

Using Git and Bitbucket for Assignment Submission

by Massimo Di Pierro

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In this class you will use GIT to version control your work and BitBucket for assignment submission.

Why?

- First of all because you need to learn this, it is the method professionals use to collaborate online.
- It allows me to check not just the final product of your work, but how much time you spend on the project, the errors you made, and perhaps understand your thought process.
- We use BitBucket specifically because it allows private repositories.

FAQ:

Q: Can I use GitHub?

A: Yes, but you will have to pay for a private repository. In Bitbucket it is free.

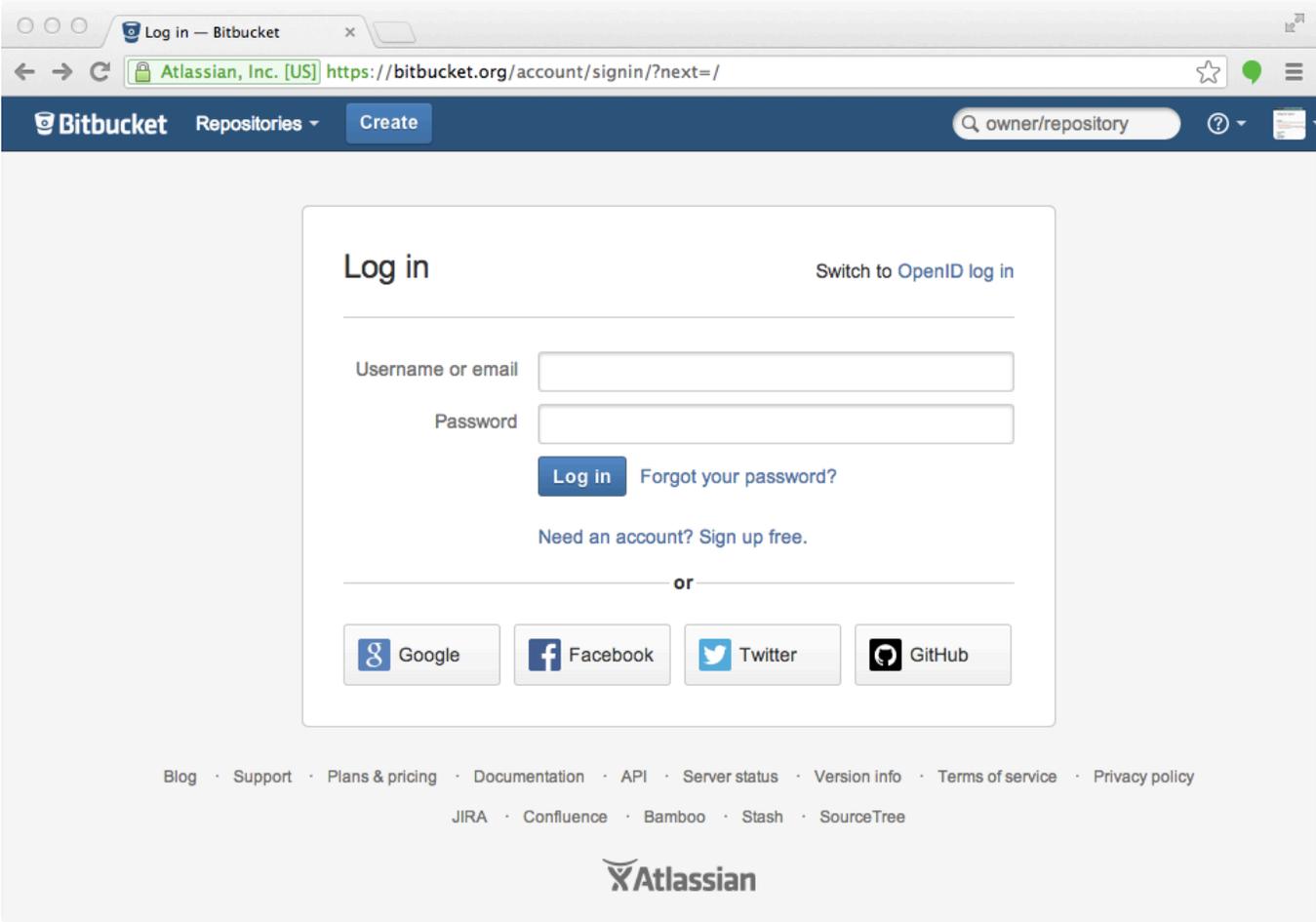
Q: Can I use Mercurial?

A: No. Mercurial is great and comparable to Git but my automated process is based on Git.

Before you start, if you do not have one, you need a BitBucket account, to create a private repository where to upload your projects/assignments, and give me access to it, so that I can read it, grade it, and make corrections. You will use one and the same repository for each assignment.

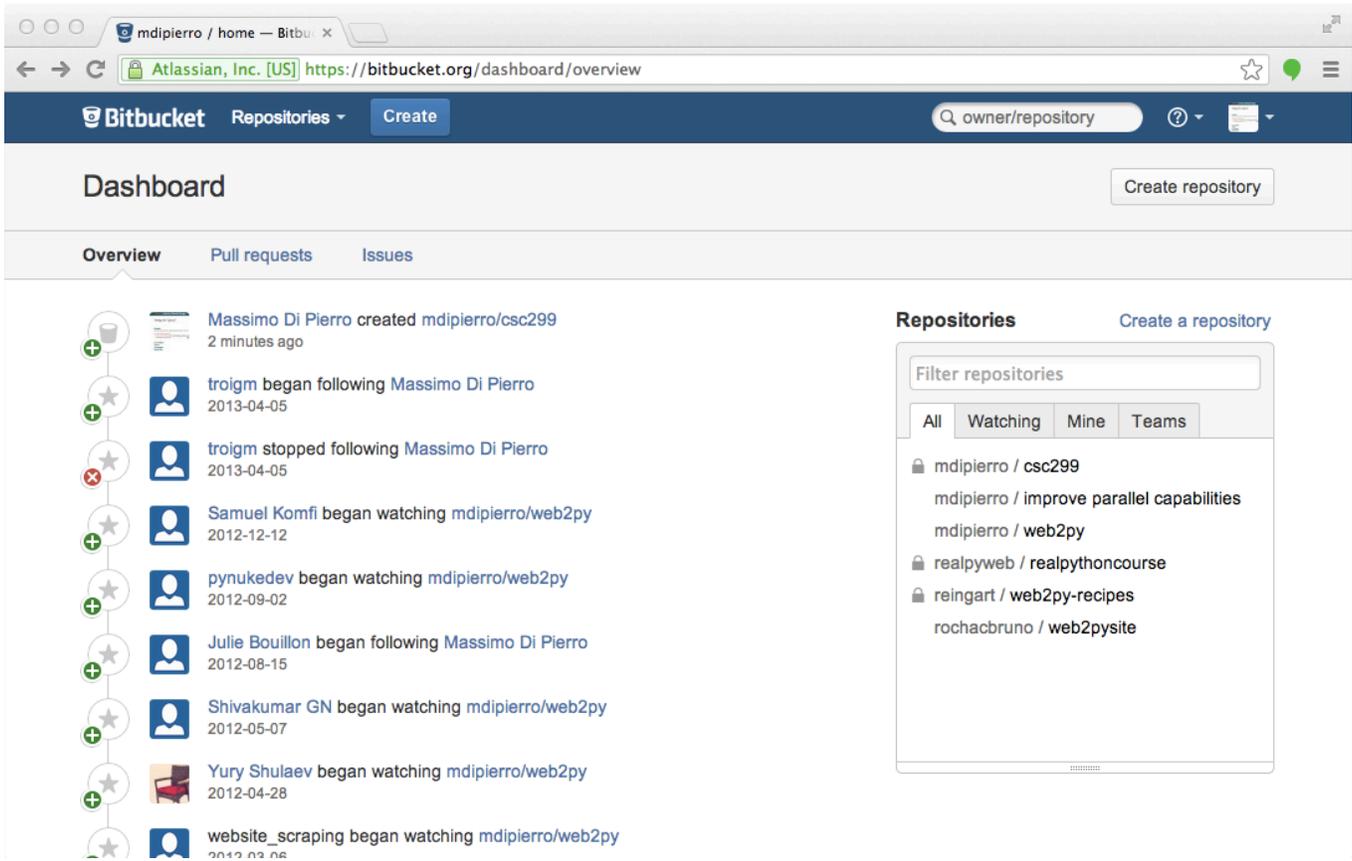
Step 1

Visit <http://bitbucket.com> and register/login.



Step 2

You will be redirected to a Dashboard. It shows all your projects. Press [Create Repository]



The screenshot shows the Bitbucket Dashboard interface. The browser address bar displays the URL `https://bitbucket.org/dashboard/overview`. The page header includes the Bitbucket logo, a "Repositories" dropdown menu, and a "Create" button. A search bar contains the text "owner/repository". The main heading is "Dashboard", with a "Create repository" button to its right. Below the heading are tabs for "Overview", "Pull requests", and "Issues".

The "Overview" tab is active, displaying a vertical list of recent activities. Each activity includes a user profile icon, a description of the action, and a timestamp. The activities listed are:

- Massimo Di Piero created `mdipierro/csc299` 2 minutes ago
- troigm began following Massimo Di Piero 2013-04-05
- troigm stopped following Massimo Di Piero 2013-04-05
- Samuel Komfi began watching `mdipierro/web2py` 2012-12-12
- pynukedev began watching `mdipierro/web2py` 2012-09-02
- Julie Bouillon began following Massimo Di Piero 2012-08-15
- Shivakumar GN began watching `mdipierro/web2py` 2012-05-07
- Yury Shulaev began watching `mdipierro/web2py` 2012-04-28
- website_scraping began watching `mdipierro/web2py` 2012-03-06

On the right side of the dashboard, there is a "Repositories" section with a "Create a repository" link. It features a "Filter repositories" input field and a set of tabs: "All", "Watching", "Mine", and "Teams". The "All" tab is selected, showing a list of repositories:

- `mdipierro / csc299`
- `mdipierro / improve parallel capabilities`
- `mdipierro / web2py`
- `realpyweb / realpythoncourse`
- `reingart / web2py-recipes`
- `rochacbruno / web2pysite`

Step 3

Create a new repository. Call it “csc299”, make it private, do not allow forking, use Git (not Mercurial) and enable Issue tracking and Wiki for your project. If you want to declare a language choose Python (optional). The press [Create repository]

Create a new repository You can also [import a repository](#)

Name*

Description

Access level This is a private repository
 Don't allow public forks

Repository type Git
 Mercurial

Project management Issue tracking
 Wiki

Language

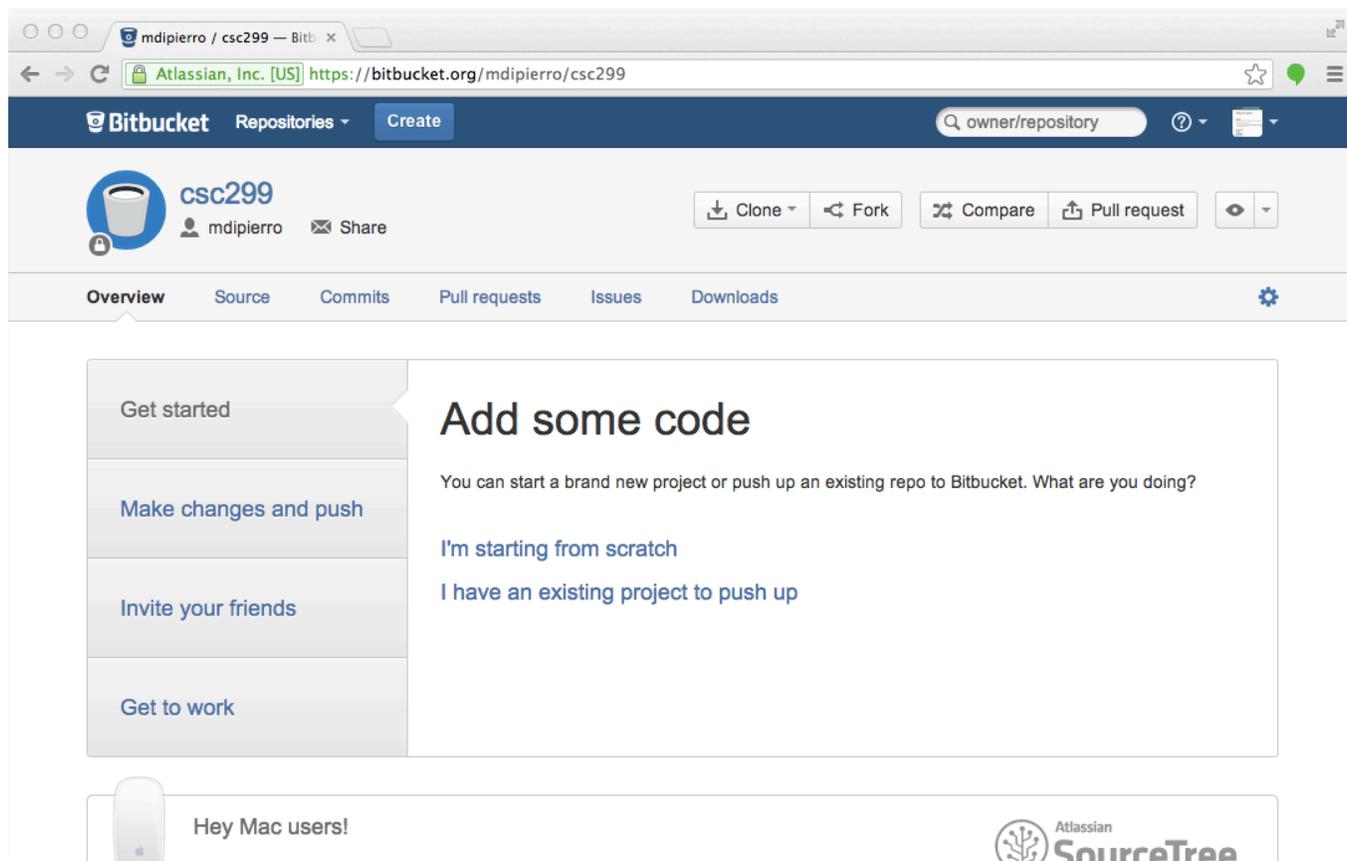
New to Bitbucket?
Learn the basics of using Git and Mercurial by exploring the Bitbucket 101.

Working in a team?
Create a team account to consolidate your repos and organize your team's work

[Blog](#) · [Support](#) · [Plans & pricing](#) · [Documentation](#) · [API](#) · [Server status](#) · [Version info](#) · [Terms of service](#) · [Privacy policy](#)

Step 4

You now need instructions to that code that resides on your machine can be pushed (aka uploaded) to Bitbucket. Choose the option “I’m starting from scratch”.



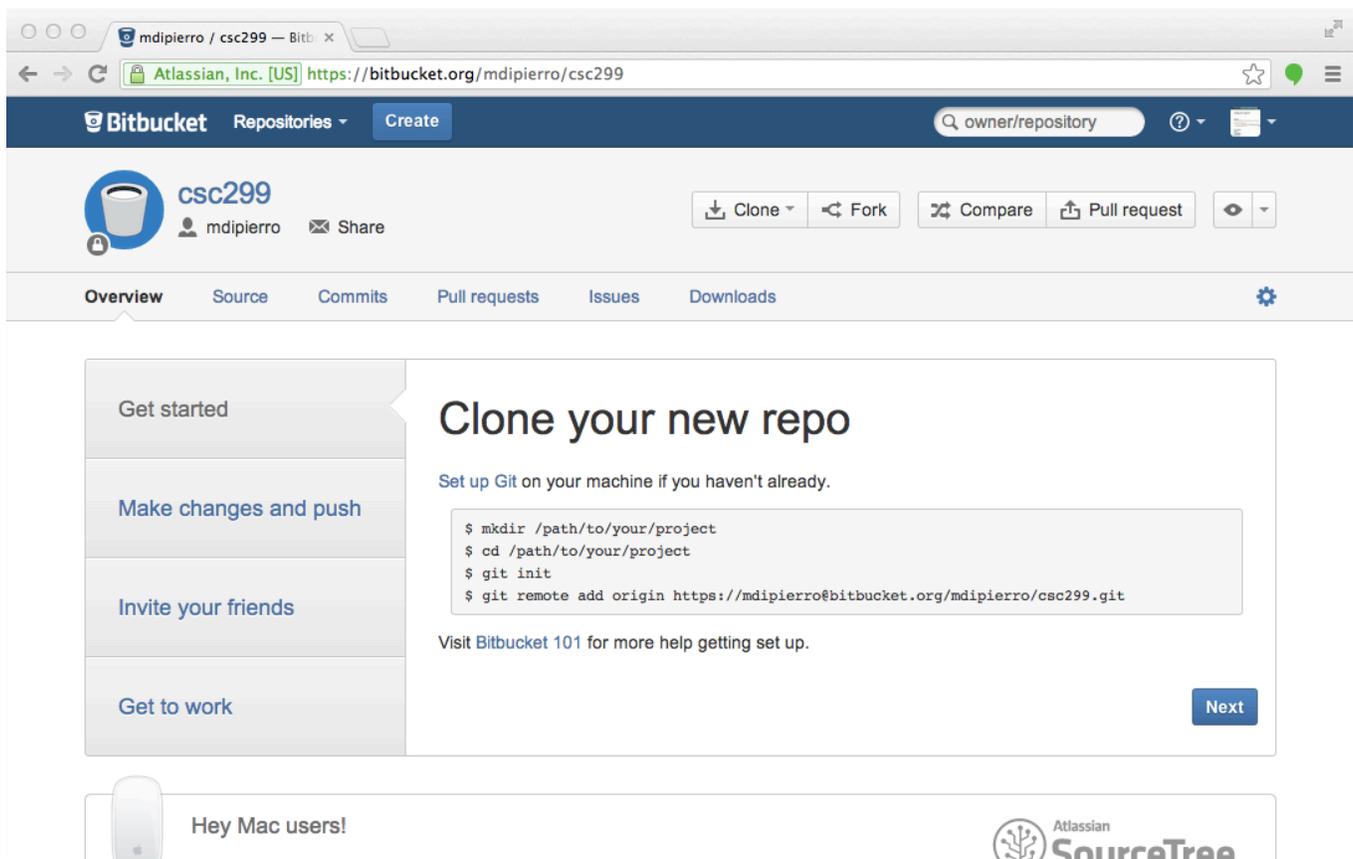
The screenshot shows the Bitbucket web interface for a repository named 'csc299' owned by 'mdipierro'. The browser address bar shows 'https://bitbucket.org/mdipierro/csc299'. The repository page has a navigation bar with 'Overview', 'Source', 'Commits', 'Pull requests', 'Issues', and 'Downloads'. Below the navigation bar, there is a sidebar with four items: 'Get started', 'Make changes and push', 'Invite your friends', and 'Get to work'. The main content area is titled 'Add some code' and contains the text: 'You can start a brand new project or push up an existing repo to Bitbucket. What are you doing?'. Below this text are two links: 'I'm starting from scratch' and 'I have an existing project to push up'. At the bottom of the page, there is a banner for 'Hey Mac users!' and the Atlassian SourceTree logo.

Step 5

At this point Bitbucket will give instructions that you need to run on your local machine to create a repo and upload the data. These instructions are:

- make a folder for a project (if you do not have one)
- cd into that folder
- type “git init” to create a new repository in that project
- type “git add .” to add all files from that folder to the repository
- type “git remote origin https://....git” to push (aka upload) your repository to Bitbucket.

Press [Next]



The screenshot shows the Bitbucket web interface for a new repository named 'csc299' owned by 'mdipierro'. The page is titled 'Clone your new repo' and provides instructions for setting up Git on a local machine. The instructions are as follows:

```
$ mkdir /path/to/your/project
$ cd /path/to/your/project
$ git init
$ git remote add origin https://mdipierro@bitbucket.org/mdipierro/csc299.git
```

Below the instructions, there is a link to 'Visit Bitbucket 101 for more help getting set up.' and a 'Next' button. The page also features a sidebar with navigation options: 'Get started', 'Make changes and push', 'Invite your friends', and 'Get to work'. At the bottom, there is a 'Hey Mac users!' message and the Atlassian SourceTree logo.

Step 6

After you do this, every time you work on your project you will do:

“git add .” to add new files you created to the repository

“git commit -a -m ‘some comment’” to mark an important point in your development process

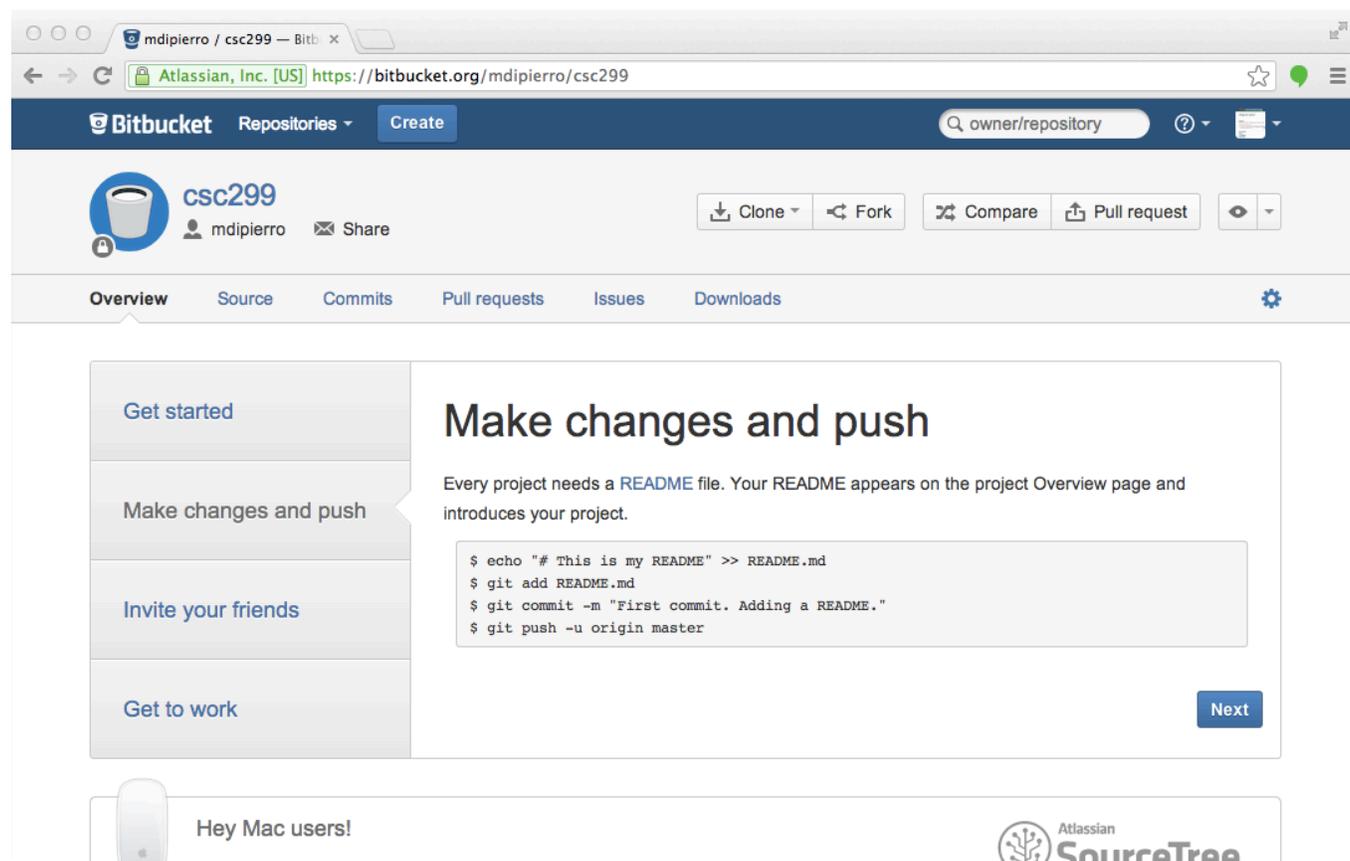
“git push” to upload the changes to the Bitbucket server.

You should have a file called README.md in which you explain what your project is about.

Also include a file called student.yaml which contains:

name: <your name>

student-id: <your student id>



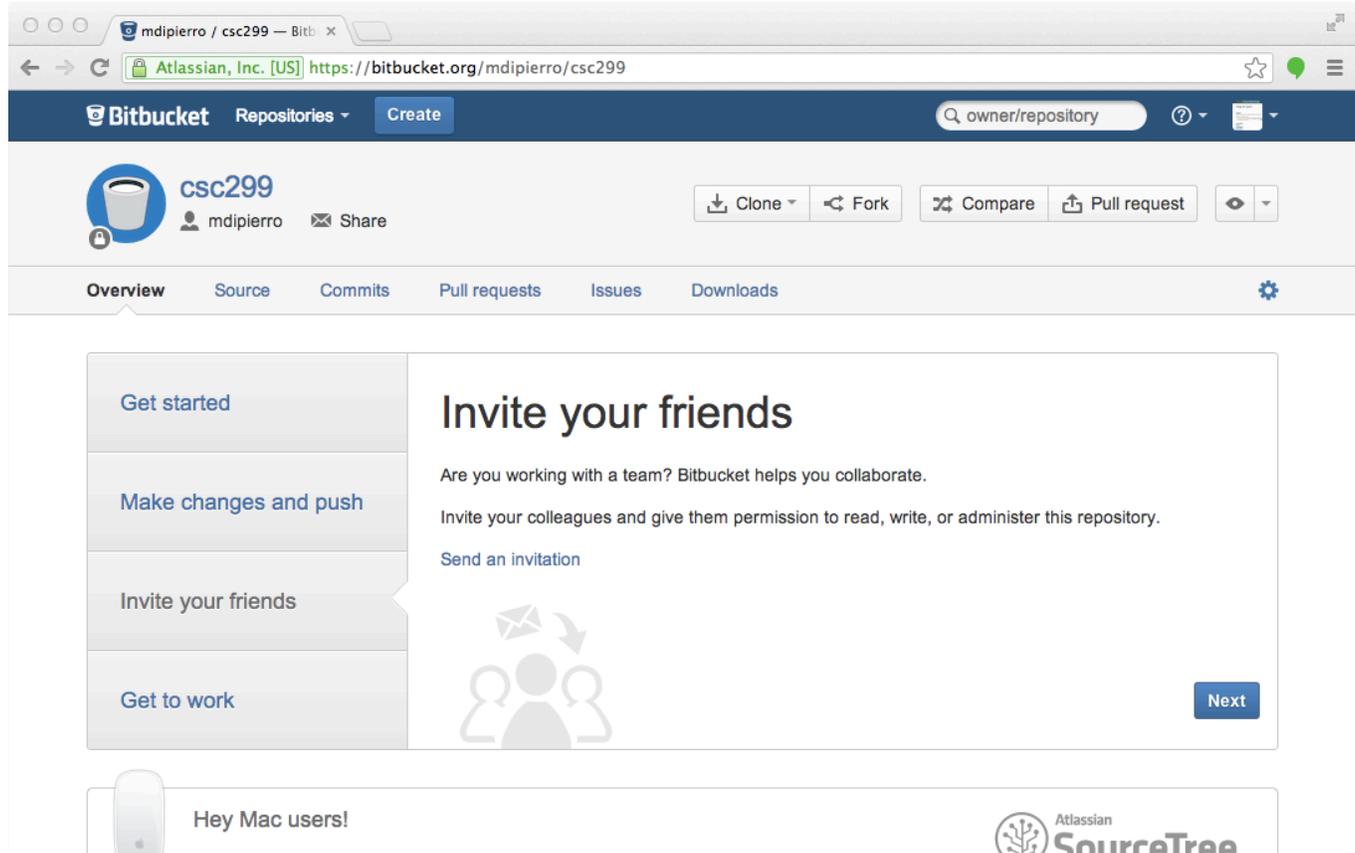
The screenshot shows the Bitbucket web interface for a repository named 'csc299' owned by 'mdipierro'. The browser address bar shows 'https://bitbucket.org/mdipierro/csc299'. The repository page has a navigation bar with 'Overview', 'Source', 'Commits', 'Pull requests', 'Issues', and 'Downloads'. The main content area features a 'Get started' sidebar and a central section titled 'Make changes and push'. This section includes a text box with the following terminal commands:

```
$ echo "# This is my README" >> README.md
$ git add README.md
$ git commit -m "First commit. Adding a README."
$ git push -u origin master
```

A 'Next' button is located at the bottom right of the 'Make changes and push' section. At the bottom of the page, there is a 'Hey Mac users!' banner and the Atlassian SourceTree logo.

Step 7

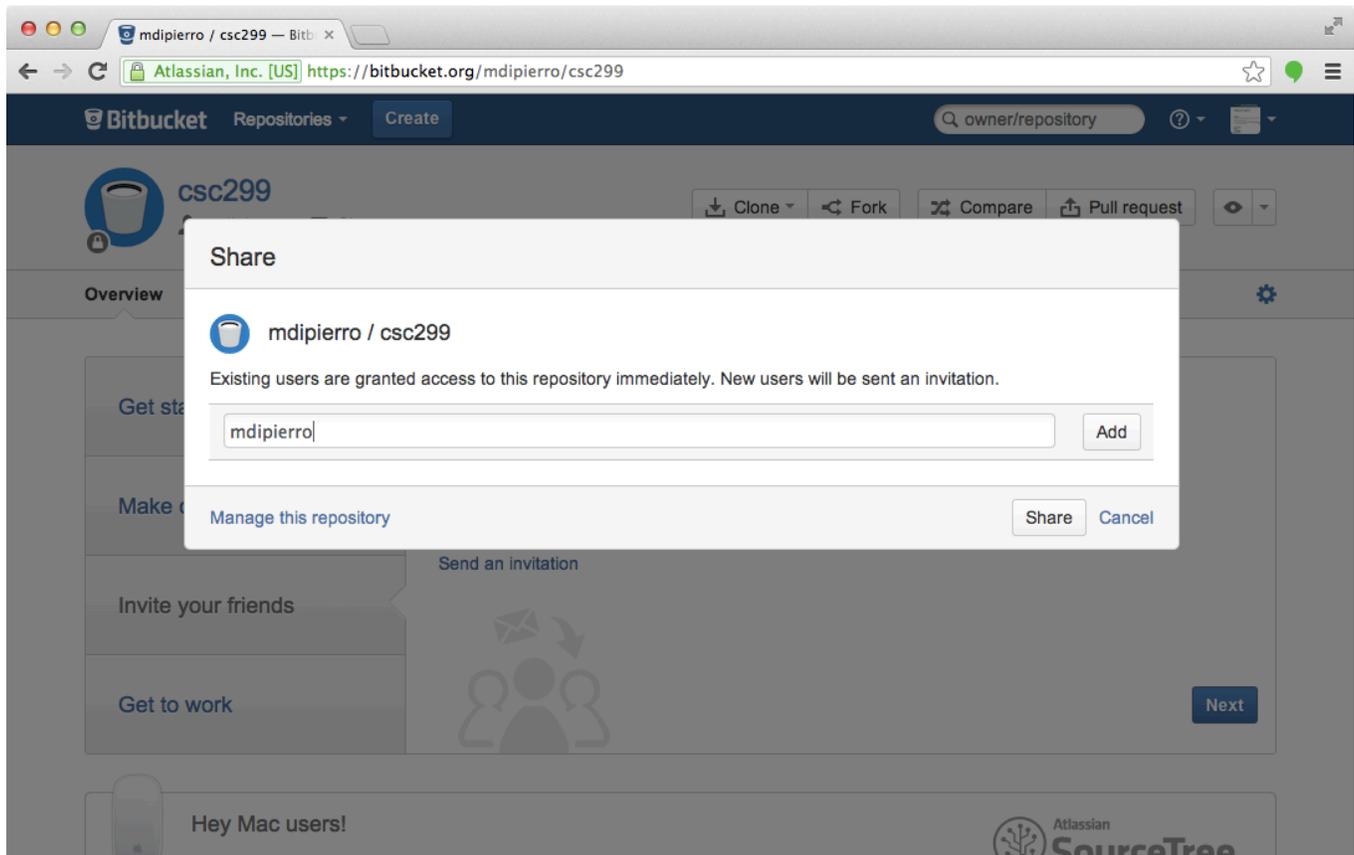
You can add friends to share your code. Unless this is a collaborative project you should not add friends because you want to keep it private (I remind you I will check for similarities and plagiarism will be detected and reported).



The screenshot shows a web browser window displaying the Bitbucket repository page for 'csc299' by user 'mdipierro'. The browser address bar shows 'https://bitbucket.org/mdipierro/csc299'. The page header includes the Bitbucket logo, 'Repositories', and a 'Create' button. Below the header, the repository name 'csc299' and owner 'mdipierro' are shown, along with a 'Share' button. Action buttons for 'Clone', 'Fork', 'Compare', and 'Pull request' are visible. A navigation bar contains 'Overview', 'Source', 'Commits', 'Pull requests', 'Issues', and 'Downloads'. The main content area features a sidebar with 'Get started', 'Make changes and push', 'Invite your friends', and 'Get to work'. The 'Invite your friends' section is active, displaying the heading 'Invite your friends', the text 'Are you working with a team? Bitbucket helps you collaborate. Invite your colleagues and give them permission to read, write, or administer this repository.', and a 'Send an invitation' link. An illustration of three people with an envelope icon is shown below. A 'Next' button is located at the bottom right of this section. At the bottom of the page, there is a 'Hey Mac users!' banner and the Atlassian SourceTree logo.

Step 8

You should add me (mdipierro) so that I can monitor your progress.



Done!