**Head in git**

<https://stackoverflow.com/questions/2304087/what-is-head-in-git>

DeenJ@FPRIC MINJ /d/GitRepos/design1(release/learn-git)

$ cd .git

DeenJ@FPRIC MINJ /d/GitRepos/design1/.git (GIT\_DIR!)

$ cat HEAD

ref: refs/heads/release/phase1Branch

DeenJ@FPRIC MINJ /d/GitRepos/design1/.git (GIT\_DIR!)

$ cd refs/heads

DeenJ@FPRIC MINJ /d/GitRepos/design1/.git/refs/heads (GIT\_DIR!)

$ ls -la

total 1

drwxr-xr-x 1 DeenJ 1049089 0 Sep 25 09:11 ./

drwxr-xr-x 1 DeenJ 1049089 0 Sep 13 16:41 ../

drwxr-xr-x 1 DeenJ 1049089 0 Sep 13 16:53 feature/

-rw-r--r-- 1 DeenJ 1049089 41 Sep 13 16:41 master

drwxr-xr-x 1 DeenJ 1049089 0 Sep 25 13:07 release/

DeenJ@FPRIC MINJ /d/GitRepos/design1/.git/refs/heads (GIT\_DIR!)

$ cat master

9f5ab48105ace8bb7f8751d42491615bb7dac9c1

This commit points to last commit at master

DeenJ@FPRIC MINJ /d/GitRepos/design1/.git/refs/heads (GIT\_DIR!)

$ cat release/phase1Branch

c40063b9d84e447046575c7ff628672ca9a8fafd

This commit points to last commit at phase1Branch

**Viewing changes in indexed stage vs working repo with diff**

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git status

On branch release/phase1Branch

Your branch is up to date with 'origin/release/phase1Branch'.

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: package.json

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

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git diff

**diff --git a/package.json b/package.json**

**index 13284ec..ffc29aa 100644**

**--- a/package.json**

**+++ b/package.json**

@@ -1,6 +1,6 @@

{

"name": "Game1",

- "version": "2.0.1",

+ "version": "2.0.2",

"description": "",

"private": true,

"repository": {

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$

**Viewing only staged changes**

Git add package.json

$ git status

On branch release/phase1Branch

Your branch is up to date with 'origin/release/phase1Branch'.

Changes to be committed:

(use "git reset HEAD <file>..." to unstage)

modified: package.json

DeenJ@FPRIC MINJ /d/GitRepos/design1(release/learn-git)

$ git diff --staged

**diff --git a/package.json b/package.json**

**index 13284ec..ffc29aa 100644**

**--- a/package.json**

**+++ b/package.json**

@@ -1,6 +1,6 @@

{

"name": "Game1",

- "version": "2.0.1",

+ "version": "2.0.2",

"description": "",

"private": true,

"repository": {

**Deleting files**

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git status

On branch release/learn-git

Untracked files:

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

toDelete.txt

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

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git add toDelete.txt

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git status

On branch release/learn-git

Changes to be committed:

(use "git reset HEAD <file>..." to unstage)

new file: toDelete.txt

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git commit -m "to delete"

[release/learn-git 369d91c] to delete

1 file changed, 1 insertion(+)

create mode 100644 toDelete.txt

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git rm toDelete.txt

rm 'toDelete.txt'

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git status

On branch release/learn-git

Changes to be committed:

(use "git reset HEAD <file>..." to unstage)

deleted: toDelete.txt

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git commit -m "dlete a file"

[release/learn-git 4033cc1] dlete a file

1 file changed, 1 deletion(-)

delete mode 100644 toDelete.txt

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git status

On branch release/learn-git

nothing to commit, working tree clean

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$

**Moving and renaming files**

**Writing commit messages**

Git add -m “message”

**Log Commit**

<https://devhints.io/git-log>

https://git-scm.com/docs/git-log

Git log

**git log --oneline**

git log branch

**git log --oneline --decorate**

Git log -n

git log -p -2

Git log –since =date

Git log –until =date

Git log –author = name , or --committer

Git log –grep =”searchcriteria text”

https://gitster.livejournal.com/30195.html

Example :

DeenJ@FPRIC MINGW64 /d/GitRepos/design1 (release/learn-git)

$ git log --grep="Defect ID: 368028"

commit c40063b9d84e447046575c7ff628672ca9a8fafd (HEAD -> release/learn-git, origin/release/Game1\_phase1, release/Game1\_phase1)

Author: Deen john <deen.john@mail.com>

Date: Fri Sep 21 15:45:52 2018 +0200

fix for Mobile - an 'unable to load game' error on load yet game loads in background

Defect ID: 368028

Either /or

DeenJ@FPRIC MINGW64 /d/GitRepos/design1 (release/learn-git)

$ git log --grep="showBalance" --grep =deen

commit 512b1f32fcffae0528788df651a3df1d8e9cdd17

Author: Deen John <deen.john@mail.com>

Date: Wed Sep 19 14:31:29 2018 +0200

Removing showBalance functionality

commit 51c14b3088b897fa445b39aa41345cc424524db7

Author: Deen John <deen.john@mail.com>

Date: Wed Sep 19 14:31:01 2018 +0200

updating submodule for :

Removing showBalance functionality

--and

$ git log --pretty=oneline

**git log --oneline --decorate --all --graph**

$ git log --graph --pretty=format:'%Cred%h%Creset -%C(yellow)%d%Creset %s %Cgreen(%cr) %C(bold blue)<%an>%Creset' --abbrev-commit

git show 4388eab (to see the changes in commit file)

-p

In addition to the default output, this command(patch) displays the files that have been modified, location of the lines that have been added or removed and the actual changes that have been made.

**Amending commits**

**Find history of file changed**

git log --name-status --follow package.json

**Undoing working directory changes**

Git checkout – file

Ex : git checkout package.json

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git status

On branch release/learn-git

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: package.json

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

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git checkout package.json

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git status

On branch release/learn-git

nothing to commit, working tree clean

**Unstaging files**

<https://git-scm.com/docs/git-reset#git-reset-Resetasinglefileintheindex>

Git reset HEAD file

Ex : $ git reset HEAD package.json

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git status

On branch release/learn-git

Changes to be committed:

(use "git reset HEAD <file>..." to unstage)

modified: package.json

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git reset HEAD package.json

Unstaged changes after reset:

M package.json

**Amending commits**

Only last commit is amendable

One can amend the commit message or file

Package.json has changed from ver 2.0.1 to 2.0.2

I want to amend my last commit package.json file from v2.0.2 to 2.0.3

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git status

On branch release/learn-git

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: package.json

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

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git add package.json

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git status

On branch release/learn-git

Changes to be committed:

(use "git reset HEAD <file>..." to unstage)

modified: package.json

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git commit --amend -m "update commit message2"

[release/learn-git 676be02] update commit message2

Date: Tue Sep 25 15:54:02 2018 +0200

1 file changed, 1 insertion(+), 1 deletion(-)

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git status

On branch release/learn-git

nothing to commit, working tree clean

**Retrieving old versions**

<https://stackoverflow.com/questions/927358/how-to-undo-the-most-recent-commits-in-git>

The current branch is pointing at commit 676be02 , which we want to revert

(release/learn-git)> 676be02 > c40063b

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git checkout c40063b -- package.json

i.e change the package.json to same as it was at the time of c40063b

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git status

On branch release/learn-git

Changes to be committed:

(use "git reset HEAD <file>..." to unstage)

modified: package.json

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git diff --staged

**diff --git a/package.json b/package.json**

**index 94a7c4f..13284ec 100644**

**--- a/package.json**

**+++ b/package.json**

@@ -1,6 +1,6 @@

{

"name": "Game1",

- "version": "2.0.3",

+ "version": "2.0.1",

"description": "",

"private": true,

"repository": {

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git commit -m "this commit reverts commit 676be02"

[release/learn-git fd75764] this commit reverts commit 676be02

1 file changed, 1 insertion(+), 1 deletion(-)

# Reverting a commit

https://stackoverflow.com/questions/4114095/how-to-revert-a-git-repository-to-a-previous-commit

Put git in exact opposite changes of last commit but retain commit history

Commit fc08381 has package.json changed to 2.0.2

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git revert fc08381

[release/learn-git 4388eab] this Revert "commit test"

1 file changed, 1 insertion(+), 1 deletion(-)

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git log

commit 4388eabde23943b84050c65897f65ede5562d14e (HEAD -> release/learn-git)

Author: Deen john <deen.john@mail.com>

Date: Tue Sep 25 16:46:39 2018 +0200

this Revert "commit test"

This reverts commit fc08381f5d35c73e44fcad0ccd9fbcb0fbbc8d3c.

commit fc08381f5d35c73e44fcad0ccd9fbcb0fbbc8d3c

Author: Deen john <deen.john@mail.com>

Date: Tue Sep 25 16:42:49 2018 +0200

commit test

https://stackoverflow.com/questions/17563726/how-to-see-the-changes-in-a-git-commit

$ git show --color --pretty=format:%b $COMMIT

This reverts commit fc08381f5d35c73e44fcad0ccd9fbcb0fbbc8d3c.

**diff --git a/package.json b/package.json**

**index ffc29aa..13284ec 100644**

**--- a/package.json**

**+++ b/package.json**

@@ -1,6 +1,6 @@

{

"name": "Game1",

- "version": "2.0.2",

+ "version": "2.0.1",

"description": "",

"private": true,

"repository": {

**Removing an unpushed commit**

https://stackoverflow.com/questions/1338728/delete-commits-from-a-branch-in-git

<https://stackoverflow.com/questions/1338728/delete-commits-from-a-branch-in-git>

**--soft (safest option)**

**-Doesn’t change staging index or working dir**

$ git reset --soft c40063b (package.json updated to v2.0.2 by commit c40063b)

Soft reset puts the last commit changes to staging index

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git diff --staged

**diff --git a/package.json b/package.json**

**index 13284ec..ffc29aa 100644**

**--- a/package.json**

**+++ b/package.json**

@@ -1,6 +1,6 @@

{

"name": "Game1",

- "version": "2.0.1",

+ "version": "2.0.2",

"description": "",

"private": true,

"repository": {

We can move the head back to same last commit too (keep last commit id save somewhere)

**Git revert –commit id**

**--mixed**

**-Changes staging index to match repo**

**- doesn’t change working dir**

**All changes goes to working directory**

**Current commit is** 12eee5b

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git reset --mixed c40063b

Unstaged changes after reset:

M package.json

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git status

On branch release/learn-git

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: package.json

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

We can move the head back to same last commit too (keep last commit id save somewhere)

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git reset --mixed 12eee5bd

**--hard**

**-changes staging index and working dir to match repo**

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git reset --hard c40063b

HEAD is now at c40063b fix for Mobile - an 'unable to load game' error on load yet game loads in background Defect ID: 368028

DeenJ@FPRIC MINJ /d/GitRepos/design1 (release/learn-git)

$ git status

On branch release/learn-git

nothing to commit, working tree clean

You can still go back to lost commit , the commit from where you reset.

**Referencing commits**

Parent commit

Head^ refer the parent of this HEAD or HEAD ~1  
 master^

Grandparent commit

-HEAD^^

**Exploring tree listings**

$ git ls-tree HEAD

100644 blob f0dfce3cb5a140f069b5929764dc68546398c8b7 .editorconfig

100644 blob a80ed545aec64ad5ab870050dc5edccce2885cd9 .gitignore

100644 blob 74a9f9e714174243fbd78f264864a9686f3a5c13 .gitmodules

100644 blob d2cd9ced88b7f6e6f14feb7713eee3af621ccd6e .jsbeautifyrc

100644 blob 8b26165c4201d8af4414de31ee51c29a28791281 .jshintrc

100644 blob e41b4e6db32818fb0979ca7e523aa83849fb5151 README.md

040000 tree 5ad0611ebba8d4273a995b6dbf1ec571389aefe3 deploy

100644 blob 86ee5b34bbdbf49687862350a73f424376aad2c4 game.bat

040000 tree 318c80f46f1efbd8772ece10641723452557738e gulp

100644 blob e5b7e9b77b385c58f85153f88cc599a76da4f6ac gulpfile.js

100644 blob 2ddbc97faf807856878d225bf9bebc88e1aebb47 npm-shrinkwrap.json

100644 blob 13284ec171e556460d2f76fa6ef58b394c2f48b9 package.json

040000 tree 8a9e985281cc0e1300c8372a233f94d5b2b71dd3 src

040000 tree 62b437f413bced10a8bd0564fa386a21f838b94f submodule

**Compare commits**

Git diff commitid

**Example 1 :**

DeenJ@FPRIC MINGW64 /d/GitRepos/design1 (release/learn-git)

$ git diff 51c14b3

$ git log --oneline

c40063b (HEAD -> release/learn-git, origin/release/Game1\_phase1, release/Game1\_phase1) fix for Mobile - an 'unable to load game' error on load yet game loads in background Defect ID: 368028

df10257 updating submodule for : Simple hamburgermenu closing fix. Commit id : d444a11

512b1f3 Removing showBalance functionality

51c14b3 updating submodule for :

613b3d3 updating submodule Fixed issue where lobby button was showing, when not in a lobby

08feb9d Changes to disable multichannel for vivo

0d35d50 updating package version

ffa0a56 (origin/feature/Minimum\_Req, feature/Minimum\_Req) git modules updated

073c268 submodules updated

fa0b413 git modules updated

667190b updated language script for all both clients

2e87acb updated for build version= V2.3.0

e259d39 Wil real money banner was touching to reels in mobile- Fixed

b796303 submodules updated

19ddd62 git module updated for build version 2.2.0 final

9973196 Added Hema's change to load en language if language code is not proper

f68b58e Gitmodule updated for build version 2..2.0

$ git diff fa0b413 package.json

**diff --git a/package.json b/package.json**

**index 38abdd5..13284ec 100644**

**--- a/package.json**

**+++ b/package.json**

@@ -1,6 +1,6 @@

{

"name": "Game1",

- "version": "2.0.0",

+ "version": "2.0.1",

"description": "",

"private": true,

"repository": {

@@ -47,7 +47,7 @@

"gulp-uglify": "^1.3.0",

"gulp-util": "^3.0.6",

"path": "^0.12.7",

- "play-harness": "git+ssh://git@digit.mgsops.net/hummingbird/harness.git#tags/V5.12.1",

+ "play-harness": "git+ssh://git@digit.mgsops.net/hummingbird/harness.git#tags/coolbuck-v.7.2.1",

"require-dir": "^0.3.0",

"slash": "^1.0.0",

"vinyl-paths": "^1.0.0"

DeenJ@FPRIC MINGW64 /d/GitRepos/design1 (release/learn-git)

$

**Example 2 :**

**Diff between any two random commits**

$ git log --oneline

c40063b (HEAD -> release/learn-git, origin/release/Game1\_phase1, release/Game1\_phase1) fix for Mobile - an 'unable to load game' error on load yet game loads in background Defect ID: 368028

df10257 updating submodule for : Simple hamburgermenu closing fix. Commit id : d444a11

512b1f3 Removing showBalance functionality

51c14b3 updating submodule for :

613b3d3 updating submodule Fixed issue where lobby button was showing, when not in a lobby

08feb9d Changes to disable multichannel for vivo

0d35d50 updating package version

ffa0a56 (origin/feature/Minimum\_Req, feature/Minimum\_Req) git modules updated

073c268 submodules updated

fa0b413 git modules updated

DeenJ@FPRIC MINGW64 /d/GitRepos/design1 (release/learn-git)

$ git diff c40063b..512b1f3

**diff --git a/src/config/SoundsConfig.js b/src/config/SoundsConfig.js**

**index b185fea..f18f2a7 100644**

**--- a/src/config/SoundsConfig.js**

**+++ b/src/config/SoundsConfig.js**

@@ -54,6 +54,13 @@

]);

+ hasWebAudio = !(

+ nua.startsWith("Mozilla/5.0") &&

+ nua.indexOf("; Le ") > -1 &&

+ nua.indexOf("AppleWebKit/") > -1 &&

+ nua.indexOf("Chrome") > -1 &&

+ nua.indexOf("EUI Browser/") > -1

+ );

}

if(common.casino.isDesktop()) {

**diff --git a/submodule/Store b/submodule/Store**

**index d444a11..78cf6f9 160000**

**--- a/submodule/Store**

**+++ b/submodule/Store**

@@ -1 +1 @@

-Subproject commit d444a1130a7836e48d53730dd7ac776f2295d4a6

+Subproject commit 78cf6f91b5c977e61b0847ddbb1f886fd5912623

**Comparing branches**

**Git diff master..newbranch**

**Example :**

DeenJ@FPRIC MINGW64 /d/GitRepos/design1 (release/learn-git)

$ git diff master..release/learn-git

**diff --git a/.gitmodules b/.gitmodules**

**new file mode 100644**

**index 0000000..74a9f9e**

**--- /dev/null**

**+++ b/.gitmodules**

@@ -0,0 +1,4 @@

+[submodule "submodule/Store"]

+ path = submodule/Store

+ url = git@digit.mgsops.net:h5gamesframework/Components.git

+ branch = tags/Game1/V3.3.0

\ No newline at end of file

**diff --git a/deploy/Database/desktop/8.H5LanguagePatch.sql b/deploy/Database/desktop/5.H5LanguagePatch.sql**

**similarity index 59%**

**rename from deploy/Database/desktop/8.H5LanguagePatch.sql**

**rename to deploy/Database/desktop/5.H5LanguagePatch.sql**

**index af34172..9549888 100644**

**--- a/deploy/Database/desktop/8.H5LanguagePatch.sql**

**+++ b/deploy/Database/desktop/5.H5LanguagePatch.sql**

@@ -3,9 +3,9 @@

\* MobileLanguages SQL Language Patch

\*

\* Generated by: Language Utility 'http://fpmoblob2/ToolMob/LanguageUtility' on ToolMob by 'unknown user'

-\* Generation Date: 06/07/2017 13:12:41 PM

-\* LanguagePack Identifier(s): 02ffe082 2fdb4027 3d912d9e 07fe5898 8cffa813 9a3641fb 9bd7c940 9dc2faa0 39b28cce 043a04d4 95d30f86 379e38e0 600f7f54 942f8bd8 3317c000 62739d74 609401a2 5279879d 38143337 53931968 55836735 79430963 aa1b7fd9 b9695181 bcf4a9a1 cccb2e10 d5eaba9a d7dd28eb d1790f31 d5964fe2 dca41b3c f2b70675 f6b10170 f6826845 fc55aa81

-\* LanguagePatch Identifier: e366a04c

+\* Generation Date: 06/07/2017 13:42:24 PM

+\* LanguagePack Identifier(s): 0fe7a856 2dcd9a85 5d42d3db 7d6d1da4 9b2b91d4 013ba346 15ec64d7 17b17424 37e8bf0b 49cddb19 50a51075 53e6b7b9 61bacd3b 78bd17f3 91da4803 229a4fc2 891b96d4 05708cc0 7537b551 24328afe 40385b85 78399cbb 89787f79 711992b5 65422190 b1acd28e b4d51fef b1256e18 bc4cbec9 da6e6739 ddbc013d ee66f83a f23a93bc f049376a feb73303

+\* LanguagePatch Identifier: 3cfc88fe

\*

\* Description: Installs language string data into a MobileLanguages Database.

\*

@@ -65,740 +65,968 @@ DECLARE @subProductName NVARCHAR(100) = NULL;

------------------------------------------------------

**Example2 :**

$ git diff --color-words master..release/learn-git

**Identify merged branches**

<https://stackoverflow.com/questions/226976/how-can-i-know-in-git-if-a-branch-has-been-already-merged-into-master>

**Means all the commits that are in other branch are in current branch too**

Git branch –merged

DeenJ@FPRIC MINGW64 /d/GitRepos/design1 (release/learn-git)

$ git branch --merged

feature/Minimum\_Req

release/Minimum\_Req

release/Game1\_phase1

\* release/learn-git

**As the tip of head is not reachable from current branch HEAD , master is not merged into** (release/learn-git) branch

**Cherry-picking commits**

Cherry-picking means that we apply the changes from one or more existing commits. Each commit that we target is going to become a new commit on the current branch. We're essentially telling git, hey, go get that commit that you already know about, grab its changes, and apply them right here.

 how we can use different techniques to share code between branches or even different repositories.

Similar to copy paste

Identical changes but diff SHA

Git cherry-pick commitid

Git cherry-pick –continue (after resolving conflict)

Git cherry-pick --abort

[**How to resolve merge conflicts in Git**](https://stackoverflow.com/questions/161813/how-to-resolve-merge-conflicts-in-git)

https://stackoverflow.com/questions/161813/how-to-resolve-merge-conflicts-in-git

**Rebase**

Use rebase for your own local branches , not for public branches

**Git rebase master**

i.e use master as base for rebase the current branch over master