CSE306 Software Quality in Practice

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git

distributed version control system
ClassExercise

Overview

Last updated: an hour ago
Language: —
Access level: Admin

1 Branch
0 Tags
0 Forks
1 Watcher

Invite users to this repo
Send Invitation

Recent activity

1 commit
Pushed to alphonce/classexercise
| e350833 | README.md created online with... |
| Carl Alphonse · an hour ago

What is this repository for?

- Quick summary
- Version
- Learn Markdown
git clone
# README

This README would normally document whatever steps are necessary to get your application up and running.

## What is this repository for?

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- Version
- Learn Markdown

Go to #clone on this page
README

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What is this repository for?

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dhcp020-209-034: git alphonce$ git clone
https://alphonce@bitbucket.org/alphonce/classexercise.git
Cloning into 'classexercise'...
remote: Counting objects: 3, done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0)
Unpacking objects: 100% (3/3), done.
dhcp020-209-034:git alphonce$ cd classexercise/
dhcp020-209-034:classexercise alphonce$ ls -la
dhcp020-209-034:git alphonce$ cd classexercise/
dhcp020-209-034:classexercise alphonce$ ls -la

total 8
-drwxr-xr-x 4 alphonce staff 136 Apr 13 09:59 .
-drwxr-xr-x 29 alphonce staff 986 Apr 13 09:59 ..
-drwxr-xr-x 13 alphonce staff 442 Apr 13 09:59 .git
-rw-r--r-- 1 alphonce staff 565 Apr 13 09:59 README.md
pointer to the current branch
$ more head
ref: refs/heads/master

<table>
<thead>
<tr>
<th>Mode</th>
<th>Name</th>
<th>Owner</th>
<th>Group</th>
<th>Size</th>
<th>Date</th>
<th>Time</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-r</td>
<td>HEAD</td>
<td>alphonce</td>
<td>staff</td>
<td>23</td>
<td>Apr 17</td>
<td>13:26</td>
<td>HEAD</td>
</tr>
<tr>
<td>drwx</td>
<td>branches</td>
<td>alphonce</td>
<td>staff</td>
<td>68</td>
<td>Apr 17</td>
<td>13:26</td>
<td>branches</td>
</tr>
<tr>
<td>-r</td>
<td>config</td>
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<td>staff</td>
<td>328</td>
<td>Apr 17</td>
<td>13:26</td>
<td>config</td>
</tr>
<tr>
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<td>description</td>
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<td>staff</td>
<td>73</td>
<td>Apr 17</td>
<td>13:26</td>
<td>description</td>
</tr>
<tr>
<td>drwx</td>
<td>hooks</td>
<td>alphonce</td>
<td>staff</td>
<td>408</td>
<td>Apr 17</td>
<td>13:26</td>
<td>hooks</td>
</tr>
<tr>
<td>-r</td>
<td>index</td>
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<td>staff</td>
<td>137</td>
<td>Apr 17</td>
<td>13:26</td>
<td>index</td>
</tr>
<tr>
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<td>info</td>
<td>alphonce</td>
<td>staff</td>
<td>102</td>
<td>Apr 17</td>
<td>13:26</td>
<td>info</td>
</tr>
<tr>
<td>drwx</td>
<td>logs</td>
<td>alphonce</td>
<td>staff</td>
<td>136</td>
<td>Apr 17</td>
<td>13:26</td>
<td>logs</td>
</tr>
<tr>
<td>drwx</td>
<td>objects</td>
<td>alphonce</td>
<td>staff</td>
<td>238</td>
<td>Apr 17</td>
<td>13:26</td>
<td>objects</td>
</tr>
<tr>
<td>-r</td>
<td>packed-refs</td>
<td>alphonce</td>
<td>staff</td>
<td>107</td>
<td>Apr 17</td>
<td>13:26</td>
<td>packed-refs</td>
</tr>
<tr>
<td>drwx</td>
<td>refs</td>
<td>alphonce</td>
<td>staff</td>
<td>170</td>
<td>Apr 17</td>
<td>13:26</td>
<td>refs</td>
</tr>
</tbody>
</table>
$ git ls-files

README.md
content
(blobs, trees, commits)

- rw-r--r--  1 alphonce  staff  23 Apr 17 13:26 HEAD
- drwxr-xr-x  2 alphonce  staff  68 Apr 17 13:26 branches
- rw-r--r--  1 alphonce  staff  328 Apr 17 13:26 config
- rw-r--r--  1 alphonce  staff  73 Apr 17 13:26 description
- drwxr-xr-x  12 alphonce  staff  408 Apr 17 13:26 hooks
- rw-r--r--   1 alphonce  staff  137 Apr 17 13:26 index
- drwxr-xr-x  3 alphonce  staff  102 Apr 17 13:26 info
- drwxr-xr-x  4 alphonce  staff  136 Apr 17 13:26 logs
- drwxr-xr-x  7 alphonce  staff  238 Apr 17 13:26 objects
- rw-r--r--  1 alphonce  staff  107 Apr 17 13:26 packed-refs
- drwxr-xr-x  5 alphonce  staff  170 Apr 17 13:26 refs
The git man page seems to be surprisingly bereft of an official definition, other than this (emphasis mine):

The object database contains objects of three main types: **blobs, which hold file data**, trees, which point to blobs and other trees to build up directory hierarchies; and commits, which each reference a single tree and some number of parent commits.

The repeated use of the term "object database" across git documentation suggests a borrowing of "blob" specifically from DBMSs. In its article on Binary large objects, Wikipedia defines the term as "a collection of binary data stored as a single entity in a database management system", further offering the following:

Blobs were originally just amorphous chunks of data invented by Jim Starkey at DEC, who describes them as "the thing that ate Cincinnati, Cleveland, or whatever" from "the 1958 Steve McQueen movie", referring to The Blob.

Later, Terry McKiever, a marketing person for Apollo, felt that it needed to be an acronym and invented the backronym Basic Large Object. Then Informix invented an alternative backronym, Binary Large Object.

So, though it's not a definitive answer, the term "blob" has a conventional and well-defined usage across computer science as an opaque string of binary data, and git adheres to that definition without further specifying it. 

answered Jul 24 '15 at 17:12

Jeff Bowman
33.9k65685
$ ls -l objects

total 0

drwxr-xr-x  3 alphonce  staff  102 Apr 17 13:26 25
drwxr-xr-x  3 alphonce  staff  102 Apr 17 13:26 39
drwxr-xr-x  3 alphonce  staff  102 Apr 17 13:26 9c
drwxr-xr-x  2 alphonce  staff  68  Apr 17 13:26 info
drwxr-xr-x  2 alphonce  staff  68  Apr 17 13:26 pack

drwxr-xr-x  3 alphonce  staff  102 Apr 17 13:26 info

drwxr-xr-x  4 alphonce  staff  136 Apr 17 13:26 logs

drwxr-xr-x  7 alphonce  staff  238 Apr 17 13:26 objects

-rw-r--r--  1 alphonce  staff  107 Apr 17 13:26 packed-refs

drwxr-xr-x  5 alphonce  staff  170 Apr 17 13:26 refs
$ git cat-file -t 25b4
commit
$ git cat-file -t 9ce9
tree
$ git cat-file -t 39af
blob
$ git cat-file -p 25b4

tree 9ce959348ab4c2eef61549393b4b1acc0504a649
author Carl Alphonce <alphonce@buffalo.edu> 1492449992 +0000
committer Carl Alphonce <alphonce@buffalo.edu> 1492449992 +0000

README.md created online with Bitbucket
$ git cat-file -p 9ce9
100644 blob 39af52c077c0d4c3bc7730b362592e0bf7f635db  README.md
$ git cat-file -p 39af

# README #

This README would normally document whatever steps are necessary to get your application up and running.

### What is this repository for? ###

* Quick summary
* Version
* [Learn Markdown](https://bitbucket.org/tutorials/markdowndemo)

### How do I get set up? ###

* Summary of set up
* Configuration
* Dependencies
* Database configuration
* How to run tests
* Deployment instructions

### Contribution guidelines ###

* Writing tests
* Code review
* Other guidelines

### Who do I talk to? ###

* Repo owner or admin
* Other community or team contact
pointers to commits
$ ls -l refs
total 0
  drwxr-xr-x  3 alphonce  staff  102 Apr 17 13:26 heads
  drwxr-xr-x  3 alphonce  staff  102 Apr 17 13:26 remotes
  drwxr-xr-x  2 alphonce  staff  68 Apr 17 13:26 tags
stash → workspace → index → staging → local repository → remote repository

`git add`
create a file
add to index
(staging area)

Git: `git add <filename>`
stash
workspace
index staging
local repository
remote repository

git commit
commit to local repo

```bash
  git commit -m "message"
```
push to remote repo

© git push
stash
workspace
index staging
local repository
remote repository

git pull
pull from remote repo

```bash
   git pull
```
A snapshot showing a sequence of commits.