

# DEVOPS PROFESSIONAL CERTIFICATION PROGRAM

## Lab – 2: Getting Started with Git & Gitlab

- Create local and Remote Repository
- Push local repository to remote repository
- Clone source copy from remote repository and push modified copy
- Track source file(s) locally - Access previous commit by ref/tag

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- **Creating Local Repository**
  - Distinguish Working Directory & Local Repository
  - Differentiate Staging & Commit
  - Track versions

```

osgdev@TG-DevOps-OS115: ~/lab2/L2R
osgdev@TG-DevOps-OS115:~$ mkdir lab2
osgdev@TG-DevOps-OS115:~$ cd lab2
osgdev@TG-DevOps-OS115:~/lab2$ mkdir L2R
osgdev@TG-DevOps-OS115:~/lab2$ cd L2R
osgdev@TG-DevOps-OS115:~/lab2/L2R$ git init
Initialized empty Git repository in /home/osgdev/lab2/L2R/.git/
osgdev@TG-DevOps-OS115:~/lab2/L2R$ ls -a
.  .. .git
osgdev@TG-DevOps-OS115:~/lab2/L2R$ gedit Welcome.java
osgdev@TG-DevOps-OS115:~/lab2/L2R$ ls
Welcome.java
osgdev@TG-DevOps-OS115:~/lab2/L2R$ ls -a
.  .. .git  Welcome.java
osgdev@TG-DevOps-OS115:~/lab2/L2R$ cat Welcome.java
class Welcome{
    public static void main(String[] args){
        System.out.println("Welcome to DevOps Certification Program");
    }
}

osgdev@TG-DevOps-OS115:~/lab2/L2R$ git status
On branch master

Initial commit

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

        Welcome.java

nothing added to commit but untracked files present (use "git add" to track)
osgdev@TG-DevOps-OS115:~/lab2/L2R$ git add Welcome.java
osgdev@TG-DevOps-OS115:~/lab2/L2R$ git status
On branch master

Initial commit

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

        new file:   Welcome.java

osgdev@TG-DevOps-OS115:~/lab2/L2R$ git commit -m "initial Code"
[master (root-commit) 60a82ee] initial Code
Committer: avitepa <osgdev@TG-DevOps-OS115.wipro.com>
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, 7 insertions(+)
create mode 100644 Welcome.java
osgdev@TG-DevOps-OS115:~/lab2/L2R$ git log
commit 60a82ee4cb9495946221c825b70f17ae6283e744
Author: avitepa <osgdev@TG-DevOps-OS115.wipro.com>
Date:   Wed Jul 11 13:46:58 2018 +0530

    initial Code
osgdev@TG-DevOps-OS115:~/lab2/L2R$ gedit Welcome.java
osgdev@TG-DevOps-OS115:~/lab2/L2R$ cat Welcome.java
class Welcome{
    public static void main(String[] args){
        System.out.println("Welcome to DevOps Certification Program");
        System.out.println("### Initial Code Modified ###");
    }
}

```

```

osgdev@TG-DevOps-0S115:~/Lab2/L2R$ git status
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   Welcome.java

no changes added to commit (use "git add" and/or "git commit -a")
osgdev@TG-DevOps-0S115:~/Lab2/L2R$ git commit -a -m "Modified Code-1"
[master 5713339] Modified Code-1
Committer: avitepa <osgdev@TG-DevOps-0S115.wipro.com>
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(+)
osgdev@TG-DevOps-0S115:~/Lab2/L2R$ git status
On branch master
nothing to commit, working directory clean
osgdev@TG-DevOps-0S115:~/Lab2/L2R$ git log
commit 5713339ed08f304b99a479140b94ce00e4b0974c
Author: avitepa <osgdev@TG-DevOps-0S115.wipro.com>
Date:   Wed Jul 11 13:51:50 2018 +0530

    Modified Code-1

commit 60a82ee4cb9495946221c825b70f17ae6283e744
Author: avitepa <osgdev@TG-DevOps-0S115.wipro.com>
Date:   Wed Jul 11 13:46:58 2018 +0530

    initial Code
osgdev@TG-DevOps-0S115:~/Lab2/L2R$ █

osgdev@TG-DevOps-0S115:~/Lab2/L2R$ git log
commit 5713339ed08f304b99a479140b94ce00e4b0974c
Author: avitepa <osgdev@TG-DevOps-0S115.wipro.com>
Date:   Wed Jul 11 13:51:50 2018 +0530

    Modified Code-1

commit 60a82ee4cb9495946221c825b70f17ae6283e744
Author: avitepa <osgdev@TG-DevOps-0S115.wipro.com>
Date:   Wed Jul 11 13:46:58 2018 +0530

    initial Code
osgdev@TG-DevOps-0S115:~/Lab2/L2R$ cat Welcome.java
class Welcome{
    public static void main(String[] args){
        System.out.println("Welcome to DevOps Certification Program");
        System.out.println("### Initial Code Modified ###");
    }
}

osgdev@TG-DevOps-0S115:~/Lab2/L2R$ git checkout 60a82e
Note: checking out '60a82e'.

You are in 'detached HEAD' state. You can look around, make experimental
changes and commit them, and you can discard any commits you make in this
state without impacting any branches by performing another checkout.

If you want to create a new branch to retain commits you create, you may
do so (now or later) by using -b with the checkout command again. Example:

    git checkout -b <new-branch-name>

HEAD is now at 60a82ee... initial Code
osgdev@TG-DevOps-0S115:~/Lab2/L2R$ cat Welcome.java
class Welcome{
    public static void main(String[] args){
        System.out.println("Welcome to DevOps Certification Program");
    }
}

```

```
osgdev@TG-DevOps-05115:~/Lab2/L2R$ git ckeckout 571333
git: 'ckeckout' is not a git command. See 'git --help'.

Did you mean this?
  checkout
osgdev@TG-DevOps-05115:~/Lab2/L2R$ git checkout 571333
Previous HEAD position was 60a82ee... initial Code
HEAD is now at 5713339... Modified Code-1
osgdev@TG-DevOps-05115:~/Lab2/L2R$ cat Welcome.java
class Welcome{
    public static void main(String[] args){
        System.out.println("Welcome to DevOps Certification Program");
        System.out.println("### Initial Code Modified ###");
    }
}

osgdev@TG-DevOps-05115:~/Lab2/L2R$
```

- **Login and Create new Project**

The screenshot displays the TopGear Training GitLab interface. The top section features the GitLab logo and a navigation bar. The main content area is divided into two columns. The left column contains the text 'TopGear Training Gitlab' and 'Open source software to collaborate on code', followed by a brief description of GitLab's capabilities. The right column contains an 'LDAP' login form with fields for 'LDAP Username' (containing 'avitepa') and 'Password' (masked with dots), a 'Remember me' checkbox, and a 'Sign in' button. Below the login form, the 'Projects' dashboard is visible, showing a list of projects under the 'Your projects' tab. The projects listed include 'AM346617 / 346617-DevOpsProfessional\_batch1\_Capstone\_FeesApplication', 'avitepa / Demo4July', 'avitepa / 3Jul1\_L2R', 'pshashid / SelTestForGOL', 'avitepa / mySonarConfig', and 'avitepa / ConfigureVDI'. Each project entry shows its name, a 'Reporter' or 'Guest' status, and the last update time. The bottom of the screenshot shows a Windows taskbar with various application icons and the system clock indicating 1:59 PM on 7/11/2018.

**New project**

A project is where you house your files (repository), plan your work (issues), and publish your documentation (wiki), among other things.

All features are enabled for blank projects, from templates, or when importing, but you can disable them afterward in the project settings.

**Open source software to collaborate on code**

Manage git repositories with fine grained access controls that keep your code secure. Perform code reviews and enhance collaboration with merge requests. Each project can also have an issue tracker and a wiki.

**Tip:** You can also create a project from the command line. [Show command](#)

**Blank project** | Create from template | Import project

**Project path**  
http://topgear-training-gitlab.wipro.com/AVITEPA/

**Project name**  
L2R

**Project description (optional)**  
Description format

**Visibility Level**

- ☒ **Private**  
Project access must be granted explicitly to each user.
- ☐ **Internal**  
The project can be accessed by any logged in user.
- ☐ **Public**  
The project can be accessed without any authentication.

**Create project** | Cancel

avitepa / L2R · GitLab

topgear-training-gitlab.wipro.com/AVITEPA/L2R

**Project 'L2R' was successfully created.**

**L2R**

Star 0 HTTP http://topgear-training-gitlab.wipro.com/AVITEPA/L2R.git Create new...

**The repository for this project is empty**

If you already have files you can push them using the [command line instructions](#) below.

*Note that the master branch is automatically protected. [Learn more about protected branches](#)*

You can automatically build and test your application if you [enable Auto DevOps \(Beta\)](#) for this project. You can automatically deploy it as well, if you [add a Kubernetes cluster](#).

**Create new repository**

```
git clone http://topgear-training-gitlab.wipro.com/AVITEPA/L2R.git
cd L2R
touch README.md
git add README.md
git commit -m "add README"
git push -u origin master
```

**Existing folder**

```
cd existing_folder
git init
git remote add origin http://topgear-training-gitlab.wipro.com/AVITEPA/L2R.git
git add .
git commit -m "Initial commit"
git push -u origin master
```

**Existing Git repository**

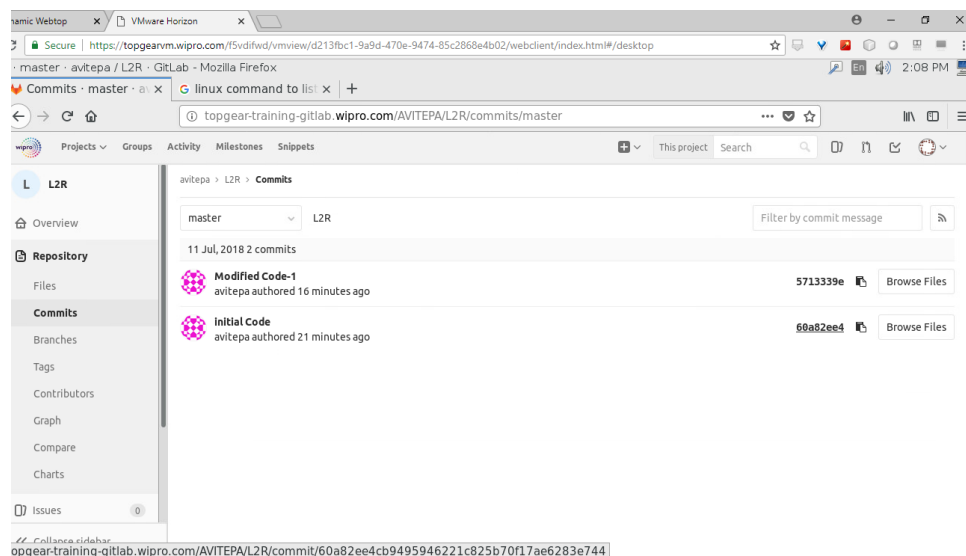
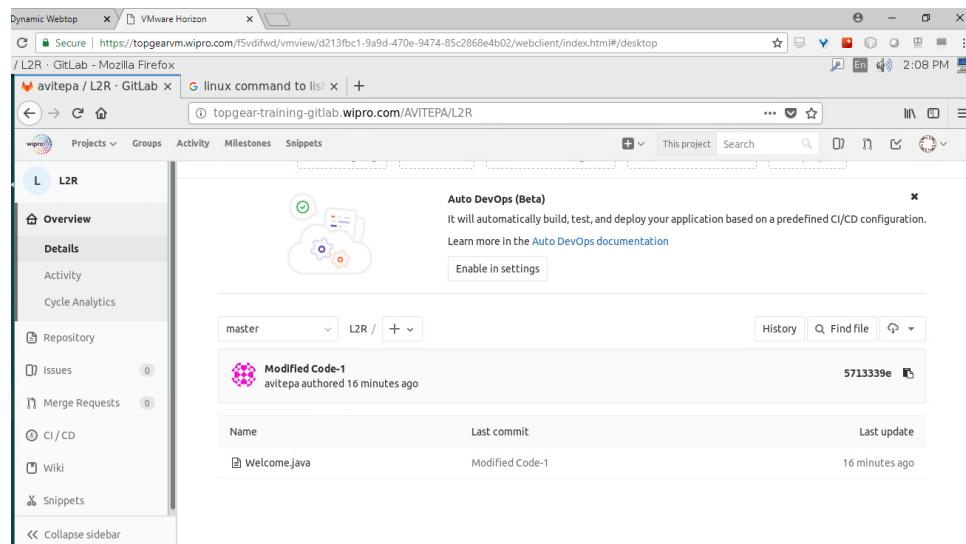
```
cd existing_repo
git remote rename origin old-origin
git remote add origin http://topgear-training-gitlab.wipro.com/AVITEPA/L2R.git
git push -u origin --all
```

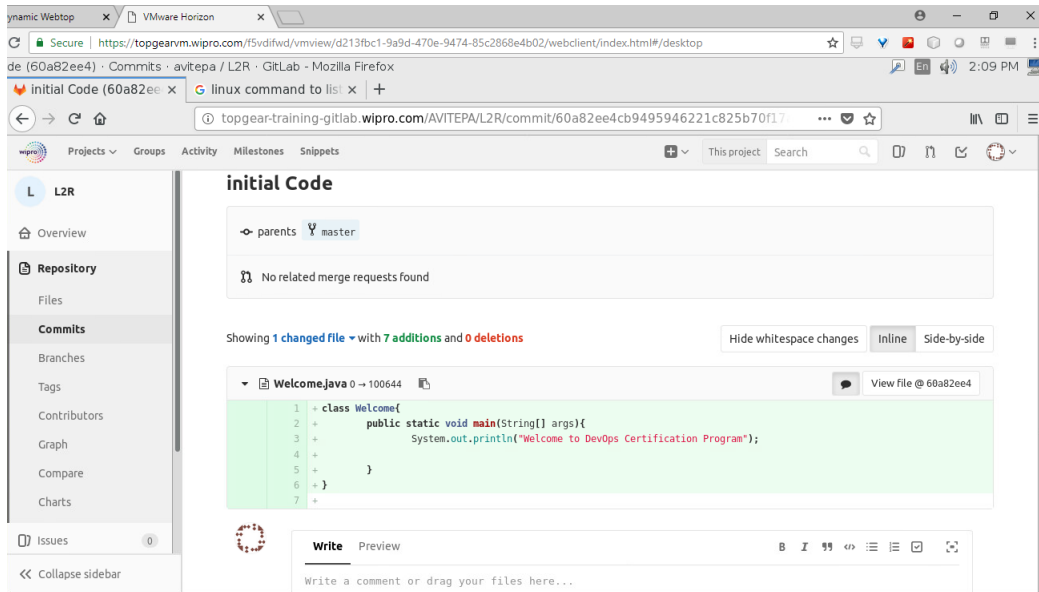
- Push local repository details to Remote/Central Repository

```

osgdev@TG-DevOps-OS115: ~/lab2/L2R
osgdev@TG-DevOps-OS115:~/Lab2/L2R$ git remote add origin http://topgear-training-gitlab.wipro.com/AVITEPA/L2R.git
osgdev@TG-DevOps-OS115:~/Lab2/L2R$ git push -u origin master
Username for 'http://topgear-training-gitlab.wipro.com': avitepa
Password for 'http://avitepa@topgear-training-gitlab.wipro.com':
Counting objects: 6, done.
Delta compression using up to 2 threads.
Compressing objects: 100% (4/4), done.
Writing objects: 100% (6/6), 616 bytes | 0 bytes/s, done.
Total 6 (delta 1), reused 0 (delta 0)
To http://topgear-training-gitlab.wipro.com/AVITEPA/L2R.git
 * [new branch]      master -> master
Branch master set up to track remote branch master from origin.
osgdev@TG-DevOps-OS115:~/Lab2/L2R$

```





dynamic Webtop x VMware Horizon x

Secure | <https://topgearvm.wipro.com/f5vdfwd/vmview/d213fbc1-9a9d-470e-9474-85c2868e4b02/webclient/index.html#/desktop>

de (60a82ee4) · Commits · avitepa / L2R · GitLab · Mozilla Firefox

Initial Code (60a82ee4) x linux command to list x +

topgear-training-gitlab.wipro.com/AVITEPA/L2R/commit/60a82ee4cb9495946221c825b70f17

Projects Groups Activity Milestones Snippets

This project Search

L2R

Overview

Repository

Files

Commits

Branches

Tags

Contributors

Graph

Compare

Charts

Issues 0

Collapse sidebar

### initial Code

parents master

No related merge requests found

Showing 1 changed file with 7 additions and 0 deletions

Hide whitespace changes Inline Side-by-side

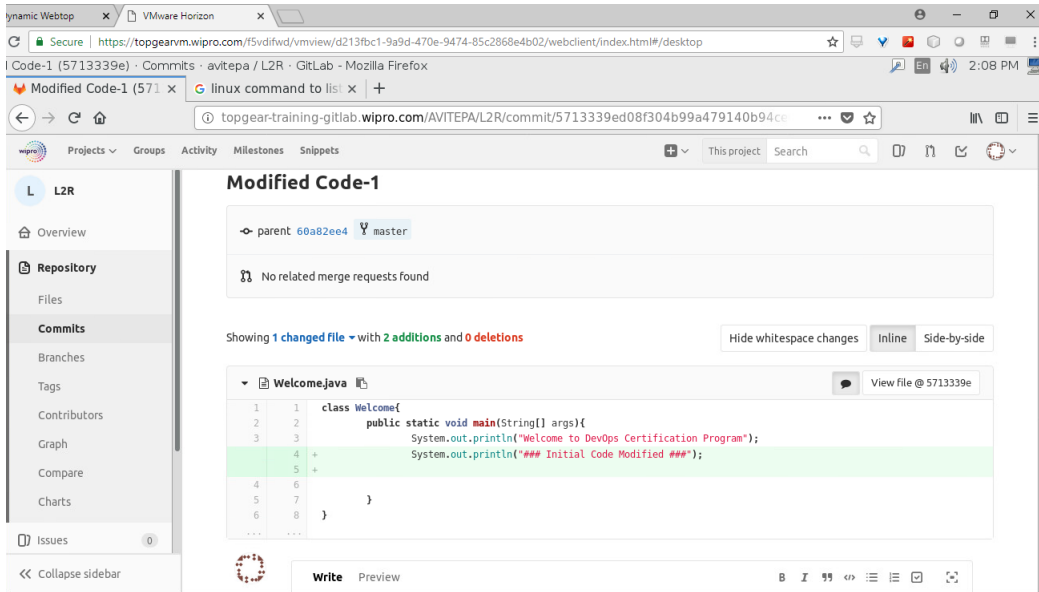
Welcome.java 0 → 100644

View file @ 60a82ee4

```
1 + class Welcome{
2 +     public static void main(String[] args){
3 +         System.out.println("Welcome to DevOps Certification Program");
4 +     }
5 + }
6 +
7 +
```

Write Preview

Write a comment or drag your files here...



dynamic Webtop x VMware Horizon x

Secure | <https://topgearvm.wipro.com/f5vdfwd/vmview/d213fbc1-9a9d-470e-9474-85c2868e4b02/webclient/index.html#/desktop>

Code-1 (5713339e) · Commits · avitepa / L2R · GitLab · Mozilla Firefox

Modified Code-1 (5713339e) x linux command to list x +

topgear-training-gitlab.wipro.com/AVITEPA/L2R/commit/5713339ed08f304b99a479140b94ce

Projects Groups Activity Milestones Snippets

This project Search

L2R

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Contributors

Graph

Compare

Charts

Issues 0

Collapse sidebar

### Modified Code-1

parent 60a82ee4 master

No related merge requests found

Showing 1 changed file with 2 additions and 0 deletions

Hide whitespace changes Inline Side-by-side

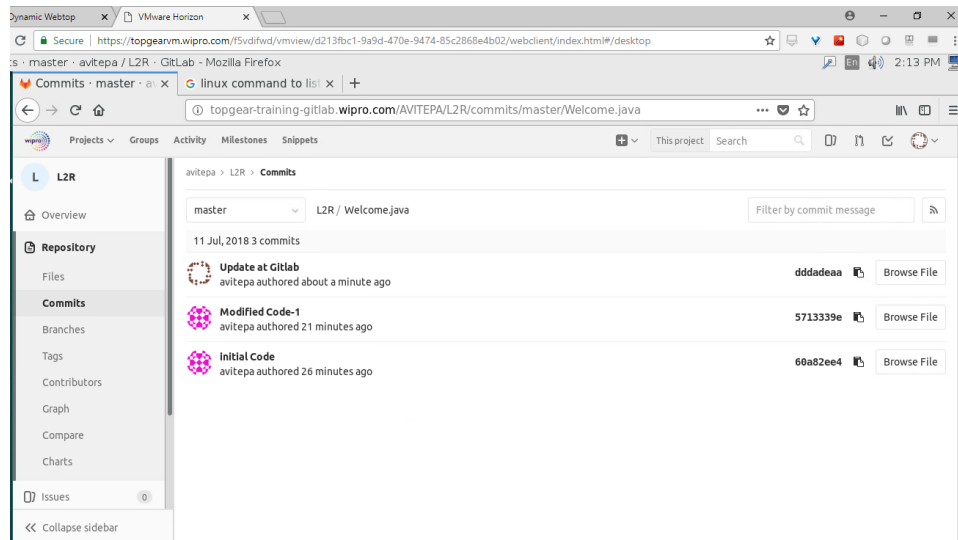
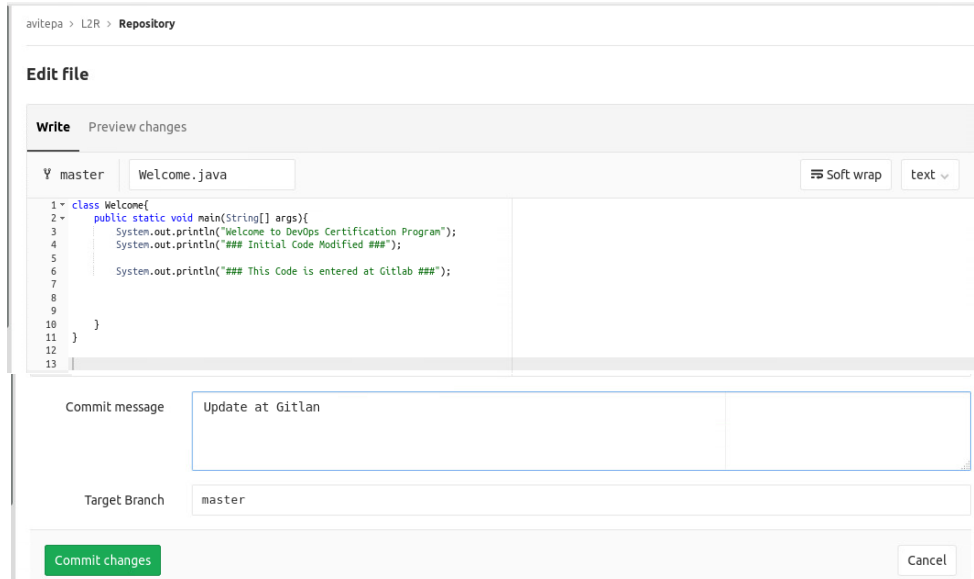
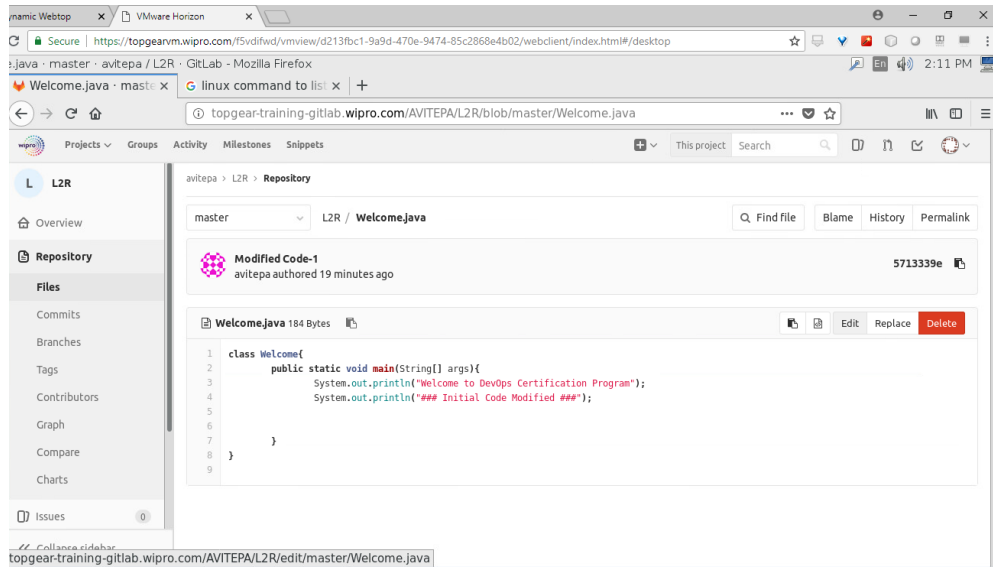
Welcome.java

View file @ 5713339e

```
1 1 class Welcome{
2 2     public static void main(String[] args){
3 3         System.out.println("Welcome to DevOps Certification Program");
4 4         System.out.println("### Initial Code Modified ###");
5 5     }
6 6 }
7 7
8 8
```

Write Preview

Write a comment or drag your files here...





- Remote To Local

```
osgdev@TG-DevOps-OS115:~/lab2/L2R$ cd
osgdev@TG-DevOps-OS115:~$ mkdir R2L
osgdev@TG-DevOps-OS115:~$ cd R2L/
osgdev@TG-DevOps-OS115:~/R2L$ git clone http://topgear-training-gitlab.wipro.com/AVITEPA/L2R
Cloning into 'L2R'...
Username for 'http://topgear-training-gitlab.wipro.com': avitepa
Password for 'http://avitepa@topgear-training-gitlab.wipro.com':
remote: Counting objects: 9, done.
remote: Compressing objects: 100% (6/6), done.
remote: Total 9 (delta 2), reused 0 (delta 0)
Unpacking objects: 100% (9/9), done.
Checking connectivity... done.
osgdev@TG-DevOps-OS115:~/R2L$ git log
fatal: Not a git repository (or any of the parent directories): .git
osgdev@TG-DevOps-OS115:~/R2L$ cd L2R/
osgdev@TG-DevOps-OS115:~/R2L/L2R$ git log
commit dddadeaad896bfa3e6bdaa177bf013ad492cc0c2
Author: avitepa <avinash.patel@wipro.com>
Date: Wed Jul 11 14:12:26 2018 +0530
```

Update at Gitlab

```
commit 5713339ed08f304b99a479140b94ce00e4b0974c
Author: avitepa <osgdev@TG-DevOps-OS115.wipro.com>
Date: Wed Jul 11 13:51:50 2018 +0530
```

Modified Code-1

```
commit 60a82ee4cb9495946221c825b70f17ae6283e744
Author: avitepa <osgdev@TG-DevOps-OS115.wipro.com>
Date: Wed Jul 11 13:46:58 2018 +0530
```

initial Code

```
osgdev@TG-DevOps-OS115:~/R2L/L2R$ █
osgdev@TG-DevOps-OS115:~/R2L/L2R$ gedit Welcome.java
osgdev@TG-DevOps-OS115:~/R2L/L2R$ cat Welcome.java
class Welcome{
    public static void main(String[] args){
        System.out.println("Welcome to DevOps Certification Program");
        System.out.println("### Initial Code Modified ###");

        System.out.println("### This Code is entered at Gitlab ###");
        System.out.println("### This Code is entered after clone and pushed bak to
Gitlabs ###");

    }
}
```

```
osgdev@TG-DevOps-OS115: ~/R2L/L2R
osgdev@TG-DevOps-OS115:~/R2L/L2R$ git push origin master
Username for 'http://topgear-training-gitlab.wipro.com': avitepa
Password for 'http://avitepa@topgear-training-gitlab.wipro.com':
Everything up-to-date
osgdev@TG-DevOps-OS115:~/R2L/L2R$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   Welcome.java

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

```

osgdev@TG-DevOps-0S115:~/R2L/L2R$ git commit -a -m "Modified & Pushed"
[master f923626] Modified & Pushed
Committer: avitepa <osgdev@TG-DevOps-0S115.wipro.com>
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(+)
osgdev@TG-DevOps-0S115:~/R2L/L2R$ git push origin master
Username for 'http://topgear-training-gitlab.wipro.com': avitepa
Password for 'http://avitepa@topgear-training-gitlab.wipro.com':
Counting objects: 3, done.
Delta compression using up to 2 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 350 bytes | 0 bytes/s, done.
Total 3 (delta 1), reused 0 (delta 0)
To http://topgear-training-gitlab.wipro.com/AVITEPA/L2R
   dddadea..f923626  master -> master
osgdev@TG-DevOps-0S115:~/R2L/L2R$

```

