

Assignment - 1

1. Create a GitHub repository with the name dac-mar-24-<your prn>. Clone it on the local machine. Create a Hello World program Java program in the local repository directory. Push it to GitHub.
2. Create two branches B-1 and B-2. Make changes to the HelloWorld.java file in both the branches. Merge them and finally keep only the main branch. Push the final version to GitHub.

Solution:

```
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1$ cd Git
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git$ git init
Reinitialized existing Git repository in /home/dac/Desktop/AY_DAC_B1/Git/.git/
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git$ git clone https://github.com/AyushKumar55/dac-mar-24-240340120045.git
Cloning into 'dac-mar-24-240340120045'...
warning: You appear to have cloned an empty repository.
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git$ vi HelloWorld.java
```

//Manually moved HelloWorld.java to dac-24-mar-240340120045

```
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git add .
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git status
On branch main

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   HelloWorld.java

dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git commit -m "Added HelloWorld.java file in main branch"
[main (root-commit) c231f1a] Added HelloWorld.java file in main branch
 1 file changed, 5 insertions(+)
 create mode 100644 HelloWorld.java
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git status
On branch main
Your branch is based on 'origin/main', but the upstream is gone.
  (use "git branch --unset-upstream" to fixup)

nothing to commit, working tree clean
```

HelloWorld.java file in main branch

```
token x *HelloWorld.java x
1 class HelloWorld{
2     public static void main(String[] args){
3         System.out.println("Hello World");
4     }
5 }
```

Changed HelloWorld.java in B-1 branch & Committed the changes of Branch - 1

```
Activities Terminal May 28 18:36
dac@dac-Veriton-M200-H310: ~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045
class HelloWorld{
    public static void main(String[] args){
        System.out.println("Hello World");
        System.out.println("I am in Branch B-1");
    }
}
```

```
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git branch B-1
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git branch
B-1
* main
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git checkout B-1
Switched to branch 'B-1'
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git add .
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git status
On branch B-1
nothing to commit, working tree clean
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ vi HelloWorld.java
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git status
On branch B-1
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:   HelloWorld.java

no changes added to commit (use "git add" and/or "git commit -a")
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git commit -m "Update: Added a new message (B-1)"
On branch B-1
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:   HelloWorld.java

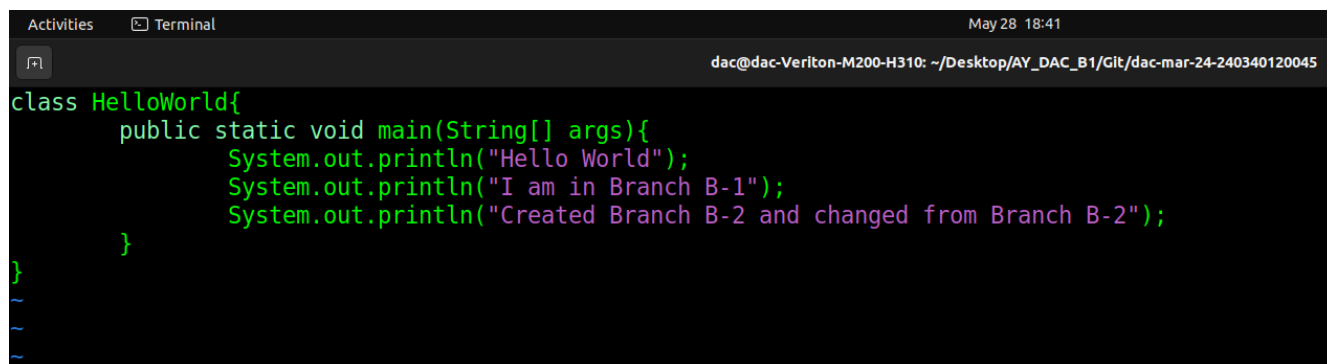
no changes added to commit (use "git add" and/or "git commit -a")
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git add .
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git status
On branch B-1
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   HelloWorld.java

dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git commit -m "Update: Added a new message (B-1)"
[B-1 0b73012] Update: Added a new message (B-1)
1 file changed, 1 insertion(+)
```

Pushed HelloWorld.java to the remote repository from main branch

```
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git checkout main
Switched to branch 'main'
Your branch is based on 'origin/main', but the upstream is gone.
(use "git branch --unset-upstream" to fixup)
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git push
Username for 'https://github.com': AyushKumar55
Password for 'https://AyushKumar55@github.com':
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 329 bytes | 329.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/AyushKumar55/dac-mar-24-240340120045.git
* [new branch]      main -> main
```

Changed HelloWorld.java in B-2 branch & Committed the changes of Branch - 2



The screenshot shows a terminal window with the title bar 'Activities Terminal' and a timestamp 'May 28 18:41'. The terminal path is 'dac@dac-Veriton-M200-H310: ~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045'. The code displayed is:

```
class HelloWorld{
    public static void main(String[] args){
        System.out.println("Hello World");
        System.out.println("I am in Branch B-1");
        System.out.println("Created Branch B-2 and changed from Branch B-2");
    }
}
~
~
~
```

```
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git branch B-2
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git branch
* B-1
  B-2
  main
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git checkout B-2
Switched to branch 'B-2'
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ ls
HelloWorld.java
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ vi
.git/      HelloWorld.java
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ vi
.git/      HelloWorld.java
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ vi HelloWorld.java
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git add .
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git status
On branch B-2
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   HelloWorld.java

dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git commit -m"Update: Added a new message (B-2)"
[B-2 a0bfcd5] Update: Added a new message (B-2)
1 file changed, 1 insertion(+)
```

Merged B-1 and B-2 into main and committed the changes.

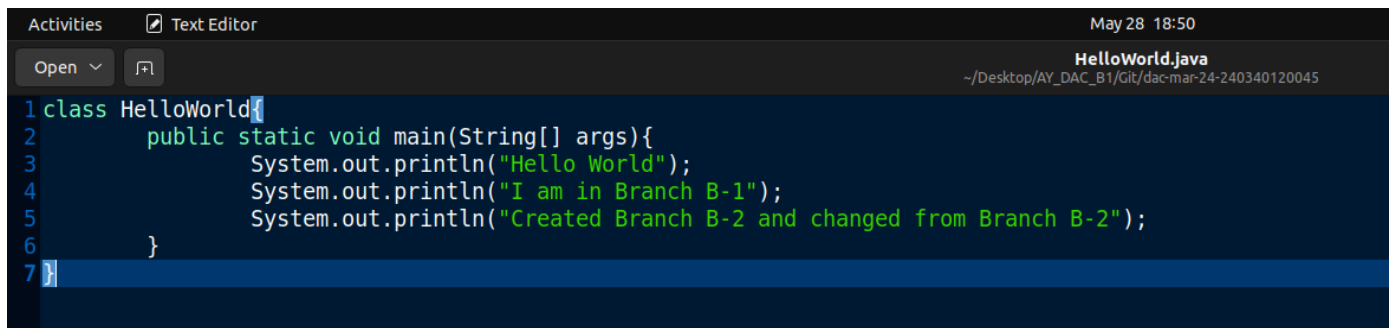
```
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git merge B-1
Updating c231f1a..0b73012
Fast-forward
 HelloWorld.java | 1 +
 1 file changed, 1 insertion(+)
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ vi HelloWorld.java
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git merge B-2
Updating 0b73012..a0bfcd5
Fast-forward
 HelloWorld.java | 1 +
 1 file changed, 1 insertion(+)
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ vi HelloWorld.java
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git checkout B-2
Switched to branch 'B-2'
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ vi HelloWorld.java
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git checkout B-1
Switched to branch 'B-1'
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ vi HelloWorld.java
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git checkout main
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 2 commits.
  (use "git push" to publish your local commits)
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ vi HelloWorld.java
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git commit -m"Merged branches B-1 & B-2"
On branch main
Your branch is ahead of 'origin/main' by 2 commits.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
```

Pushed after Merging

```
dac@dac-Veriton-M200-H310:~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045$ git push
Username for 'https://github.com': AyushKumar55
Password for 'https://AyushKumar55@github.com':
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 12 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (6/6), 651 bytes | 651.00 KiB/s, done.
Total 6 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/AyushKumar55/dac-mar-24-240340120045.git
 c231f1a..a0bfcd5  main -> main
```

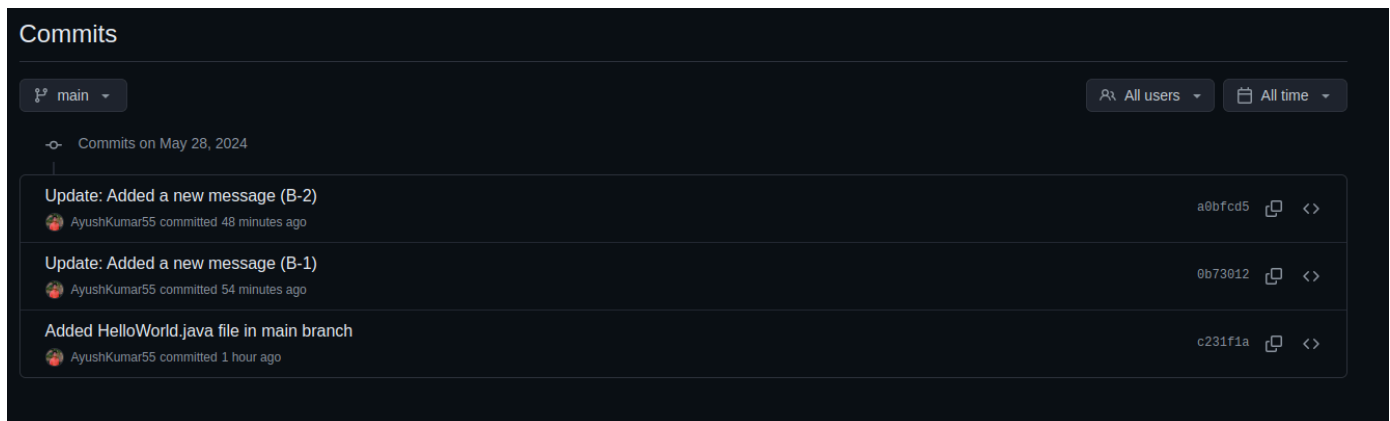
HelloWorld.java file after merging



The screenshot shows a text editor window titled "HelloWorld.java" with the file path "~/Desktop/AY_DAC_B1/Git/dac-mar-24-240340120045". The code is as follows:

```
1 class HelloWorld{
2     public static void main(String[] args){
3         System.out.println("Hello World");
4         System.out.println("I am in Branch B-1");
5         System.out.println("Created Branch B-2 and changed from Branch B-2");
6     }
7 }
```

Version History



The screenshot shows the "Commits" section of a Git repository. The current branch is "main". The commit history is filtered to show commits on May 28, 2024. The commits are listed in descending order of time.

Commit Message	Commit Hash	Author	Time
Update: Added a new message (B-2)	a0bfc5	AyushKumar55	48 minutes ago
Update: Added a new message (B-1)	0b73012	AyushKumar55	54 minutes ago
Added HelloWorld.java file in main branch	c231f1a	AyushKumar55	1 hour ago