



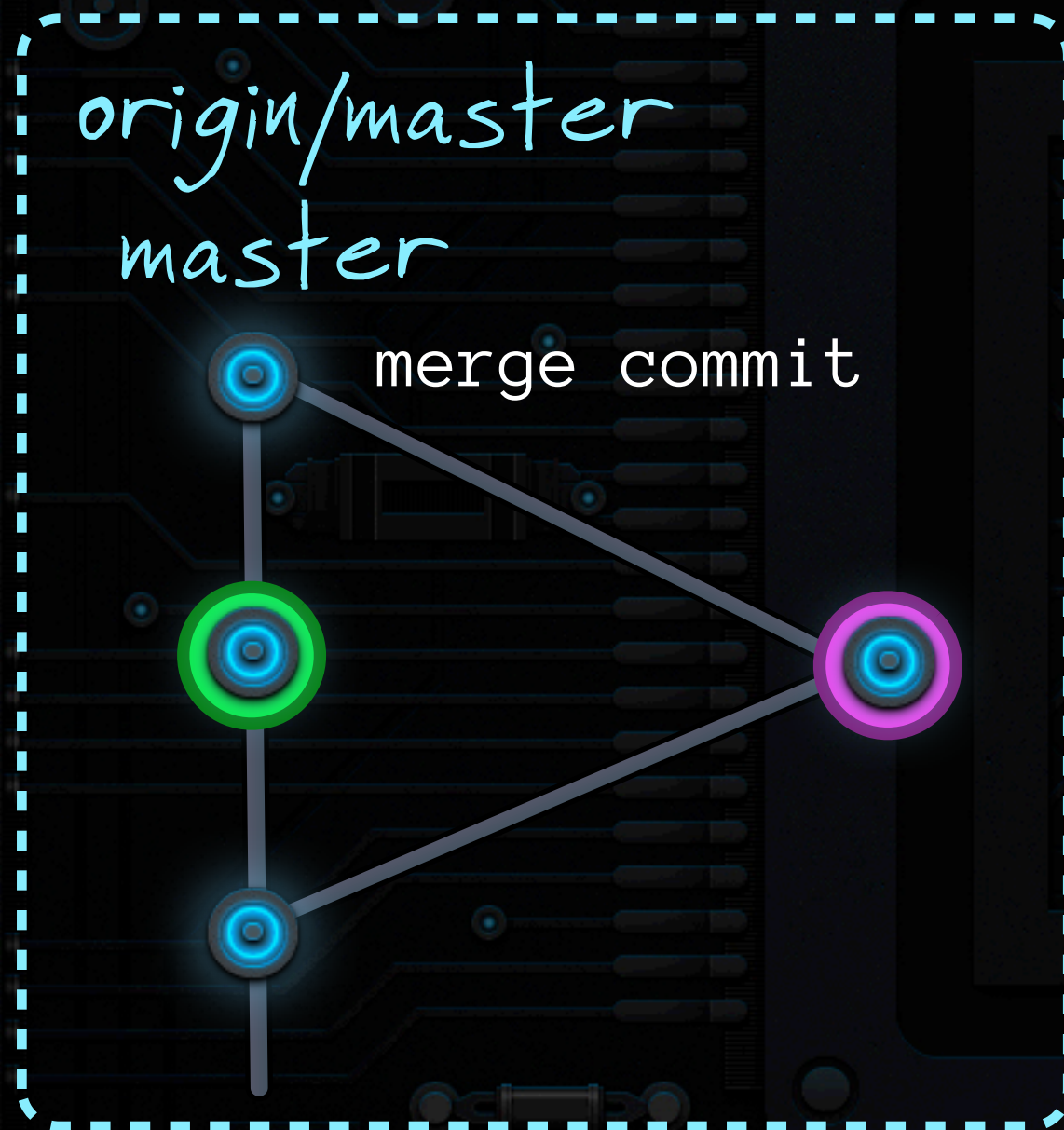
GTR

REAL

REBASE BELONG TO US

LEVEL 6

MERGE COMMITS ARE BAD



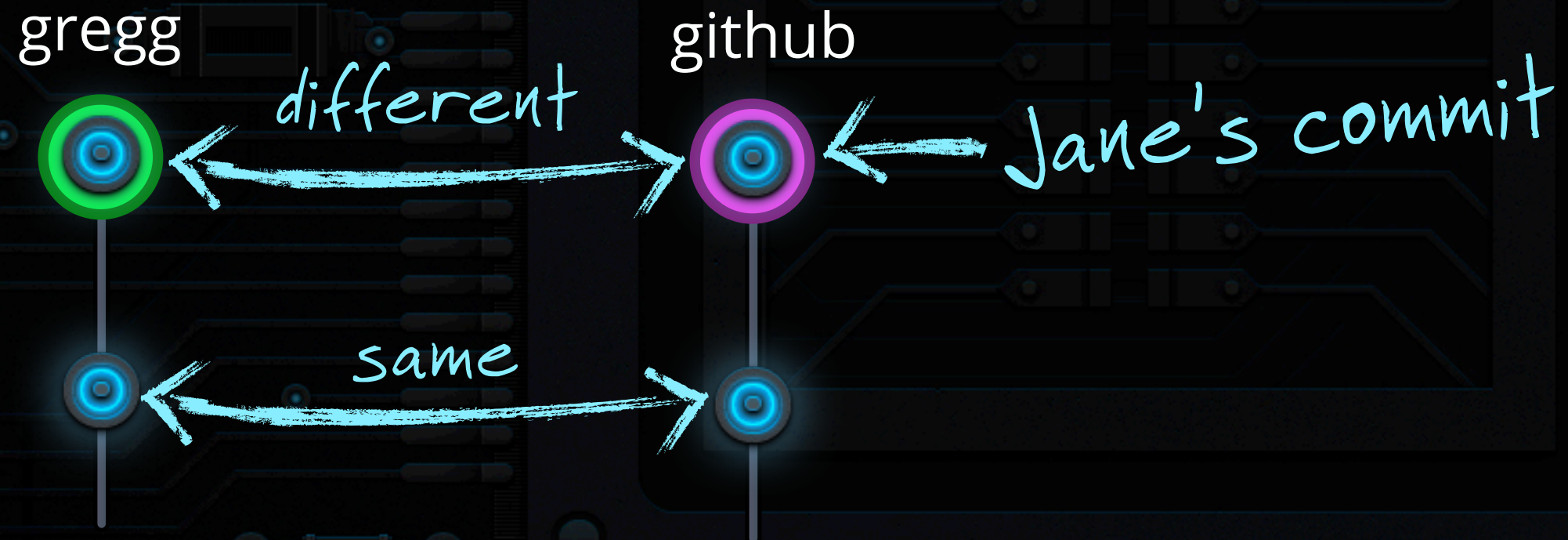
- Merge branch 'cats'
- Add Cats.
- Merge branch 'master' of http...
- Update the Readme.
- Add product and store models.

Merge commits feel useless

DIFFERENT GIT COMMITS



gregg \$ **git commit -am "Update the readme."**
[master c715339] Update the readme.
1 file changed, 1 insertion(+), 1 deletion(-)



GIT PUSH REJECTED

```
gregg $ git push
```

```
To https://github.com/codeschool/git-real.git
```

```
! [rejected]        master -> master (non-fast-forward)
```

```
error: failed to push some refs to 'https://github.com/codeschool/git-real.git'
```

```
hint: Updates were rejected because the tip of your current branch is behind
```

```
hint: its remote counterpart. Merge the remote changes (e.g. 'git pull')
```

```
hint: before pushing again.
```

```
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
```

```
$ git pull
```

```
...
```

```
$ git push
```

```
...
```

Cannot write over Jane's commit

Nope!

FETCH

```
gregg $ git fetch
```

```
remote: Counting objects: 5, done.
```

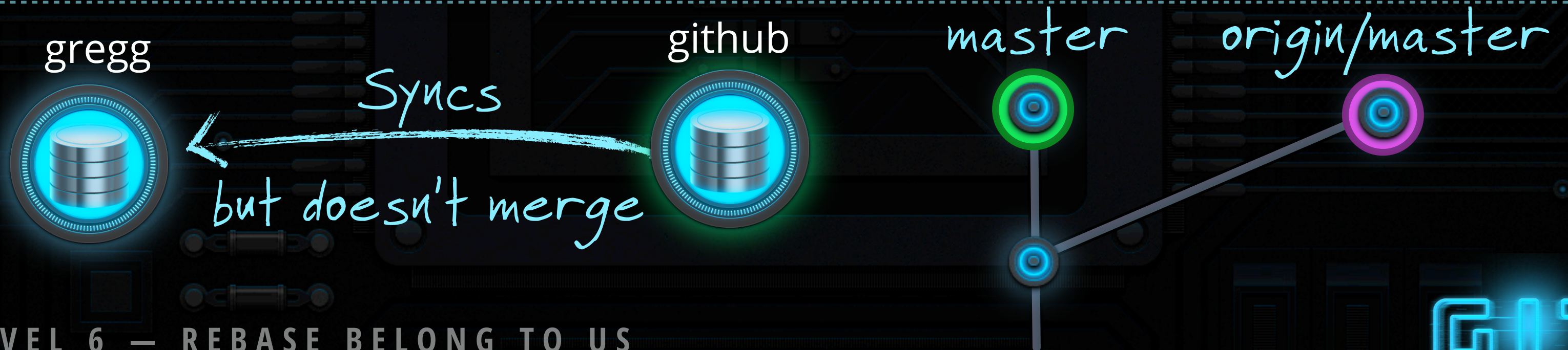
```
remote: Compressing objects: 100% (2/2), done.
```

```
remote: Total 4 (delta 0), reused 4 (delta 0)
```

```
Unpacking objects: 100% (4/4), done.
```

```
From https://github.com/codeschool/git-real
```

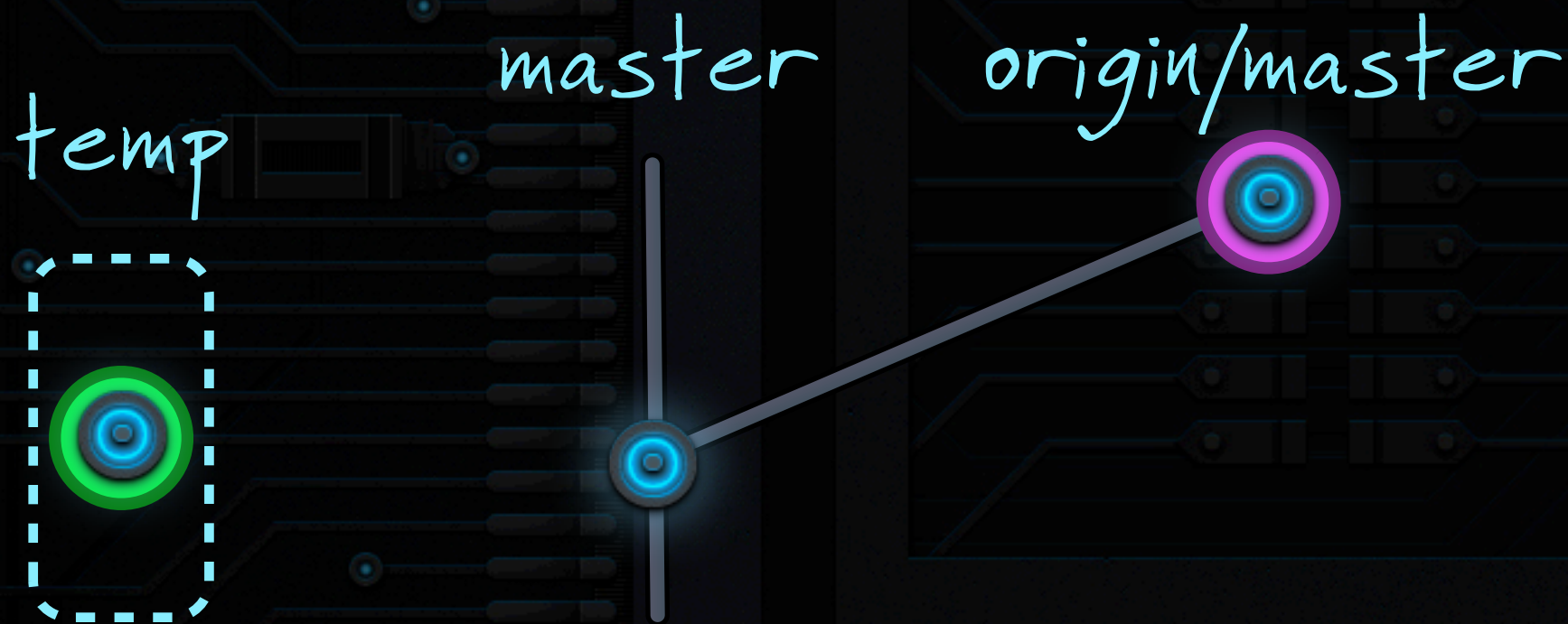
```
f35f2f1..71a4650 master -> origin/master
```



REBASE

```
gregg $ git rebase
```

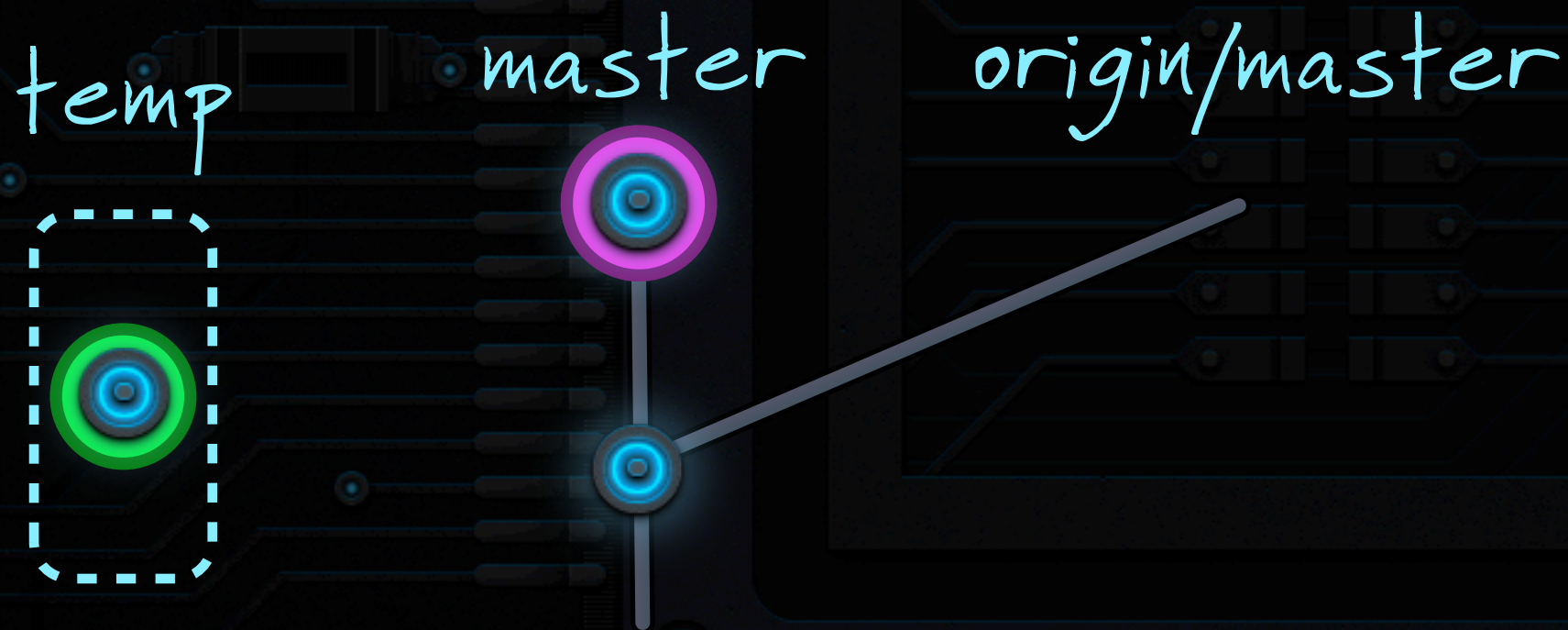
1. Move all changes to **master** which are not in **origin/master** to a temporary area.



REBASE

```
gregg $ git rebase
```

1. Move all changes to **master** which are not in **origin/master** to a temporary area.
2. Run all **origin/master** commits.



3. Run all commits in the temporary area, one at a time.

REBASE

```
gregg $ git rebase
```

1. Move all changes to **master** which are not in **origin/master** to a temporary area.
2. Run all **origin/master** commits.
3. Run all commits in the temporary area, one at a time.

master



Update the Readme.



Add product and store models.

No Merge Commit!

LOCAL BRANCH REBASE

```
$ git checkout admin  
Switched to branch 'admin'  
$ git rebase master  
...
```



IF ALL GOES WELL, MERGE MASTER

```
$ git checkout master
```

Switched to branch 'master'

```
$ git merge admin
```

...

master

admin

WHAT ABOUT CONFLICTS

gregg



Add shopping cart.



Add lie to readme.



github



Add truth to readme.



Add product and store models.



Edited same file!

same

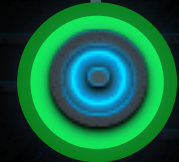
FETCH

```
gregg $ git fetch
```

master



Add shopping cart.



Add lie to readme.



origin/master



Add truth to readme.



Add product and store models.



REBASE

```
gregg $ git rebase
```

1. Move all changes to **master** which are not in **origin/master** to a temporary area

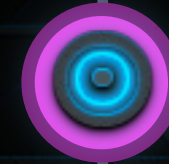
temp



origin/master



Add truth to readme.



Add product and store models.

master



REBASE

```
gregg $ git rebase
```

2. Run all **origin/master** commits.

temp



Add shopping cart.



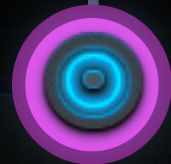
Add lie to readme.



master



Add truth to readme.



Add product and store models.



3. Run all commits in the temporary area, one at a time.

REBASE CONFLICT

```
gregg $ git rebase
```

First, rewinding head to replay your work on top of it...

Applying: Add lie to readme.

Using index info to reconstruct a base tree...

M README.txt

<stdin>:13: trailing whitespace.

the cake is a lie, and I am your father!

warning: 1 line adds whitespace errors.

Falling back to patching base and 3-way merge...

Auto-merging README.txt

CONFLICT (content): Merge conflict in README.txt

Failed to merge in the changes.

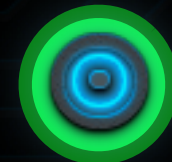
Patch failed at 0001 Add lie to readme.

When you have resolved this problem run "git rebase --continue".

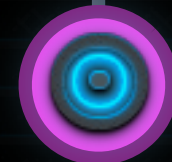
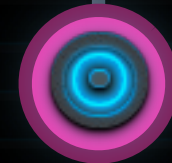
If you would prefer to skip this patch, instead run "git rebase --skip".

To check out the original branch and stop rebasing run "git rebase --abort".

master



CONFLICT



GIT

REAL

REBASE CONFLICT

```
gregg $ git status
```

```
# Not currently on any branch.
```

```
# Unmerged paths:
```

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

```
#   (use "git add/rm <file>..." as appropriate to mark resolution)
```

```
#
```

```
# both modified:      README.txt
```

```
#
```

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

Edit the README.txt

```
gregg $ git add README.txt
```

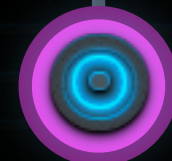
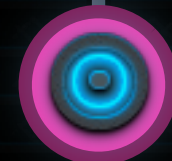
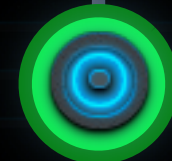
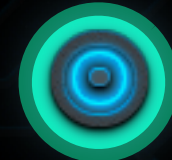
```
gregg $ git rebase --continue
```

```
Applying: Add lie to readme.
```

```
Applying: Add shopping cart
```

```
gregg $
```

master



REBASED LOG

master



Add shopping cart.



Add lie to readme.



Add truth to readme.



Add product and store models.



REBASE BELONG TO US

LEVEL 6



GTR

REAL