contains bad file modes
remote: warning: object 82e9dc75087c715ef4a9da6fc89674aa74efee1c: badFilemode: contains bad file modes
remote: warning: object 2b5bdfdf7798569e0b59b16eb9602d5fa572d6038: badFilemode: contains bad file modes
remote: warning: object 0776ebe16d603a16a3540ae78504abe6b0920ac0: badFilemode: contains bad file modes
remote: warning: object c9a4eba919aaf1bd98209dfaad43776fae171951: badFilemode: contains bad file modes
remote: warning: object 5d374ca6970d503b3d1a93170d65a02ec5d6d4ff: badFilemode: contains bad file modes
remote: warning: object 2660be985a85b5a96b9de69050375ac5e436c957: badFilemode: contains bad file modes
remote: warning: object cc2df043a780ba35f1ad458d4710a4ea42fc9c17: badFilemode: contains bad file modes
remote: warning: object 0e70cb482c7d76069b93da00d3fac97526b9aeec: badFilemode: contains bad file modes
remote: warning: object e022421aad3c90ef550eaa69b388df25ceb1686b: badFilemode: contains bad file modes
remote: warning: object 59c9ea857e563de5e3bb27f0cb6133a6f22c8964: badFilemode: contains bad file modes
remote: warning: object a851ce1b68aad8616fd4eed75dc02c3de77b4802: badFilemode: contains bad file modes
remote: warning: object 26f176413928139d69d2249c78f24d7be4b0d9fd: badFilemode: contains bad file modes
remote: warning: object b474d669fad6d037c18c0d232aef579a65ae101b: badFilemode: contains bad file modes
remote: warning: object a4944100a4832f8fce1494e2e8cbea74e349f731: badFilemode: contains bad file modes
remote: warning: object 8156e162365f85a1712373132bd8bb3ba0209537: badFilemode: contains bad file modes
remote: warning: object 192f84588c8e47a2d8ca3d0c6e50641b7a2491b8: badFilemode: contains bad file modes
remote: warning: object 905781d15f6cb171e9c4360465905c7c27f835ee: badFilemode: contains bad file modes
remote: warning: object 6795adc096e36c7a7f8e6a407297727e61d4d083: badFilemode: contains bad file modes
remote: warning: object f2745cc464cc08214719d9f6ac71fd9a9d6417a9: badFilemode: contains bad file modes
remote: warning: object 420f7beb8c3b0e8b7a5e6e8dad92e1246e1dcfb3: badFilemode: contains bad file modes
remote: warning: object 75a725933087584bb4de417b38588f2b3dccc2943: badFilemode: contains bad file modes
remote: warning: object b9be893a0014c33d0b825cd9588566825c129a4b: badFilemode: contains bad file modes
remote: warning: object 07c2d8f92d55b9ab885c10bfa862e652dcc40ee5: badFilemode: contains bad file modes
remote: warning: object 1e474a8671630eca49f3a94145045903a22ffed1: badFilemode: contains bad file modes
remote: warning: object 9999cfff451d3a833ca39981d6868fdb452449f13: badFilemode: contains bad file modes
remote: warning: object 53cbeeb5b30e9a9e0759fad94a9e2d24aaeff53d: badFilemode: contains bad file modes
remote: warning: object 0965df45db7cf28dba93b554bdf26b61e8b950f7: badFilemode: contains bad file modes
remote: warning: object 298e5d544d67bcc11e95aa6b04f1069a9cd959e6: badFilemode: contains bad file modes
remote: warning: object b65f86cddb4086dc6b9b0a14ec8a935c45c6c3d: badFilemode: contains bad file modes
remote: warning: object 31f24db6e3e3f70191d95bbe7a06a2b1bb711d99: badFilemode: contains bad file modes
remote: warning: object 747fe6bdc82aff5407221eff645656932c66ae63: badFilemode: contains bad file modes
remote: warning: object 8caa89079f408d056c20ae13a2a62cb2148ccd2c: badFilemode: contains bad file modes
remote: warning: object 928b601edc5e57a3998233b5593de63f90d24671: badFilemode: contains bad file modes
remote: warning: object 56763d1f057cdc4bf4e60cbec69b51593f9e3bd0: badFilemode: contains bad file modes
remote: warning: object 41bcaba0309c151fb38f82135d9b011e2066d130: badFilemode: contains bad file modes
remote: warning: object 2031abe6fdaa115800eb0c5cd66ebf265d17b3c3: badFilemode: contains bad file modes
remote: warning: object 0ba51186089993112337d5b34a9ee23fe7cf4fdb: badFilemode: contains bad file modes
remote: warning: object a2438d35e51d7bec87ca5231c0e8f7fb9039ba56: badFilemode: contains bad file modes
remote: warning: object 3f703cd0cd32a4aa9892bda84c664c36e40f7921: badFilemode: contains bad file modes
remote: warning: object 958b0946a5082fbc6797209fb225f5d7a786b786: badFilemode: contains bad file modes
remote: warning: object 69bdfda541c368a47a86482df66e488b152fe3d: badFilemode: contains bad file modes

```

3.



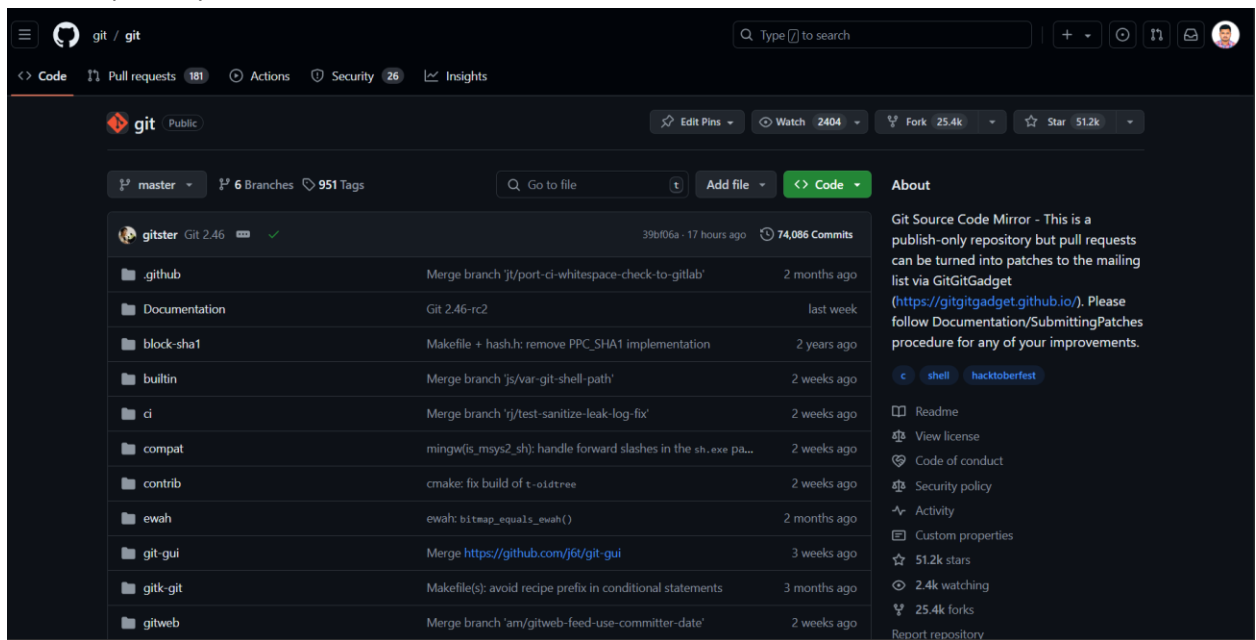
## Exercise 7: Collaborating with Git

### Objective:

Collaborate on a repository by creating a pull request.

### Instructions:

1. Fork a repository on GitHub.



2. Clone your forked repository to your local machine.

```
DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (master)
$ git clone https://github.com/chinthalapallikarthikreddy/git
Cloning into 'git'...
remote: Enumerating objects: 360803, done.
remote: Counting objects: 100% (38/38), done.
remote: Compressing objects: 100% (18/18), done.
remote: Total 360803 (delta 21), reused 35 (delta 20), pack-reused 360765
Receiving objects: 100% (360803/360803), 235.53 MiB | 17.47 MiB/s, done.
Resolving deltas: 100% (273730/273730), done.
Updating files: 100% (4509/4509), done.
```

3. Navigate into the cloned repository.

```
DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git (master)
$ cd git
```



4. Create a new branch for your changes.

```
DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git/git (master)
$ git checkout -b ourbranch
Switched to a new branch 'ourbranch'
```

5. Make your changes and commit them.

```
DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git/git (ourbranch)
$ git commit -m "describe the changes"
[ourbranch d42b0cb8cf] describe the changes
1 file changed, 1 insertion(+)
create mode 100644 file3.txt
```

6. Push the branch to your forked repository.

```
DELL@KARTHIKREDDY MINGW64 ~/karthik_c/git/git (ourbranch)
$ git push -u origin ourbranch
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 286 bytes | 286.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'ourbranch' on GitHub by visiting:
remote:   https://github.com/chinthalapallikarthikreddy/git/pull/new/ourbranch
remote:
To https://github.com/chinthalapallikarthikreddy/git
 * [new branch]      ourbranch -> ourbranch
branch 'ourbranch' set up to track 'origin/ourbranch'.
```

7. Create a pull request from your forked repository to the original repository.

ChatGPTYour Repositorieschinthalapalika...upstox login - Se...Upstox Prochinthalapalika...New tab

https://github.com/chinthalapalika.../git

chinthalapalika... / git

CodePull requestsActionsProjectsSecurityInsightsSettings

gitPublicforked from git/git

ourbranch had recent pushes 4 seconds agoCompare & pull request

master1 Branch0 TagsGo to fileAdd fileCode

This branch is up to date with git/git:master. ContributeSync fork

gitsterGit 2.4639e06a · 14 hours ago74,086 Commits

|               |  |              |
|---------------|--|--------------|
| github        | Merge branch 'jy/port-ci-whitespace-check-to-gitlab'           | 2 months ago |
| Documentation | Git 2.46-rc2   | last week    |
| block-sha1    | Makefile + hash.h: remove PPC_SHA1 implementation              | 2 years ago  |
| builtin       | Merge branch 'js/var-git-shell-path'                           | 2 weeks ago  |
| ci            | Merge branch 'ij/test-sanitize-leak-log-fix'                   | 2 weeks ago  |
| compat        | mingw(s_msys2_sh): handle forward slashes in the sh.exe pla... | 2 weeks ago  |
| contrib       | cmake: fix build of t-oidtree                                  | 2 weeks ago  |

About

Git Source Code Mirror - This is a publish-only repository but pull requests can be turned into patches to the mailing list via GitGitGadget (<https://gitgadget.github.io/>). Please follow Documentation/SubmittingPatches procedure for any of your improvements.

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