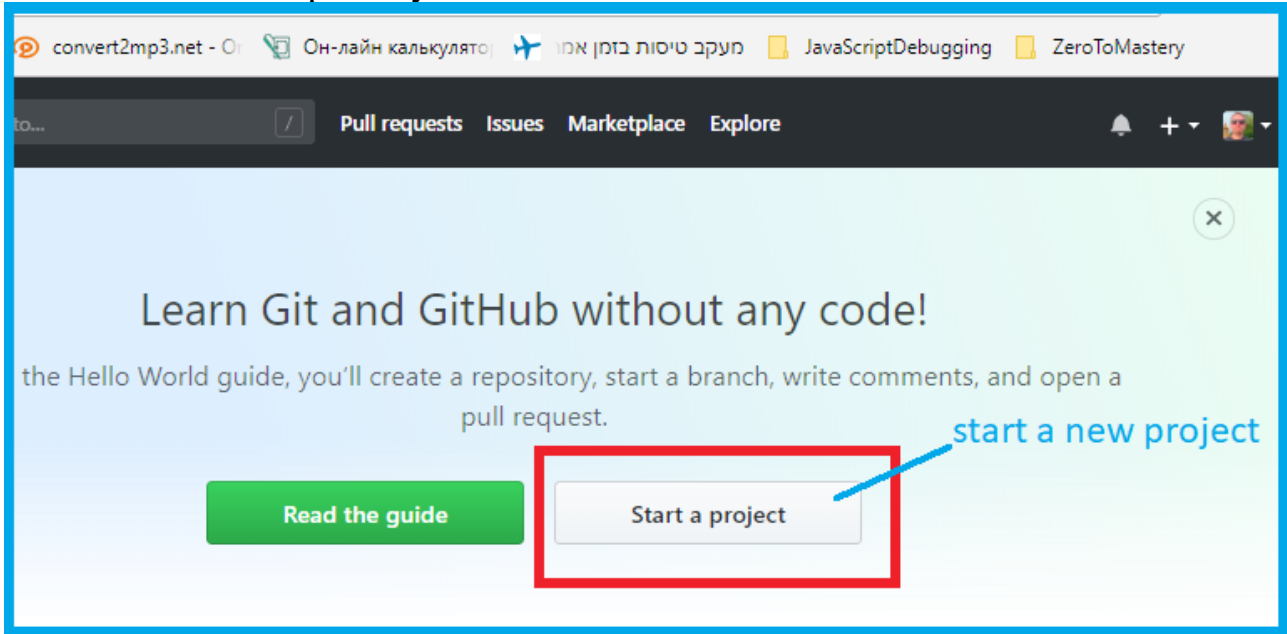


Git and GitHub (Source Control)

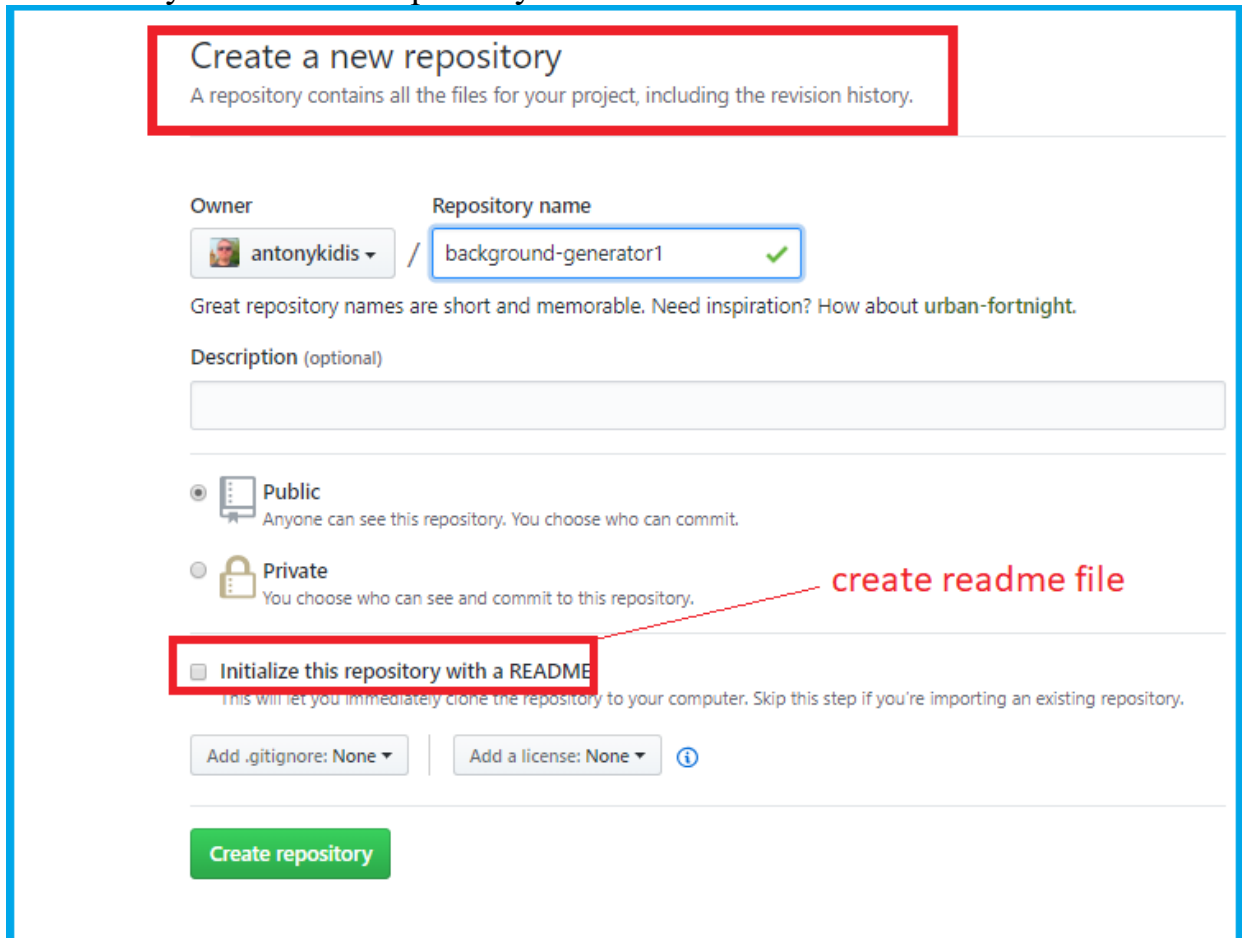
Step 1

- |Navigate to <https://github.com/>
- Create new repository

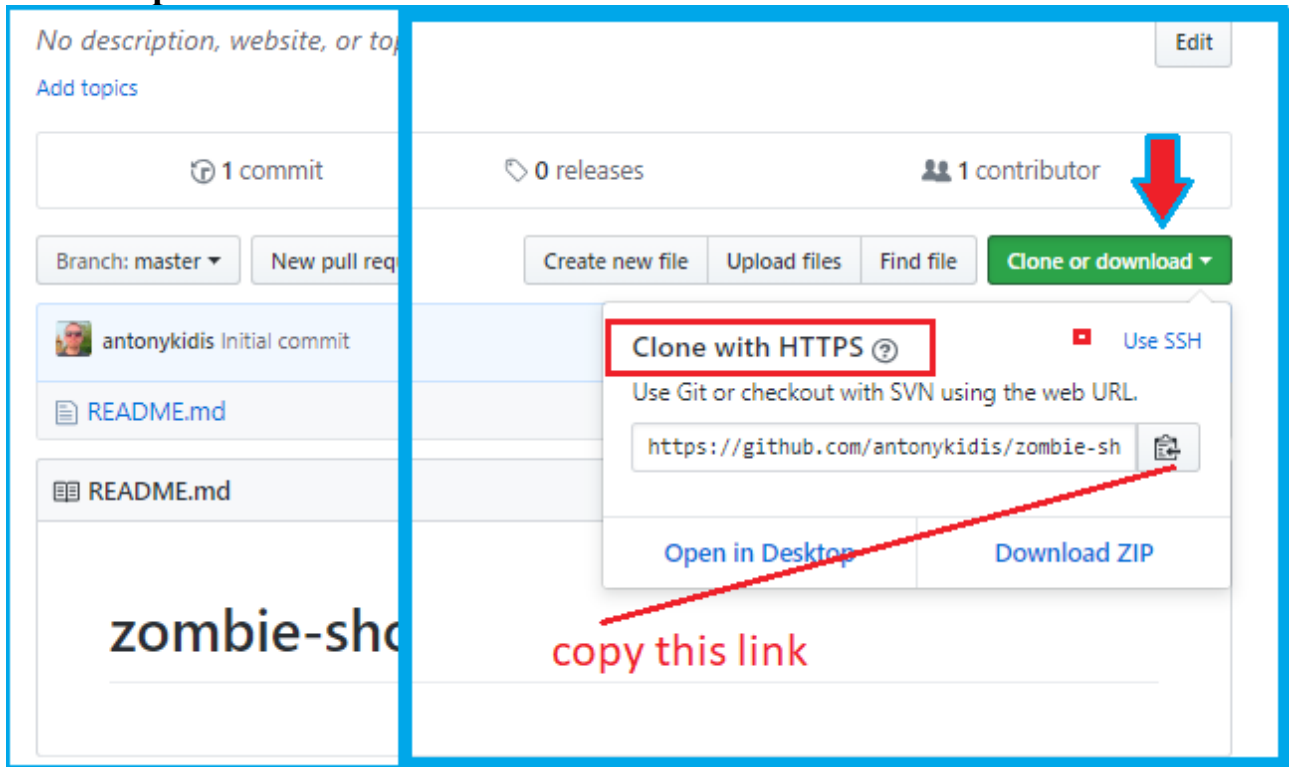


Step 2

- Name your project.
- check to create a readme file.
- Finally click Create repository.



• Step 3



- select **use HTTPS**, then copy the **URL** to a clip board

Step 4

- Open terminal(bash.exe/powershell) or other shell installed on your PC and navigate(cd...) to your working folder - the place where you build your project locally (on your computer)
- **cd to your folder**
- Example:
- `Dima Mir@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/BackgroundGenerator`

Step 5

- Once you inside the project folder, open terminal window
- and enter the following command.
- **git clone** <https://github.com/antonykidis/background-generator.git>
- The above command will **COPY** GitHub's project to your **LOCAL** project's
- The background-generator cloned now to a local computer

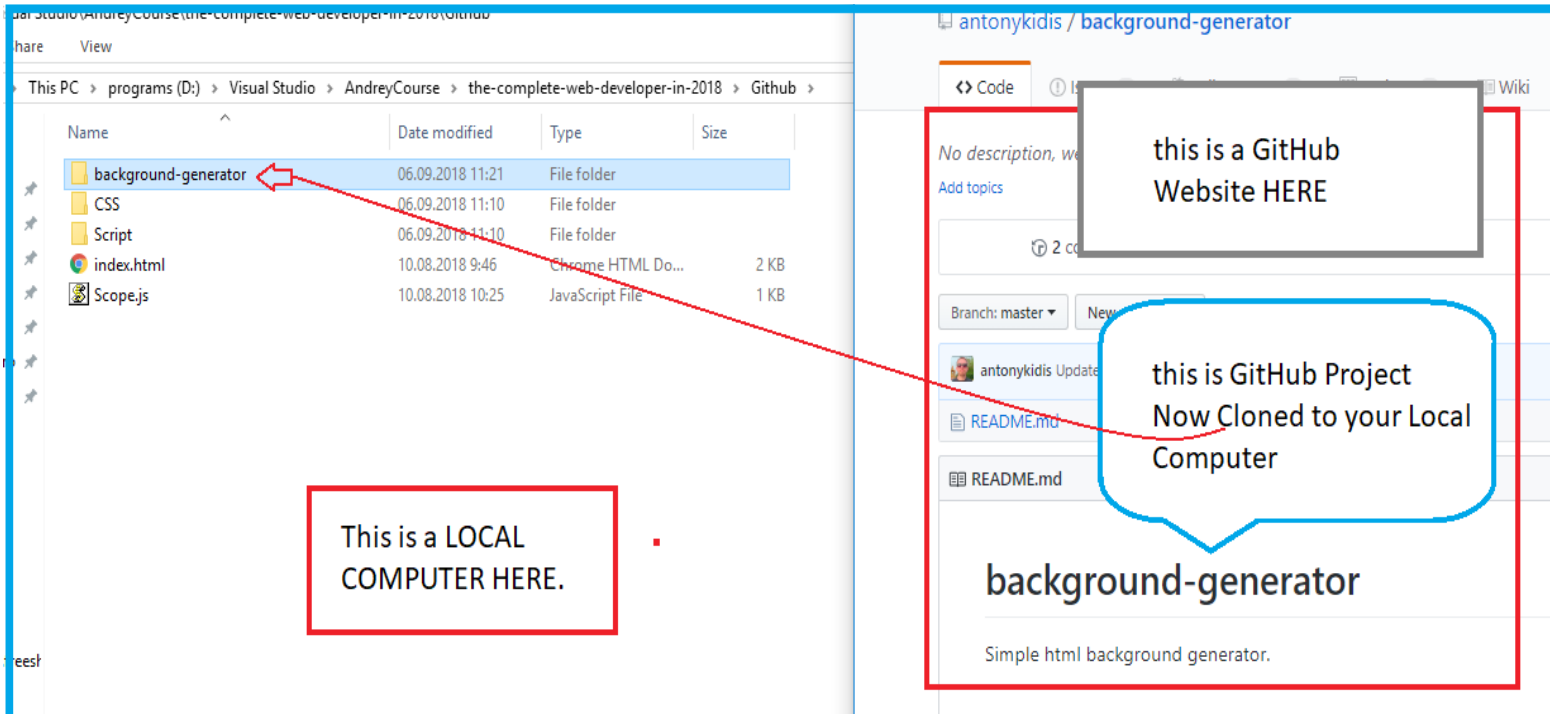
```
MINGW64:/d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018
Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018
$ cd Github

Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github
$ ls
CSS/  index.html  Scope.js  Script/

Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github
$ git clone https://github.com/antonykidis/background-generator.git
Cloning into 'background-generator'...
remote: Counting objects: 6, done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 6 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (6/6), done.

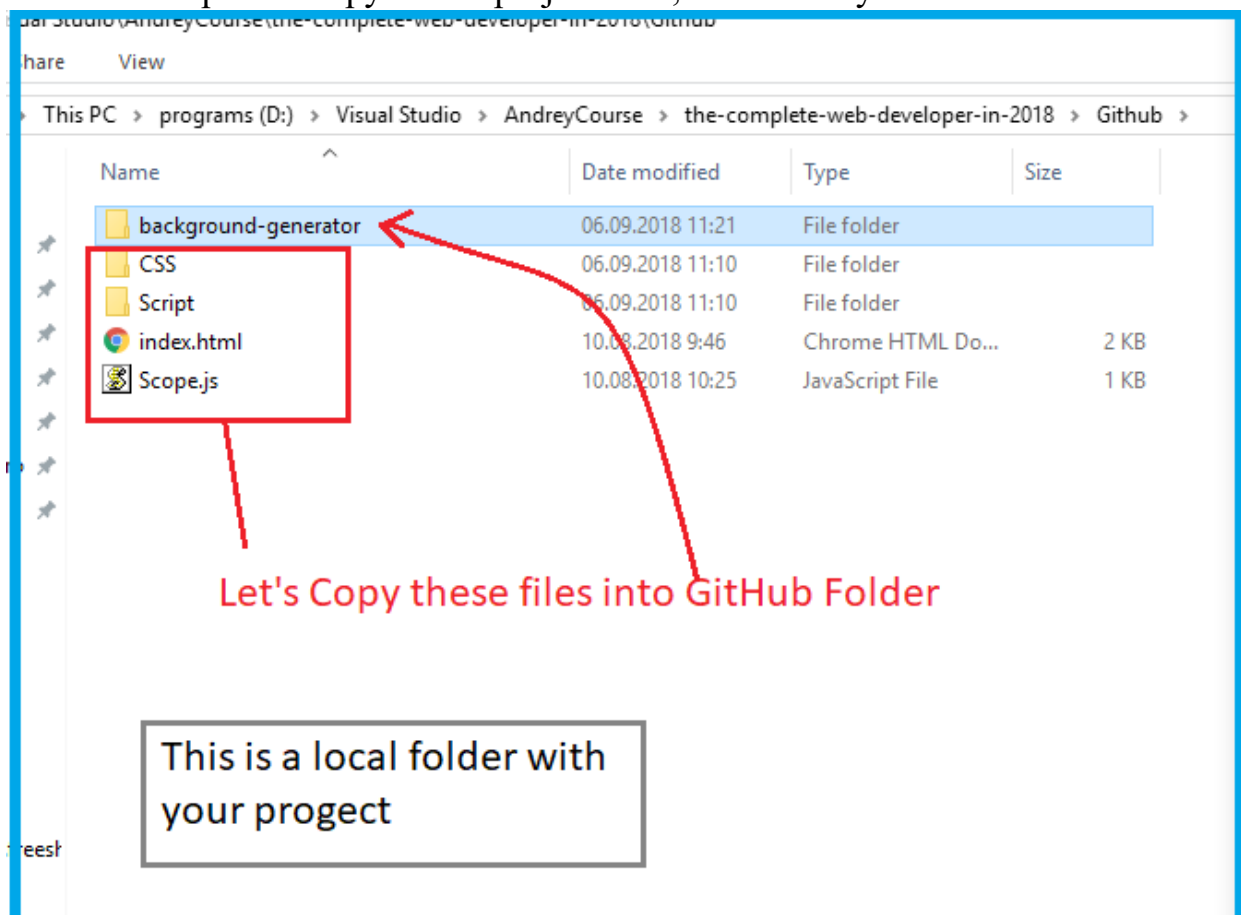
Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github
$ ls
background-generator/  CSS/  index.html  Scope.js  Script/

Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github
```



Step6

- Next step is to Copy all the project files, into a newly cloned folder



Step 7

- Next Step is to CD into background-generator folder
- `cd background generator` will bring us to a similar output

```
Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github
$ cd background-generator

Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github/background-generator (master)
$ |
```

- We now can view all the files as we usually do in terminal.
- By typing ls.
- We'll get the following output:

```
Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github/background-generator (master)
$ ls
CSS/ index.html README.md Scope.js Script/

Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github/background-generator (master)
$
```

This folder will contain the project files plus the readme file

Step 8

- We can now check the status of our files
- use the following command
- `git status`
- The above will invoke the following output

```
MINGW64:/d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github/background-generator (master)
Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github/background-generator (master)
$ ls
CSS/ index.html README.md Scope.js Script/

Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github/background-generator (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

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

    CSS/
    Scope.js
    Script/
    index.html

nothing added to commit but untracked files present (use "git add" to track)

Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github/background-generator (master)
$ |
```

- As we see we have **Untracked** files

- We can now add these files to a GitHub Configuration file before upload it on Github

Step 9

- Let's **Add** our local project's (*Untracked files*) to a **Special configuration file**
- Follow the bellow syntax:
- **git add CSS** (folder)
- **git add Script**(folder)
- **git add Scope.js** (file)
- **git add index.html** (file)
-

```

MINGW64:/d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github/background-generator (master)
$ ls
CSS/ index.html README.md Scope.js Script/

MINGW64:/d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github/background-generator (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

    new file:   CSS/main.css
    new file:   Scope.js
    new file:   Script/main.js
    new file:   index.html

MINGW64:/d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github/background-generator (master)
$
  
```

We added files successfully
And our branch is up to date

Step 10

- Finally We have to **commit the special configuration file**
- commit = means to save all the changes to configuration file
- another words:
- *Yes, these are the changes we've made to the configuration file so far.*
- *we commit it (we approve it)*
- Okay we've just set up a special configuration file to be sent to the GitHub. Great!
- Type **git commit -m "enter your message here"**

```

Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-dev
eloper-in-2018/Github/background-generator (master)
git commit -m "adding starting project. Say hi to marcy"
master 31a4720] adding starting project. Say hi to marcy
4 files changed, 82 insertions(+)
create mode 100644 CSS/main.css
create mode 100644 Scope.js
create mode 100644 Script/main.js
create mode 100644 index.html

```

```

Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-dev
eloper-in-2018/Github/background-generator (master)

```

now Configuration file is set up

Here is the configuration file

- A .git directory contains a file called index.
- You can think of it as a configuration file

This PC > programs (D:) > Visual Studio > AndreyCourse > the-complete-web-developer-in-2018 > Github > background-generator > .git

.git directory

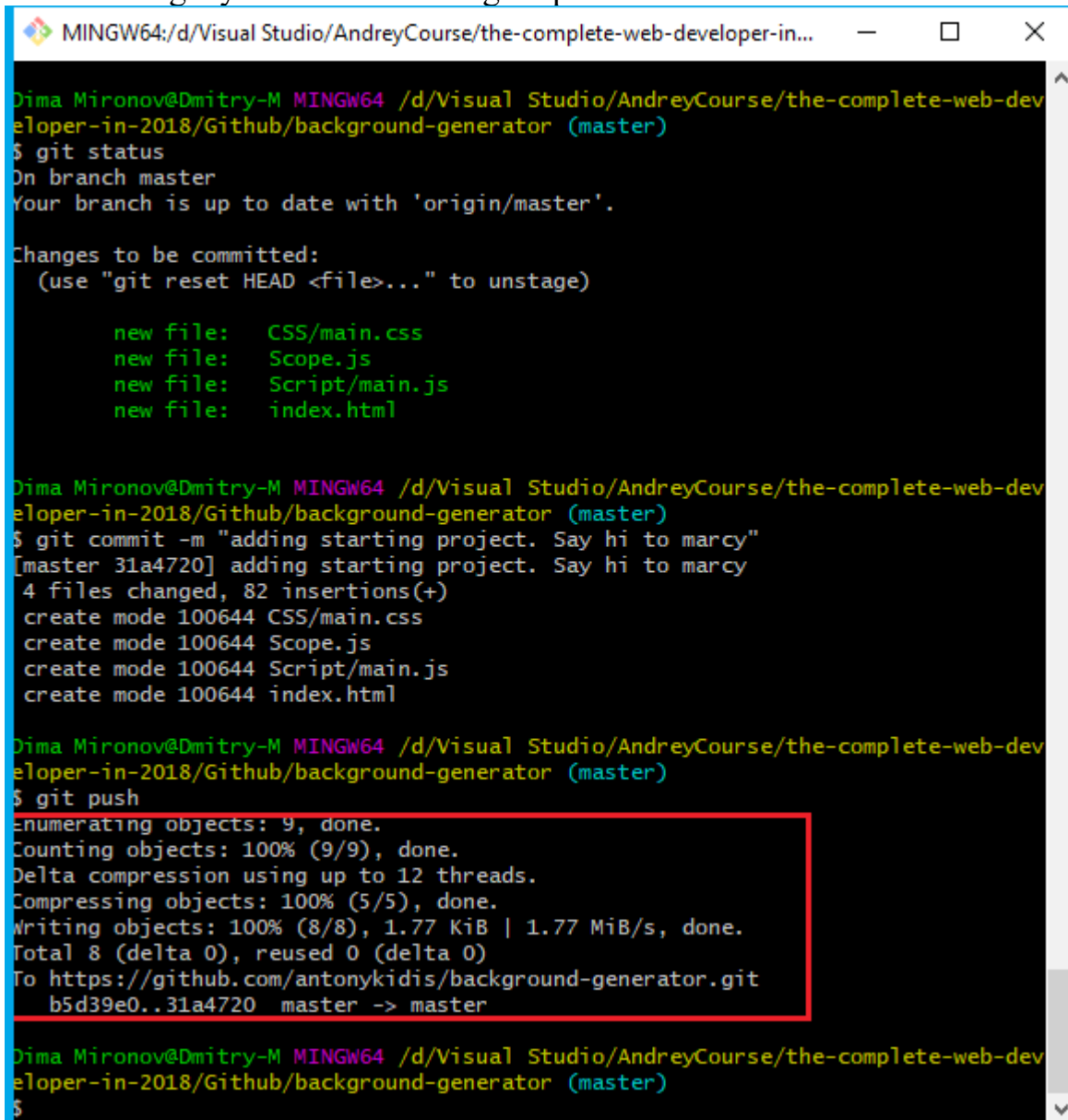
.git directory

Think of it as a Configuration file
This file will be PUSHED to GitHub to make changes

index file = Configuration file

The screenshot shows a Windows file explorer window with the path 'This PC > programs (D:) > Visual Studio > AndreyCourse > the-complete-web-developer-in-2018 > Github > background-generator > .git'. The file list shows various folders and files, with the 'index' file highlighted. A red box is drawn around the 'index' file, and a red arrow points from it to a text box that says 'Think of it as a Configuration file'. Another red arrow points from the 'index' file to a text box that says 'index file = Configuration file'. The background shows a terminal window with git commands and a WordPad window showing the content of the index file.

- Step 11
- Finally **Push** the configuration file to a GitHub server
- Use the following command
- **get push**
- This will get you to the following output

A screenshot of a terminal window with a black background and green and white text. The window title is 'MINGW64:/d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github/background-generator (master)'. The user 'Dima Mironov@Dmitry-M' is in the 'master' branch. They run '\$ git status', which shows the branch is up to date and lists four new files: CSS/main.css, Scope.js, Script/main.js, and index.html. Then they run '\$ git commit -m "adding starting project. Say hi to marcy"', which creates the files. Finally, they run '\$ git push', which enumerates objects, counts them, compresses them, and writes them to the repository. The push is successful, with the commit hash 'b5d39e0..31a4720' and the message 'master -> master'.

```
Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github/background-generator (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        new file:   CSS/main.css
        new file:   Scope.js
        new file:   Script/main.js
        new file:   index.html

Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github/background-generator (master)
$ git commit -m "adding starting project. Say hi to marcy"
[master 31a4720] adding starting project. Say hi to marcy
 4 files changed, 82 insertions(+)
 create mode 100644 CSS/main.css
 create mode 100644 Scope.js
 create mode 100644 Script/main.js
 create mode 100644 index.html

Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github/background-generator (master)
$ git push
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 12 threads.
Compressing objects: 100% (5/5), done.
Writing objects: 100% (8/8), 1.77 KiB | 1.77 MiB/s, done.
Total 8 (delta 0), reused 0 (delta 0)
To https://github.com/antonykidis/background-generator.git
   b5d39e0..31a4720  master -> master

Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-developer-in-2018/Github/background-generator (master)
$
```

Step 12

- Test the pushed files on <https://github.com>

File Explorer window showing the 'background-generator' folder contents:

- .git
- CSS
- Script
- index.html
- README.md
- Scope.js

Terminal output:

```
Counting objects: 100% (9/9), done.
Delta compression using up to 12 threads.
Compressing objects: 100% (5/5), done.
Writing objects: 100% (8/8), 1.77 KiB | 1.77 MiB/s, done.
Total 8 (delta 0), reused 0 (delta 0)
To https://github.com/antonykidis/background-generator.git
b5d39e0..31a4720 master -> master

Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-dev
eloper-in-2018/Github/background-generator (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.
nothing to commit, working tree clean

Dima Mironov@Dmitry-M MINGW64 /d/Visual Studio/AndreyCourse/the-complete-web-dev
eloper-in-2018/Github/background-generator (master)
$
```

GitHub repository page for 'antonykidis / background-generator' showing commit history and README.



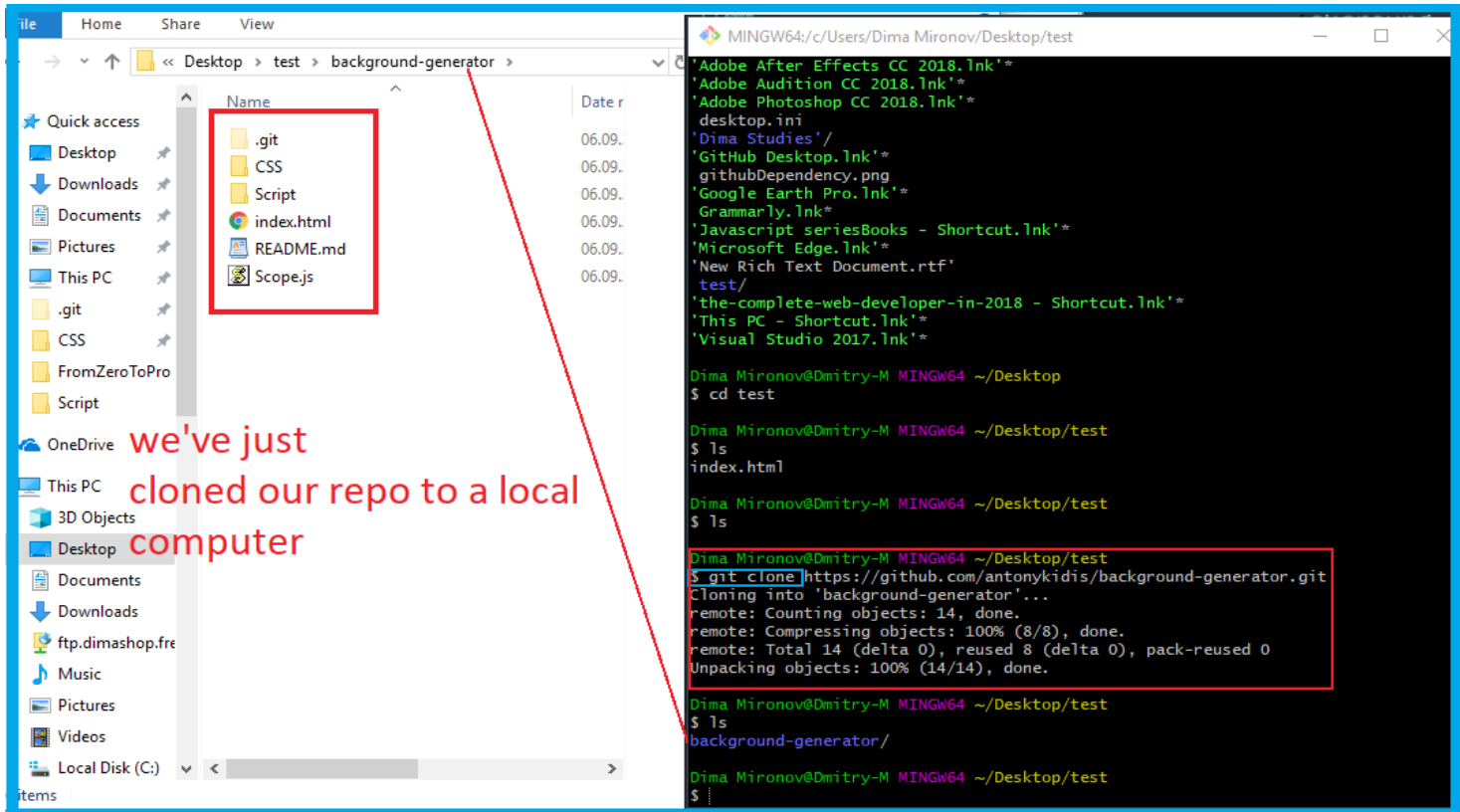
We successfully pushed files on GitHub

Next Step

How to work on existing Repository?

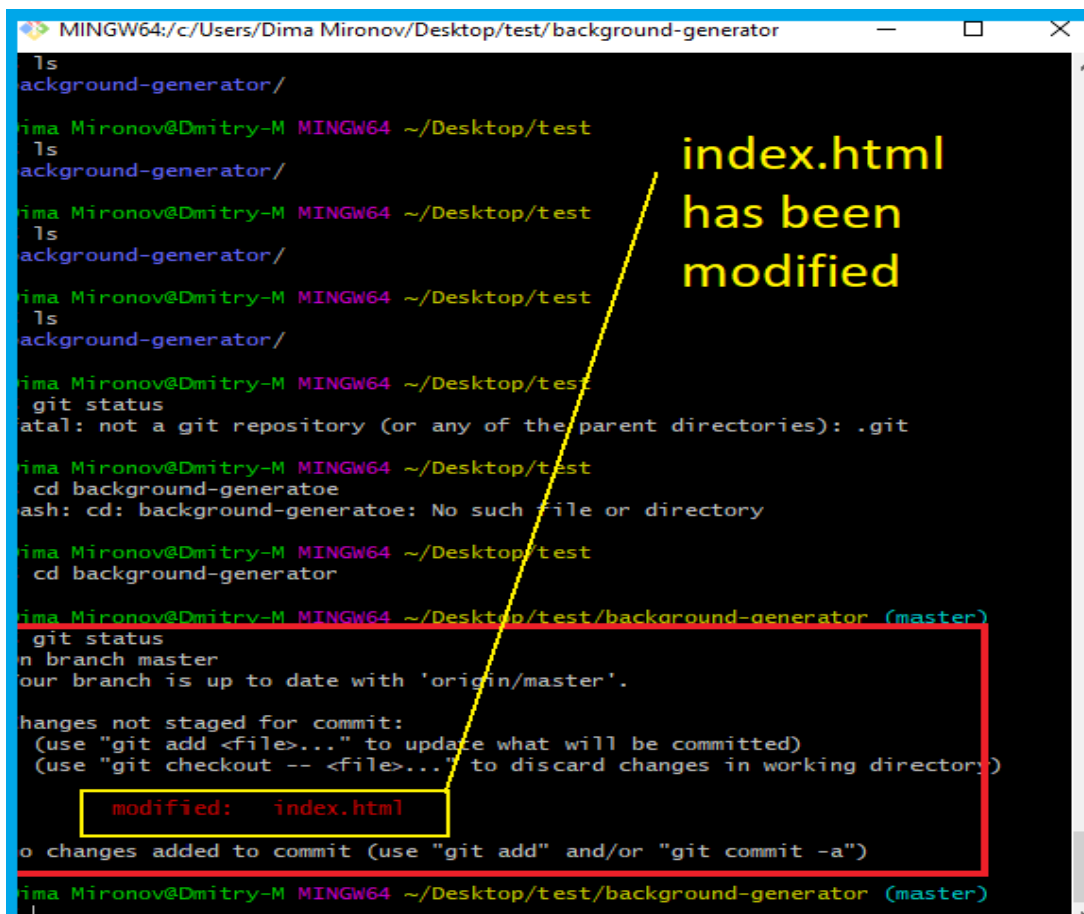
Working on existing
GitHub
Repository

1. Go to your folder (where you want to put a GitHub repository)
2. Type the following command to copy GitHub's repository to your computer.
 - `git clone https://github.com/antonykidis/background-generator.git`
3. Check if a cloned files appears in the folder (see picture)

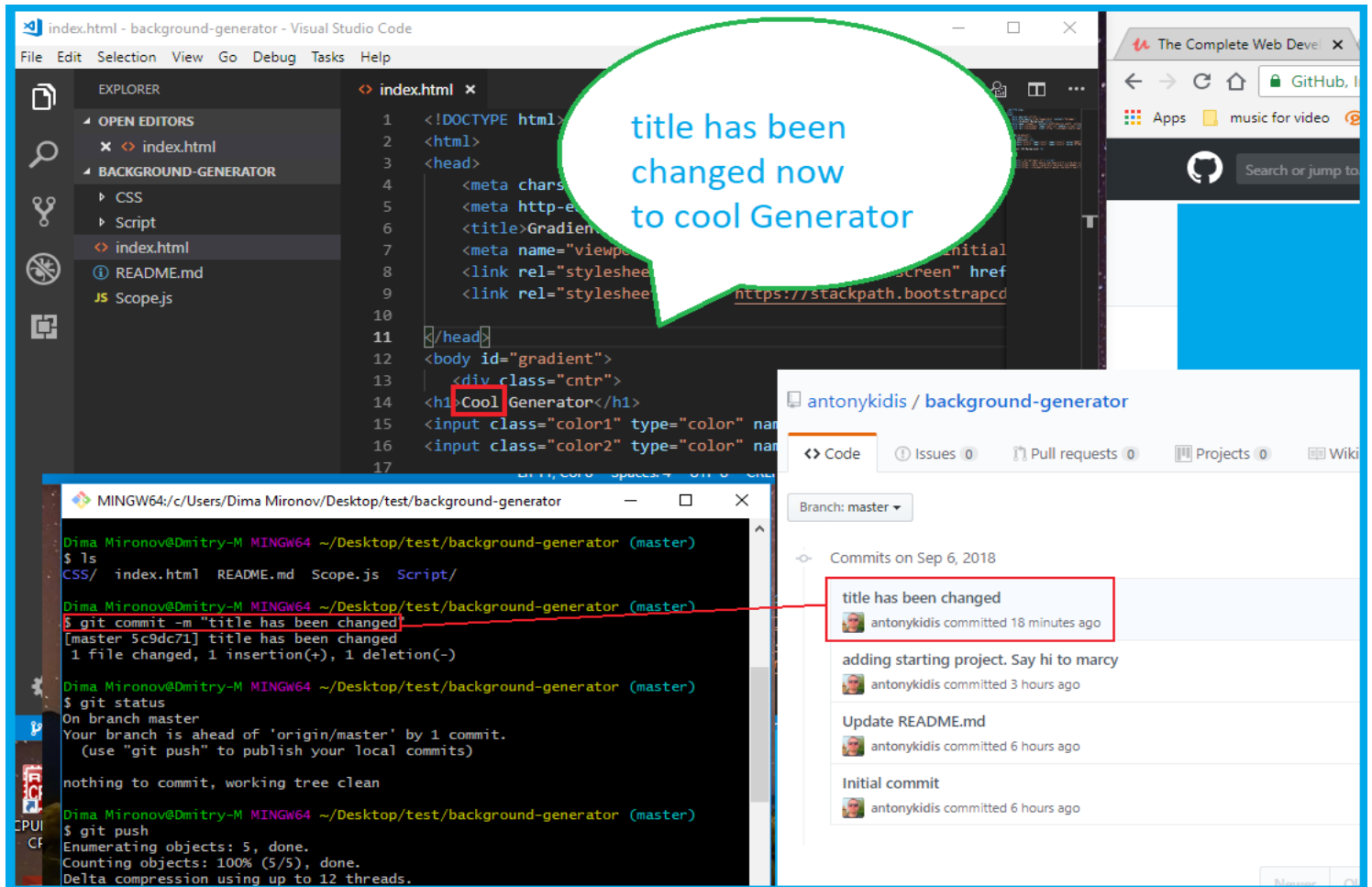


How To push a modified files back to GitHub?

1. Open **index.html** and make some changes.
2. Then comeback to a terminal window and type **git status**.
3. You should see a similar picture



4. After modifying the **index.html** we have to add it to the configuration file again.
 5. **git add index.html**
 6. Then type **git commit** to update, and prepare the config file.
 7. finally type **git push** to push a configured file bac to a GitHub server.
 8. finally go to <https://github.com> and see if the repository been updated
- See the illustration



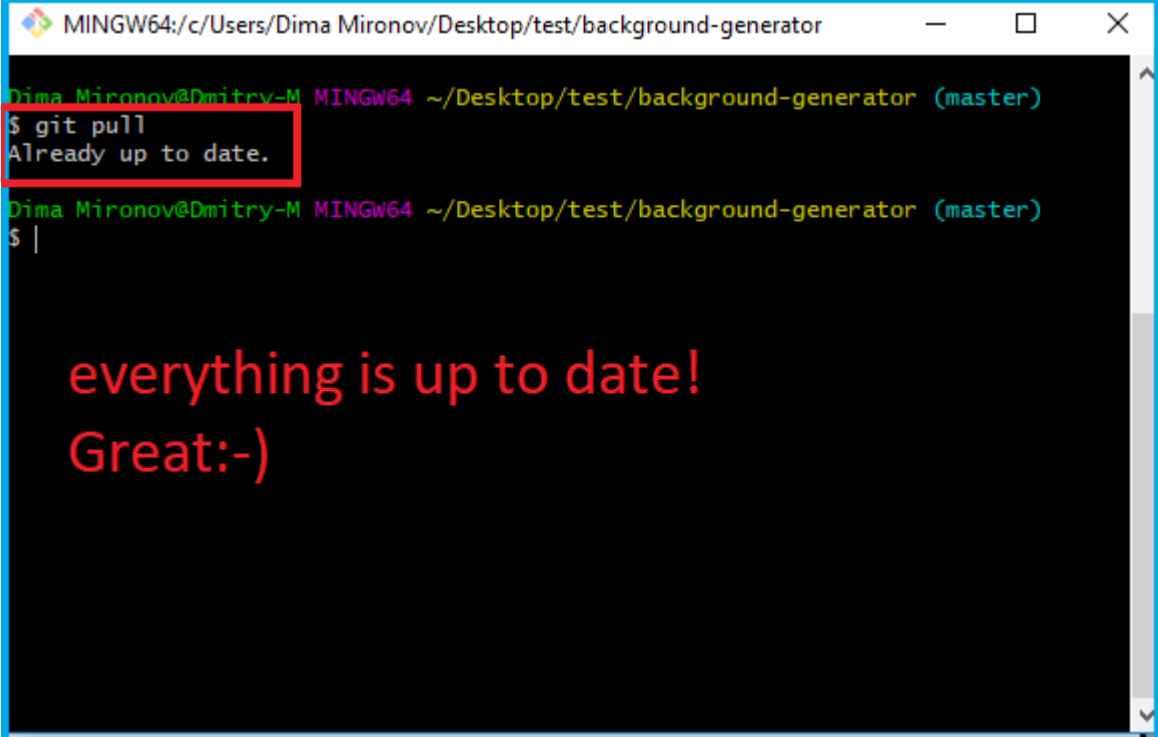
We now can navigate to a *commits link* and see the actual changes we made
As we see the title has changed



9. Finally we can Pull the latest version from a Github like this

Type the following command `git pull`

This will bring you to the following output:

A screenshot of a terminal window titled 'MINGW64:/c/Users/Dima Mironov/Desktop/test/background-generator'. The prompt is 'Dima Mironov@Dmitry-M MINGW64 ~/Desktop/test/background-generator (master)'. The command '\$ git pull' has been entered, and the output 'Already up to date.' is displayed. A red box highlights the command and its output. Below the terminal output, the text 'everything is up to date!' and 'Great:-)' is written in red.

```
Dima Mironov@Dmitry-M MINGW64 ~/Desktop/test/background-generator (master)
$ git pull
Already up to date.

Dima Mironov@Dmitry-M MINGW64 ~/Desktop/test/background-generator (master)
$ |
```

everything is up to date!
Great:-)

Always follow the below command rules

But these vary depending on the situation. Because sometimes you will need to get pull first. Then start working on the project (to get the latest version available)

Useful commands	
• git add	adds to Config.File
• git add .	adds all files
• git commit	closing the config.file and prepare for pushing into the server
• git push	pushes the configuration file and updates the repository
• git pull	PULL THE LATEST CHANGES

