

ELEC5616 PROJECT

CONFIGURING PHABRICATOR

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Introduction

In this project, we will be using professional code management tools to work with our project.

The two tools we will use in particular are:

Git:

Git is source code version control software that is very widely used in the IT industry.

If you are not already familiar with this, you will need to familiarise yourself.

- [Simple Git Guide](#)
- [GitHub's interactive introduction](#)
- [Git Book - Basics](#)

Phabricator:

Developed internally at Facebook, Phabricator is a useful tool for managing tasks, bugs, code revisions, etc.

You should be able to pick this one up as you go.

- [User Docs - Introduction](#)
- [Phabricator User Guide](#)

CREATE USER ACCOUNT

Create User Account

You should have received a “Welcome to Phabricator” email with your pre-configured user account.

- If you have, please follow the URL in that email to create an account, then set your password.
- If you have not received an e-mail, please head to <https://answer.elec5616.com/auth/register/> and register.
 - If you wish to remain anonymous, choose a non-identifying username and do not provide your “Real Name” .
 - Enter your student number in the “Student ID” field
 - Your e-mail address must be a valid university address
 - Newly created accounts must be approved by an administrator before they can be used

Set your VCS password

The password you will use to log into the website must be different from the password you use with git.

As such, you must also set your “VCS password”

1. Visit:
<https://answer.elec5616.com/settings/panel/vcspassword/>
2. Enter a new “VCS Password”
3. When you “push” or “pull” with git, you will use this VCS password.

JOIN A GROUP



Join a Group

Once your other group members have created an account, you need to ask for your group to be created by the tutor.

To request a group:

1. Select “Maniphest” on the left
2. Select “Create Task” in the top right
3. Create a task with the following details:
 - Title:** “Make a new group”
 - Subscribers:** Enter the usernames of your group members
 - Other:** Don’t touch any other fields, they should already be configured for you.
4. Wait until the tutor has created your group for you.

When your group is created, it will be a “project” called something like “Group4”, which will have a series of sub-projects called “G4-Part1” etc.

SET-UP YOUR REPOSITORY

Create repository in phabricator

Once your group is established, your group needs to create a repository, where you will submit code.

To create a repository:

1. Select “Diffusion” on the left
2. Select “New Repository” on the top right
3. Select “Create a New Hosted Repository” → “Continue”
4. Type is “git” → “Continue”
5. Name the repository (e.g. “GroupFour - Project Part One”) → “Continue”
6. Change The Policies to group project access only (where # is your group number):
 - Visible G#-Project-Part1
 - Editable G#-Project-Part1
 - Can Push G#-Project-Part1
7. Select “Create Repository Now” → “Continue”

Setup initial repository

First, you want to take the original code provided to you, then commit it to your new repository. Below is an easy way to do this:

1. Clone the empty repository
 - 1.1 Select "Diffusion"
 - 1.2 Select your repository
 - 1.3 Run the command under "Clone (HTTP)" on your PC:
(This will probably be an empty repository, that's okay)
2. Unzip the provided original project files (e.g. `skynet_part1.zip`) into the empty repository, and change directories into that repository
3. Use the "`git add *`" command to stage all the original files
(run "`git status`" to see that they've been added)
4. Commit the work using the command:

```
git commit -m "First Commit - original code"
```
5. Push the code back to phabricator:

```
git push origin master
```

Work on and push your changes

Now that you have cloned the git repository from phabricator, you're ready to start working.

When you are working on the project files, you should regularly commit any changes that you have made using the `git commit` command.

Every now and then, you should also push those changes using the command: `git push origin master`. This will allow your group members to “pull” your code using the command `git pull origin master`.

Your work will then be properly backed up on the server and will be ready for submission.

SUBMIT YOUR FINAL
DIFFERENTIAL

Final differential

When you have made all of your changes to the code and you are ready to submit, you need to create a “Differential” .

This differential will be reviewed by your markers and will be used to provide feedback and marks on your code.

You only need to do this once, when you finish the project.

However, if you realise you have made a mistake after creating a differential, you can update that existing differential. You should always append to the existing diff, do not create a new one.

To create a differential:

1. Select “Differential” on the left
2. Select “Create Diff” on the top right
3. Get the full “diff” from git, using the command:

```
git diff `git rev-list HEAD | tail -n 1` > final.diff
```
4. Upload the `final.diff` file generated from the previous command
5. Select your repository
6. Make it “Visible To” your group: “G#-Project-Part1”
7. Select “Continue”
8. Leave “Attach To” as “Create a new revision...” and select “Continue”
9. Give it a title: “Group # Project Part 1”
10. Add “luke” under “Reviewers”
11. Add your group’s project under “Projects”
(e.g. G#-Project-Part1)
12. Set “Visible To” as your group again
13. Set “Editable By” as “Administrators”
14. Select “Save”

To update an existing differential:

1. Follow steps 1 to 7 of creating a differential
2. Change “Attach To” to “Update Existing Revision”, and select your previous revision.
→ “Continue”
3. Enter some “Comments” to explain what this update has changed and why
4. Select “Save”

GETTING HELP

If you're struggling to get git and/or phabricator working properly, try these things:

- **Google it** - these are both popular tools and have lots of documentation online
- **Ask your classmates** - other people have probably already struggled with this, ask them.
- **Email Luke** - A last resort, this should only be for things that you could not have found out online.

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