Git Tasks

Getting help

- Command line help (e.g., git help, git/gl cmd -h, man git-cmd)
- Anything else you can find online (e.g., StackOverflow, Google searches)
- Please don't use your phone or other sources beyond the desktop (since we're trying to track what you needed)

Navigating tasks

- Each session has a total of 7 tasks, each with a series of smaller steps
- For each step, we'll tell you what the resulting repository should look like
- If you make a mistake, don't worry! Just try to fix the problem, and remember you can search the web for help
- Don't go back to an old task: as soon as you move on to the next task we'll consider the previous task completed (if you finished all the steps) or abandoned
- Before each task you'll need to execute the bootstrap script ut-run with the next task number as input (instructions will be provided before each task). This script will clear what you've done so far and reset the repository to the state it's supposed to be for the next task.

Taking breaks

 You'll be able to take breaks between tasks. You'll know when you can take a break because there will be a slide with this symbol:



Misc tips

- Note that you are on a Mac so it's #+c to copy and #+v to paste (Ctrl+c/Ctrl+v won't work)
- You can configure the default text editor to be used when Git needs you to type in a message. If not configured, Git will use Vim. If you want to use a different text editor, such as Emacs, run the following command: git config --global core.editor emacs
- There's a separate txt file \$SNIPPETS which you can open with your editor of choice and use that for copy/pasting text instead of doing it from the slides
- If a step is not clear to you try reading its corresponding "check." It might help you figure out what to do

Fit-cli

In each session you'll be working as part of the team of fit industries Inc., developers of fit-cli. Fit-cli is a command line tool which given your gender, age, weight and height computes an estimate of the number of calories you burn per day just for being alive (also known as the resting metabolic rate).

Ever wanted to get a lower bound on the calories burned per day without leaving the command line? This is the app for you! Together with Alice (the CEO) and her team you are going to change the world.

Git

The fit-cli team are huge fans of git and use git for version control. Throughout the session you'll be using git to track changes to the source code. Fit-cli is written in Python but you don't need to know any code; we'll tell you exactly what to change and how. What you'll need to figure out is how to use git to complete the requested tasks.



You can take a break now if you want

Coming next: Task 0 (Practice Task)

Task 0 (Practice Task): Clone the fit-cli repository

Let's set up our machine to be ready to contribute to fit-cli. To do this we are going to clone the fit-cli repository.

Open the terminal, go to ~/Documents and clone the fit-cli repo at \$FIT_CLI_REMOTE - check



You can take a break now if you want

Get your repository ready for the next task by running the command ut-run git 1

Task 1: Add readme file

Maybe you didn't notice but our app has no readme file! What an atrocity! Let's fix this.

- 1) Create README.md with these contents
- 2) Track README.md check
- 3) Let's add usage instructions to the readme. Open README.md and make this change.
- 4) Create a commit with all changes to README.md and message "added readme" check



You can take a break now if you want

Get your repository ready for the next one by running the command ut-run git 2

Task 2: Let users input weight in kilos

The fact that users can only input their weight in pounds and height in inches happens to be a huge deterrement to non-US users of fit-cli. Alice has instructed you to implement two new features: let users input weight in kilos and let them input height in meters.

First, we are going to begin by implementing the kilos feature.

- Let's be diligent and work in a separate branch. Create a new branch feat/kilos and switch to it check
- 2) Open file fit.py and <u>make this change</u> <u>check</u>
- 3) Create a commit with the changes to fit.py and message "kilos feature" check
- 4) Bob (the CTO) will review our changes. Run the ut-pr-kilos-send command to send a pull request.
- 5) Bob has send you some comments on your code. First, he suggested we add a help message to the kilos flag. That's an easy fix! Open fit.py and makethischange check

Bob also suggested that instead of using the w_{const_female} and w_{const_male} variables we should change that to a dictionary. This is going to take more time to fix, so we are going to put this aside for a while and work on the meters feature instead.



You can take a break now if you want

Get your repository ready for the next one by running the command ut-run git 3

Task 3: Let users input height in meters (3.1)

- **3.1.** Let's get started with the height in meters feature.
- 1) Create a new branch feat/meters that diverges from master and switch to feat/meters check
- 2) Open file fit.py and <u>make this change</u> <u>check</u>

Task 3: Let users input height in meters (3.2)

- **3.2.** Alice just broke into your office! One of the main users of fit-cli reported a critical bug: no error is reported to the user if she inputs a value that is not the string "female" or "male" for the gender. Since she wants you to fix this right away, we are going to fix this bug, and then go back to working on our features.
- 1) Switch back to master check
- 2) Open file fit.py and <u>make this change</u> <u>check</u>
- 3) Create a commit with the changes to fit.py and message "fix error checking bug" check
- 4) Push the changes

Phew, the bug is now fixed. Now we are going to finish with our features.



You can take a break now if you want

Get your repository ready for the next one by running the command ut-run git 4

Task 4: Wrap with features (4.1)

- **4.1.** Bob wants us to wrap up the kilos feature so that it gets shipped with the next release. So instead of going back to working on the meters feature, we are going to leave that aside and finish with kilos.
- 1) Switch back to feat/kilos and go back to what we were doing before check
- 2) Let's change to using a dictionary like Bob wanted. Open fit.py and make this change check
- 3) Create a commit with the changes to fit.py and message "kilos improvements" check
- 4) Update the kilos pull request: run the command ut-pr-kilos-update

Task 4: Wrap with features (4.2)

- **4.2.** While we wait to hear from Bob regarding the kilos feature, we are going to go back to finishing with the meters feature.
- 1) Switch to feat/meters and bring back changes check
- 2) Now let's modify the computation of the rmb to use meters if the user specified so. Open fit.py and make this change check
- 3) Create a commit with the changes to fit.py and message "meters feature" check
- 4) Bob (the CTO) will review our changes. Run the ut-pr-meters-send command to send a pull request.



You can take a break now if you want

Get your repository ready for the next one by running the command ut-run git 5

Task 5: Fixing conflicts (5.1)

- **5.1.** Bob accepted your kilos merge request, but now he's saying that the height pull request doesn't apply cleanly, and he's asking us to fix conflicts with master and update the pull request.
- 1) Update our local master branch with the new changes in the remote master check
- 2) Switch back to feat/meters and rebase the changes from master (which will generate conflicts) check
- 3) Let's start fixing conflicts. Open fit.py and make this change check

Task 5: Fixing conflicts (5.2)

- **5.2.** Bob just broke into your office! Apparently we've been using the wrong shebang line all of this time. He wants you to fix this right away. We are going to fix this bug, and then go back to finish resolving the conflicts.
- 1) Switch to master check
- 2) Open fit.py and <u>make this change</u> <u>check</u>
- 3) Create a commit with the changes to fit.py and message "fix shebang" check
- 4) Push

Task 5: Fixing conflicts (5.3)

5.3. Let's finish fixing conflicts

- 1) Switch back to feat/meters and go back to the state where we where before fixing the bug check
- 2) Open fit.py and <u>make this change</u> <u>check</u>
- 3) Finish with the rebase operation check
- 4) Update the meters pull request: run the command ut-pr-meters-update



You can take a break now if you want

Get your repository ready for the next one by running the command ut-run git 6

Task 6: Code cleanup (6.1)

6.1. It's time to clean up our code. This should be a fairly small task so we are going to keep it simple and work on master.

- 1) Switch to master and pull changes check
- 2) Open fit.py and <u>make this change</u> <u>check</u>
- 3) Create a commit with the changes to fit.py and message "join const dicts" check

Task 6: Code cleanup (6.2)

- **6.2.** After a walk in the park you realized that the last commit might be wrong. So we are going to try something different.
- 1) Go back to the same state as before the commit check
- 2) Open fit.py and <u>make this change</u> <u>check</u>
- 3) Create a new commit with message "switch to using nt for consts" check
- 4) Using namedtuples looks better than merging the dictionaries, so let's go ahead and push these changes

The end!

Please complete the end of session survey

If this was your second session please complete the <u>end of study</u> <u>survey</u>

Material for Task 0

Command	Expected output	
Assuming you are at ~/Documents		
ls	fit-cli	
Assuming you are at ~/Documents/fit-cli		
ls	fit.py	
git branch	* master	
git logoneline	0e032fd first cut at fit-cli app f821dce Initialize repository	

Material for Task 1

```
fit-cli
```

The ultimate fitness app. Give your gender, age, weight and height to fit-cli and get an estimate of the number of calories you burn per day just for being alive; all of this without leaving the command line!

Command	Expected output
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: README.md</file>

1) Add at the end of the file:

To run fit-cli execute the fit.py script which accepts the following optional flags: -g/--gender, -a/--age, -w/--weight, -h/--height.

Command	Expected output
git log -p -1oneline	00f747d added readme diffgit a/README.md b/README.md new file mode 100644 index 0000000d787c5d /dev/null +++ b/README.md @@ -0,0 +1,5 @@ +fit-cli +====== +The ultimate fitness app. Give your gender, age, weight and height to fit-cli and get an estimate of the number of calories you burn per day just for being alive; all of this without leaving the command line! + +To run fit-cli execute the fit.py script which accepts the following optional flags:-g/gender, -a/age, -w/weight, -h/height.
git logoneline	00f747d added readme f294049 first cut at fit-cli app ef5940e Initialize repository

Material for Task 2

Command	Expected output
git branch	* feat/kilos master

1) After line 13 (i.e., after the height flag) add the following text in a new line:

```
parser.add_argument('-k', '--kilos', action='store_true')
```

2) Update the rmb call to match:

```
result = rmb(
    args.gender, args.age, args.weight, args.height, use_kg=args.kilos)
```

3) Update the rmb function to match:

```
def rmb(gender, age, weight, height, use_kg=False):
    w_const_female = 9.56 if use_kg else 4.35
    w_const_male = 13.75 if use_kg else 6.25
    if gender == 'female':
        return (655 + w_const_female * weight + 4.7 * height - 4.7 * age) * 1.1
    else:
        return (66 + w_const_male * weight + 12.7 * height - 6.76 * age) * 1.1
```

Command **Expected output** git diff diff --git a/fit.pv b/fit.pv index c28ba26..a7e4384 100755 --- a/fit.pv +++ b/fit.py @@ -11,18 +11,22 @@ def main(): parser.add argument('age', type=int) parser.add argument('weight', type=int, help='in pounds') parser.add argument('height', type=int, help='in inches') + parser.add argument('-k', '--kilos', action='store true') args = parser.parse args() - result = rmb(args.gender, args.age, args.weight, args.height) args.gender, args.age, args.weight, args.height, use kg=args.kilos) print('Your resting metabolic rate is {0}'.format(result)) -def rmb(gender, age, weight, height): +def rmb(gender, age, weight, height, use kg=False): + w const female = 9.56 if use kg else 4.35 + w const male = 13.75 if use kg else 6.25 if gender == 'female': - return (655 + 4.35 * weight + 4.7 * height - 4.7 * age) * 1.1 + return (655 + w const female * weight + 4.7 * height - 4.7 * age) * 1.1 else: return (66 + 6.25 * weight + 12.7 * height - 6.76 * age) * 1.1 + return (66 + w const male * weight + 12.7 * height - 6.76 * age) * 1.1 if name == ' main ':

Command **Expected output** git log --oneline -p -1 a7c51f5 kilos feature diff --git a/fit.py b/fit.py index c28ba26..a7e4384 100755 --- a/fit.pv +++ b/fit.py @@ -11,18 +11,22 @@ def main(): parser.add argument('age', type=int) parser.add argument('weight', type=int, help='in pounds') parser.add_argument('height', type=int, help='in inches') + parser.add argument('-k', '--kilos', action='store true') args = parser.parse args() - result = rmb(args.gender, args.age, args.weight, args.height) + result = rmb(args.gender, args.age, args.weight, args.height, use kg=args.kilos) print('Your resting metabolic rate is {0}'.format(result)) -def rmb(gender, age, weight, height): +def rmb(gender, age, weight, height, use kg=False): + w const female = 9.56 if use kg else 4.35 + w const male = 13.75 if use kg else 6.25 if gender == 'female': - return (655 + 4.35 * weight + 4.7 * height - 4.7 * age) * 1.1 + return (655 + w const female * weight + 4.7 * height - 4.7 * age) * 1.1 return (66 + 6.25 * weight + 12.7 * height - 6.76 * age) * 1.1 return (66 + w const male * weight + 12.7 * height - 6.76 * age) * 1.1 if name == ' main ': git log --oneline a7c51f5 kilos feature 00f747d added readme f294049 first cut at fit-cli app ef5940e Initialize repository

1) Change the kilos argument (line 14) to:

```
parser.add_argument(
    '-k', '--kilos', action='store_true',
    help='if true, then the weight given as input is interpreted as kg')
```

```
Command
                Expected output
                diff --git a/fit.py b/fit.py
git diff
                index a7e4384..04d6006 100755
                --- a/fit.pv
                +++ b/fit.pv
                @@ -11,7 +11,9 @@ def main():
                   parser.add argument('age', type=int)
                   parser.add argument('weight', type=int, help='in pounds')
                   parser.add argument('height', type=int, help='in inches')
                - parser.add argument('-k', '--kilos', action='store true')
                + parser.add argument(
                + '-k', '--kilos', action='store true',
                       help='if true, then the weight given as input is interpreted as kg')
                   args = parser.parse args()
                   result = rmb(
```

Material for Task 3

Command	Expected output
git branch -v	feat/kilos c34c636 kilos feature * feat/meters c23a513 added readme master c23a513 [ahead 1] added readme

1) After line 13 (i.e., after the height flag) add the following text in a new line:

```
parser.add_argument(
    '-m', '--meters', action='store_true',
    help='if true, the height input will be interpreted in meters')
```

2) Update the rmb call to match:

```
result = rmb(
    args.gender, args.age, args.weight, args.height, use_m=args.meters)
```

3) Update the rmb function to match:

```
def rmb(gender, age, weight, height, use_m=False):
    h_const= {
        'female': 1.8 if use_m else 4.7,
        'male': 5 if use_m else 12.7
      }
    if gender == 'female':
      return (655 + 4.35 * weight + 4.7 * height - 4.7 * age) * 1.1
    else:
      return (66 + 6.25 * weight + 12.7 * height - 6.76 * age) * 1.1
```

Command **Expected output** git diff diff --git a/fit.py b/fit.py index c28ba26..6af4580 100755 --- a/fit.py +++ b/fit.pv @@ -11,14 +11,22 @@ def main(): parser.add_argument('age', type=int) parser.add_argument('weight', type=int, help='in pounds') parser.add_argument('height', type=int, help='in inches') + parser.add argument('-m', '--meters', action='store_true', help='if true, the height input will be interpreted in meters') args = parser.parse_args() - result = rmb(args.gender, args.age, args.weight, args.height) + result = rmb(args.gender, args.age, args.weight, args.height, use_m=args.meters) print('Your resting metabolic rate is {0}'.format(result)) -def rmb(gender, age, weight, height): +def rmb(gender, age, weight, height, use_m=False): + h const= { 'female': 1.8 if use_m else 4.7, 'male': 5 if use_m else 12.7 if gender == 'female': return (655 + 4.35 * weight + 4.7 * height - 4.7 * age) * 1.1 else:

Command	Expected output
git branch	feat/kilos feat/meters * master
git status	On branch master Your branch is ahead of 'origin/master' by 1 commit. (use "git push" to publish your local commits) nothing to commit, working directory clean

1) Replace the line declaring the gender argument (line 10) to:

```
parser.add_argument('gender', choices=['female', 'male'])
```

Command	Expected output
git diff	<pre>diffgit a/fit.py b/fit.py index c28ba2629c708c 100755 a/fit.py +++ b/fit.py @@ -7,7 +7,7 @@ def main(): parser = argparse.ArgumentParser(</pre>

Command	Expected output
git logoneline -p -1	9a33c59 fix error checking bug diffgit a/fit.py b/fit.py index c28ba2629c708c 100755 a/fit.py +++ b/fit.py @@ -7,7 +7,7 @@ def main(): parser = argparse.ArgumentParser(
git logoneline	9a33c59 fix error checking bug c23a513 added readme 333ed80 first cut at fit-cli app 85e982f Initialize repository

Material for Task 4

```
Command
                                     Expected output
git status
                                     On branch feat/kilos
                                     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: fit.py
                                     no changes added to commit (use "git add" and/or "git commit -a")
git diff
                                     diff --git a/fit.py b/fit.py
                                     index a7e4384..04d6006 100755
                                     --- a/fit.pv
                                     +++ b/fit.py
                                     @@ -11,7 +11,9 @@ def main():
                                        parser.add argument('age', type=int)
                                        parser.add_argument('weight', type=int, help='in pounds')
                                        parser.add argument('height', type=int, help='in inches')
                                     - parser.add argument('-k', '--kilos', action='store true')
                                     + parser.add argument(
                                     + '-k', '--kilos', action='store_true',
                                           help='if true, then the weight given as input is interpreted as kg')
                                        args = parser.parse args()
                                        result = rmb(
```

1) Update the rmb function to match:

```
def rmb(gender, age, weight, height, use_kg=False):
    w_const = {
        'female': 9.56 if use_kg else 4.35,
        'male': 13.75 if use_kg else 6.25
        }
    if gender == 'female':
        return (655 + w_const[gender] * weight + 4.7 * height - 4.7 * age) * 1.1
    else:
        return (66 + w_const[gender] * weight + 12.7 * height - 6.76 * age) * 1.1
```

Command **Expected output** diff --git a/fit.py b/fit.py git diff index a7e4384..33865f7 100755 --- a/fit.pv +++ b/fit.py @@ -11,7 +11,9 @@ def main(): parser.add argument('age', type=int) parser.add argument('weight', type=int, help='in pounds') parser.add argument('height', type=int, help='in inches') parser.add argument('-k', '--kilos', action='store true') + parser.add argument('-k', '--kilos', action='store true', help='if true, then the weight given as input is interpreted as kg') args = parser.parse args() result = rmb(@@ -21,12 +23,14 @@ def main(): def rmb(gender, age, weight, height, use kg=False): - w const female = 9.56 if use kg else 4.35 - w const male = 13.75 if use kg else 6.25 + w const = { 'female': 9.56 if use kg else 4.35, 'male': 13.75 if use kg else 6.25 if gender == 'female': - return (655 + w const female * weight + 4.7 * height - 4.7 * age) * 1.1 return (655 + w const[gender] * weight + 4.7 * height - 4.7 * age) * 1.1 else: return (66 + w const male * weight + 12.7 * height - 6.76 * age) * 1.1 + return (66 + w const[gender] * weight + 12.7 * height - 6.76 * age) * 1.1 if name == ' main ':

Command **Expected output** git log --oneline -p -1 32ef741 kilos improvements diff --git a/fit.py b/fit.py index a7e4384..33865f7 100755 --- a/fit.py +++ b/fit.pv @@ -11,7 +11,9 @@ def main(): parser.add_argument('age', type=int) parser.add_argument('weight', type=int, help='in pounds') parser.add_argument('height', type=int, help='in inches') parser.add argument('-k', '--kilos', action='store true') + parser.add argument('-k', '--kilos', action='store true', help='if true, then the weight given as input is interpreted as kg') args = parser.parse_args() result = rmb(@@ -21,12 +23,14 @@ def main(): def rmb(gender, age, weight, height, use_kg=False): - w const female = 9.56 if use_kg else 4.35 - w_const_male = 13.75 if use_kg else 6.25 + w const = { 'female': 9.56 if use kg else 4.35, 'male': 13.75 if use kg else 6.25 if gender == 'female': - return (655 + w const female * weight + 4.7 * height - 4.7 * age) * 1.1 + return (655 + w_const[gender] * weight + 4.7 * height - 4.7 * age) * 1.1 else: - return (66 + w_const_male * weight + 12.7 * height - 6.76 * age) * 1.1 + return (66 + w_const[gender] * weight + 12.7 * height - 6.76 * age) * 1.1 if __name__ == '__main__':

git log --oneline

32ef741 kilos improvements
c34c636 kilos feature
c23a513 added readme
333ed80 first cut at fit-cli app
85e982f Initialize repository

Command	Expected output
git branch	* feat/meters feat/kilos master
git diff	<pre>diffgit a/fit.py b/fit.py index c28ba266af4580 100755 a/fit.py +++ b/fit.py @@ -11,14 +11,22 @@ def main(): parser.add_argument('age', type=int) parser.add_argument('weight', type=int, help='in pounds') parser.add_argument('height', type=int, help='in inches') + parser.add_argument(+ '-m', 'meters', action='store_true', + help='if true, the height input will be interpreted in meters') args = parser.parse_args() - result = rmb(args.gender, args.age, args.weight, args.height) + result = rmb(+ args.gender, args.age, args.weight, use_m=args.meters) print('Your resting metabolic rate is {0}'.format(result))</pre>
	-def rmb(gender, age, weight, height): +def rmb(gender, age, weight, height, use_m=False): + h_const= { + 'female': 1.8 if use_m else 4.7, + 'male': 5 if use_m else 12.7 + } if gender == 'female': return (655 + 4.35 * weight + 4.7 * height - 4.7 * age) * 1.1 else:

1) Update the rmb function to match:

```
def rmb(gender, age, weight, height, use_m=False):
    h_const= {
        'female': 1.8 if use_m else 4.7,
        'male': 5 if use_m else 12.7
        }
    if gender == 'female':
        return (655 + 4.35 * weight + h_const[gender] * height - 4.7 * age) * 1.1
    else:
        return (66 + 6.25 * weight + h_const[gender] * height - 6.76 * age) * 1.1
```

Command

Expected output

git diff

```
diff --git a/fit.pv b/fit.pv
index c28ba26..2f41016 100755
--- a/fit.pv
+++ b/fit.pv
@@ -11,18 +11,26 @@ def main():
  parser.add argument('age', type=int)
  parser.add argument('weight', type=int, help='in pounds')
  parser.add argument('height', type=int, help='in inches')
+ parser.add argument(
      '-m', '--meters', action='store true',
      help='if true, the height input will be interpreted in meters')
  args = parser.parse args()
- result = rmb(args.gender, args.age, args.weight, args.height)
+ result = rmb(
      args.gender, args.age, args.weight, args.height, use m=args.meters)
  print('Your resting metabolic rate is {0}'.format(result))
-def rmb(gender, age, weight, height):
+def rmb(gender, age, weight, height, use m=False):
+ h const= {
       'female': 1.8 if use m else 4.7,
       'male': 5 if use m else 12.7
  if gender == 'female':
  return (655 + 4.35 * weight + 4.7 * height - 4.7 * age) * 1.1
    return (655 + 4.35 * weight + h const[gender] * height - 4.7 * age) * 1.1
    return (66 + 6.25 * weight + 12.7 * height - 6.76 * age) * 1.1
+ return (66 + 6.25 * weight + h const[gender] * height - 6.76 * age) * 1.1
if name == ' main ':
```

Command **Expected output** git log --oneline -p -1 1495085 meters feature diff --git a/fit.py b/fit.py index c28ba26..2f41016 100755 --- a/fit.py +++ b/fit.py @@ -11,18 +11,26 @@ def main(): parser.add_argument('age', type=int) parser.add_argument('weight', type=int, help='in pounds') parser.add_argument('height', type=int, help='in inches') + parser.add argument('-m', '--meters', action='store_true', help='if true, the height input will be interpreted in meters') args = parser.parse args() - result = rmb(args.gender, args.age, args.weight, args.height) + result = rmb(args.gender, args.age, args.weight, args.height, use_m=args.meters) print('Your resting metabolic rate is {0}'.format(result)) -def rmb(gender, age, weight, height): +def rmb(gender, age, weight, height, use m=False): + h const= { 'female': 1.8 if use_m else 4.7, 'male': 5 if use m else 12.7 if gender == 'female': - return (655 + 4.35 * weight + 4.7 * height - 4.7 * age) * 1.1 + return (655 + 4.35 * weight + h const[gender] * height - 4.7 * age) * 1.1 else: - return (66 + 6.25 * weight + 12.7 * height - 6.76 * age) * 1.1 + return (66 + 6.25 * weight + h const[gender] * height - 6.76 * age) * 1.1 if __name__ == '__main__':

git log --oneline

1495085 meters feature c23a513 added readme 333ed80 first cut at fit-cli app 85e982f Initialize repository

Material for Task 5

Command	Expected output
git logoneline master	f79c92b Merge branch 'feat/kilos' into tmp 32ef741 kilos improvements 9a33c59 fix error checking bug c23a513 added readme c34c636 kilos feature 333ed80 first cut at fit-cli app 85e982f Initialize repository

Command	Expected output
git status	rebase in progress; onto dbe5bab You are currently rebasing branch 'feat/meters' on 'dbe5bab'. (fix conflicts and then run "git rebasecontinue") (use "git rebaseskip" to skip this patch) (use "git rebaseabort" to check out the original branch) Unmerged paths: (use "git reset HEAD <file>" to unstage) (use "git add <file>" to mark resolution) both modified: fit.py</file></file>
git diff	no changes added to commit (use "git add" and/or "git commit -a") diffcc fit.py
	index 34c5706,2f410160000000 a/fit.py +++ b/fit.py @@@ -12,25 -12,25 +12,46 @@@ def main() parser.add_argument('weight', type=int, help='in pounds') parser.add_argument('height', type=int, help='in inches') parser.add_argument(++<<<<<< HEAD +

```
git diff
                 ++<<<<< HEAD
(cont)
                  +def rmb(gender, age, weight, height, use_kg=False):
                  + w_const = {
                      'female': 9.56 if use_kg else 4.35,
                      'male': 13.75 if use_kg else 6.25
                  + if gender == 'female':
                 + return (655 + w_const[gender] * weight + 4.7 * height - 4.7 * age) *
                 1.1
                 + else:
                 + return (66 + w_const[gender] * weight + 12.7 * height - 6.76 * age)
                 * 1.1
                 ++======
                 + def rmb(gender, age, weight, height, use_m=False):
                 + h_const= {
                        'female': 1.8 if use_m else 4.7,
                        'male': 5 if use_m else 12.7
                 + if gender == 'female':
                 + return (655 + 4.35 * weight + h_const[gender] * height - 4.7 * age)
                 * 1.1
                 + else:
                 + return (66 + 6.25 * weight + h_const[gender] * height - 6.76 * age)
                 * 1.1
                 ++>>>>> meters feature
                  if __name__ == '__main__':
```

1) Update the main function to match:

```
def main():
  parser = argparse.ArgumentParser(
      description=(
        'fit-cli: compute your resting metabolic rate from the command line'))
  parser.add argument('gender', choices=['female', 'male'])
  parser.add argument('age', type=int)
 parser.add argument('weight', type=int, help='in pounds')
  parser.add argument('height', type=int, help='in inches')
  parser.add argument(
      '-k', '--kilos', action='store_true',
      help='if true, then the weight given as input is interpreted as kg')
  parser.add argument(
      '-m', '--meters', action='store true',
      help='if true, the height input will be interpreted in meters')
  args = parser.parse args()
  result = rmb(
      args.gender, args.age, args.weight, args.height,
      use_kg=args.kilos, use_m=args.meters)
  print('Your resting metabolic rate is {0}'.format(result))
```

```
Command
                      Expected output
git diff
                        diff --cc fit.py
                        index 34c5706,2f41016..0000000
                        --- a/fit.py
                        +++ b/fit.pv
                        @@@ -12,25 -12,25 +12,41 @@@ def main()
                            parser.add_argument('weight', type=int, help='in pounds')
                            parser.add_argument('height', type=int, help='in inches')
                            parser.add argument(
                             '-k', '--kilos', action='store true',
                               help='if true, then the weight given as input is interpreted as kg')
                        ++ parser.add argument(
                               '-m', '--meters', action='store true',
                               help='if true, the height input will be interpreted in meters')
                            args = parser.parse_args()
                            result = rmb(
                               args.gender, args.age, args.weight, args.height, use kg=args.kilos)
                               args.gender, args.age, args.weight, args.height, use_m=args.meters)
                            args.gender, args.age, args.weight, args.height,
                               use kg=args.kilos, use m=args.meters)
                            print('Your resting metabolic rate is {0}'.format(result))
                        +def rmb(gender, age, weight, height, use kg=False):
                         + w const = {
                                'female': 9.56 if use kg else 4.35,
                               'male': 13.75 if use kg else 6.25
                         + if gender == 'female':
                             return (655 + w_const[gender] * weight + 4.7 * height - 4.7 * age) * 1.1
                         + else:
                         + return (66 + w_const[gender] * weight + 12.7 * height - 6.76 * age) * 1.1
```

```
git diff
(cont)

+ +======
+ def rmb(gender, age, weight, height, use_m=False):
+ h_const= {
+ 'female': 1.8 if use_m else 4.7,
+ 'male': 5 if use_m else 12.7
+ }
+ if gender == 'female':
+ return (655 + 4.35 * weight + h_const[gender] * height - 4.7 * age) *
1.1
+ else:
+ return (66 + 6.25 * weight + h_const[gender] * height - 6.76 * age) * 1.1
++>>>>>> meters feature

if __name__ == '__main__':
```

Command	Expected output
git branch	feat/kilos feat/meters * master

1) Replace

```
#!/usr/bin/python
```

with

#!/usr/bin/env python

Command	Expected output
git diff	<pre>diffgit a/fit.py b/fit.py index 34c570627d1599 100755 a/fit.py +++ b/fit.py @@ -1,4 +1,4 @@ -#!/usr/bin/python +#!/usr/bin/env python import argparse</pre>

Command	Expected output
git logoneline -p -1	a9a2895 fix shebang diffgit a/fit.py b/fit.py index 34c570627d1599 100755 a/fit.py +++ b/fit.py @@ -1,4 +1,4 @@ -#!/usr/bin/python +#!/usr/bin/env python import argparse
git logoneline	a9a2895 fix shebang f79c92b Merge branch 'feat/kilos' into tmp 32ef741 kilos improvements 9a33c59 fix error checking bug c23a513 added readme c34c636 kilos feature 333ed80 first cut at fit-cli app 85e982f Initialize repository

Command	Expected output
git status	rebase in progress; onto 0910678
	You are currently rebasing branch 'feat/meters' on '0910678'.
	(fix conflicts and then run "git rebasecontinue")
	(use "git rebaseskip" to skip this patch)
	(use "git rebaseabort" to check out the original branch)
	Unmerged paths:
	(use "git reset HEAD <file>" to unstage)</file>
	(use "git add <file>" to mark resolution)</file>
	both modified: fit.py
	no changes added to commit (use "git add" and/or "git commit -a")
git diff	diffcc fit.py
•	index 27d1599,2f410160000000
	a/fit.py
	+++ b/fit.py
	@@@ -12,25 -12,25 +12,41 @@@ def main()
	parser.add argument('weight', type=int, help='in pounds')
	parser.add_argument('height', type=int, help='in inches')
	parser.add argument(
	+ '-k', 'kilos', action='store true',
	+ help='if true, then the weight given as input is interpreted as kg')
	++ parser.add argument(
	+ '-m', 'meters', action='store true',
	+ help='if true, the height input will be interpreted in meters')
	args = parser.parse args()
	aigs - paiser.paise_aigs()
	result = rmb(
	- args.gender, args.age, args.weight, args.height, use_kg=args.kilos)
	- args.gender, args.age, args.weight, args.height, use_m=args.meters)
	++ args.gender, args.age, args.weight, args.height,
	++ use_kg=args.kilos, use_m=args.meters)
	<pre>print('Your resting metabolic rate is {0}'.format(result))</pre>

```
git
diff
(cont)
          ++<<<<< HEAD
          +def rmb(gender, age, weight, height, use_kg=False):
          + w_const = {
               'female': 9.56 if use_kg else 4.35,
                 'male': 13.75 if use_kg else 6.25
          + if gender == 'female':
          + return (655 + w_const[gender] * weight + 4.7 * height - 4.7 * age) * 1.1
          + else:
          + return (66 + w_const[gender] * weight + 12.7 * height - 6.76 * age) * 1.1
          + def rmb(gender, age, weight, height, use_m=False):
          + h const= {
                 'female': 1.8 if use_m else 4.7,
                 'male': 5 if use_m else 12.7
          + if gender == 'female':
         + return (655 + 4.35 * weight + h_const[gender] * height - 4.7 * age) *
         1.1
          + else:
         + return (66 + 6.25 * weight + h_const[gender] * height - 6.76 * age) * 1.1
          ++>>>>> meters feature
           if __name__ == '__main__':
```

1) Update rmb to match:

```
def rmb(gender, age, weight, height, use_kg=False, use_m=False):
  w const = {
      'female': 9.56 if use kg else 4.35,
      'male': 13.75 if use kg else 6.25
  h const= {
      'female': 1.8 if use m else 4.7,
      'male': 5 if use m else 12.7
  if gender == 'female':
    return (
        655 + w const[gender] * weight + h const[gender] * height -
        4.7 * age) * 1.1
  else:
    return (
        66 + w_const[gender] * weight + h_const[gender] * height -
        6.76 * age) * 1.1
```

```
Com
        Expected output
mand
git
        diff --cc fit.pv
diff
        index 27d1599,2f41016..0000000
        --- a/fit.pv
        +++ b/fit.pv
        @@@ -12,25 -12,25 +12,37 @@@ def main()
            parser.add argument('weight', type=int, help='in pounds')
            parser.add argument('height', type=int, help='in inches')
            parser.add argument(
             '-k', '--kilos', action='store true',
               help='if true, then the weight given as input is interpreted as kg')
        ++ parser.add argument(
                '-m', '--meters', action='store true',
               help='if true, the height input will be interpreted in meters')
            args = parser.parse_args()
            result = rmb(
                args.gender, args.age, args.weight, args.height, use kg=args.kilos)
               args.gender, args.age, args.weight, args.height, use m=args.meters)
               args.gender, args.age, args.weight, args.height,
        ++
               use kg=args.kilos, use m=args.meters)
            print('Your resting metabolic rate is {0}'.format(result))
```

```
git
        - def rmb(gender, age, weight, height, use_kg=False):
diff
        -def rmb(gender, age, weight, height, use_m=False):
       ++def rmb(gender, age, weight, height, use_kg=False, use_m=False):
(con
t)
        + w const = {
               'female': 9.56 if use kg else 4.35,
             'male': 13.75 if use kg else 6.25
           h const= {
               'female': 1.8 if use_m else 4.7,
               'male': 5 if use m else 12.7
           if gender == 'female':
             return (655 + w_const[gender] * weight + 4.7 * height - 4.7 * age) * 1.1
             return (655 + 4.35 * weight + h const[gender] * height - 4.7 * age) * 1.1
             return (
                 655 + w const[gender] * weight + h const[gender] * height -
       ++
                 4.7 * age) * 1.1
        ++
           else:
             return (66 + w_const[gender] * weight + 12.7 * height - 6.76 * age) * 1.1
             return (66 + 6.25 * weight + h_const[gender] * height - 6.76 * age) * 1.1
       ++
             return (
                 66 + w_const[gender] * weight + h_const[gender] * height -
       ++
              6.76 * age) * 1.1
       ++
         if name == ' main ':
```

```
Comman
             Expected output
             b530b05 meters feature
git log
            diff --git a/fit.py b/fit.py
--oneline
             index 27d1599..e95c109 100755
-p -1
             --- a/fit.pv
             +++ b/fit.pv
             @@ -14,23 +14,35 @@ def main():
                parser.add argument(
                    '-k', '--kilos', action='store true',
                   help='if true, then the weight given as input is interpreted as kg')
             + parser.add argument(
                   '-m', '--meters', action='store true',
                   help='if true, the height input will be interpreted in meters')
               args = parser.parse args()
                result = rmb(
                   args.gender, args.age, args.weight, args.height, use kg=args.kilos)
                   args.gender, args.age, args.weight, args.height,
                   use kg=args.kilos, use m=args.meters)
                print('Your resting metabolic rate is {0}'.format(result))
```

```
git
        -def rmb(gender, age, weight, height, use kg=False):
        +def rmb(gender, age, weight, height, use_kg=False, use_m=False):
log
           w const = {
--
oneli
               'female': 9.56 if use_kg else 4.35,
               'male': 13.75 if use_kg else 6.25
ne -p
-1
(cont
        + h const= {
               'female': 1.8 if use m else 4.7,
               'male': 5 if use m else 12.7
           if gender == 'female':
             return (655 + w_const[gender] * weight + 4.7 * height - 4.7 * age) * 1.1
             return (
                 655 + w_const[gender] * weight + h_const[gender] * height -
                 4.7 * age) * 1.1
            else:
             return (66 + w_const[gender] * weight + 12.7 * height - 6.76 * age) * 1.1
             return (
                 66 + w const[gender] * weight + h const[gender] * height -
                 6.76 * age) * 1.1
         if name == ' main ':
```

```
git log
2cadc7a meters feature
0910678 fix shebang
dbe5bab Merge branch 'feat/kilos' into tmp
c8aba68 kilos improvements
f0fc9a7 fix error checking bug
bbc9a04 kilos feature
216a831 added readme
0e032fd first cut at fit-cli app
f821dce Initialize repository
```

Material for Task 6

Command	Expected output
git branch	feat/kilos feat/meters * master
git logoneline	01ef275 meters feature 2d5f2ca fix shebang c03ce28 Merge branch 'feat/kilos' into tmp 238a883 kilos improvements 0865880 fix error checking bug b8284fc kilos feature 2b2442b added readme 6eb27d8 first cut at fit-cli app 7525920 Initialize repository

1) Update rmb to match:

```
def rmb(gender, age, weight, height, use_kg=False, use_m=False):
 const = {
      'weight': {
         'female': 9.56 if use_kg else 4.35,
         'male': 13.75 if use_kg else 6.25
        },
      'height': {
         'female': 1.8 if use_m else 4.7,
         'male': 5 if use m else 12.7
 if gender == 'female':
    return (
       655 + const['weight'][gender] * weight +
        const['height'][gender] * height - 4.7 * age) * 1.1
 else:
   return (
        66 + const['weight'][gender] * weight +
        const['height'][gender] * height - 6.76 * age) * 1.1
```

Command	Expected output
git diff	diffgit a/fit.py b/fit.py index e95c109a080817 100755 a/fit.py +++ b/fit.py @@ -27,22 +27,24 @@ def main():
	<pre>def rmb(gender, age, weight, height, use_kg=False, use_m=False):</pre>
	<pre>+</pre>

Command	Expected output
git logoneline - p -1	Toce46e5 join const dicts diffgit a/fit.py b/fit.py index e95c109a080817 100755 a/fit.py +++ b/fit.py @@ -27,22 +27,24 @@ def main(): def rmb(gender, age, weight, height, use_kg=False, use_m=False): - w_const = { - 'female': 9.56 if use_kg else 4.35, - 'male': 13.75 if use_kg else 6.25 - } - h_const= { - 'female': 1.8 if use_m else 4.7, - 'male': 5 if use_m else 12.7 + const = { + 'weight': { + 'female': 9.56 if use_kg else 4.35, + 'male': 5 if use_m else 4.7, - 'height': { + 'female': 13.75 if use_kg else 6.25 + }, + 'height': { + 'female': 1.8 if use_m else 4.7, + 'male': 5 if use_m else 4.7, + 'male': 5 if use_m else 4.7,
	_ ·

```
git
           if gender == 'female':
log --
               return (
onelin
                   655 + w_const[gender] * weight + h_const[gender] * height -
                  4.7 * age) * 1.1
е -р
-1
                   655 + const['weight'][gender] * weight +
(cont)
                   const['height'][gender] * height - 4.7 * age) * 1.1
             else:
               return (
                   66 + w_const[gender] * weight + h_const[gender] * height -
                   6.76 * age) * 1.1
                   66 + const['weight'][gender] * weight +
                   const['height'][gender] * height - 6.76 * age) * 1.1
```

```
git log --oneline

734ed30 join const dicts
2cadc7a meters feature
0910678 fix shebang
dbe5bab Merge branch 'feat/kilos' into tmp
c8aba68 kilos improvements
f0fc9a7 fix error checking bug
bbc9a04 kilos feature
216a831 added readme
0e032fd first cut at fit-cli app
f821dce Initialize repository
```

Command	Expected output
git status	On branch master Your branch is up-to-date with 'origin/master'. nothing to commit, working directory clean

1) After line 3 (i.e., after import argparse) add the following text in a new line:

```
import collections
```

2) Update rmb to match:

```
def rmb(gender, age, weight, height, use kg=False, use m=False):
 Const = collections.namedtuple('Const', ['weight', 'height'])
  const = Const(
     {'female': 9.56 if use kg else 4.35,
       'male': 13.75 if use kg else 6.25},
     {'female': 1.8 if use m else 4.7,
       'male': 5 if use m else 12.7})
  if gender == 'female':
     return (
       655 + const.weight[gender] * weight +
        const.height[gender] * height - 4.7 * age) * 1.1
  else:
     return (
       66 + const.weight[gender] * weight +
        const.height[gender] * height - 6.76 * age) * 1.1
```

Command	Expected output	
git diff	<pre>diffgit a/fit.py b/fit.py index e95c1099467829 100755 a/fit.py +++ b/fit.py @@ -1,6 +1,7 @@ #!/usr/bin/env python</pre>	
	<pre>import argparse +import collections</pre>	
	def main(): @@ -27,22 +28,20 @@ def main():	
	<pre>def rmb(gender, age, weight, height, use_kg=False, use_m=False):</pre>	
	- } - h_const= { - 'female': 1.8 if use_m else 4.7, - 'male': 5 if use_m else 12.7	
	- } + Const = collections.namedtuple('Const', ['weight', 'height']) + const = Const(+ {'female': 9.56 if use_kg else 4.35,	
	<pre>+ 'male': 13.75 if use_kg else 6.25}, + {'female': 1.8 if use_m else 4.7, + 'male': 5 if use_m else 12.7}) if gender == 'female':</pre>	
	return (- 655 + w_const[gender] * weight + h_const[gender] * height 4.7 * age) * 1.1 + 655 + const.weight[gender] * weight +	
	+ 653 + Const.weight[gender] * weight + + const.height[gender] * height - 4.7 * age) * 1.1 else: return (
	- 66 + w_const[gender] * weight + h_const[gender] * height 6.76 * age) * 1.1 + 66 + const.weight[gender] * weight +	

```
Comman
               Expected output
d
git log --
               9afbe76 switch to using nt for consts
oneline -p
               diff --git a/fit.py b/fit.py
-1
               index e95c109..9467829 100755
               --- a/fit.py
               +++ b/fit.py
               @@ -1,6 +1,7 @@
                #!/usr/bin/env python
                import argparse
               +import collections
                def main():
               @@ -27,22 +28,20 @@ def main():
                def rmb(gender, age, weight, height, use kg=False, use m=False):
               - w const = {
                      'female': 9.56 if use kg else 4.35,
                     'male': 13.75 if use kg else 6.25
               - h const= {
                      'female': 1.8 if use m else 4.7,
                      'male': 5 if use m else 12.7
               + Const = collections.namedtuple('Const', ['weight', 'height'])
               + const = Const(
                  {'female': 9.56 if use kg else 4.35,
                     'male': 13.75 if use kg else 6.25},
                    {'female': 1.8 if use m else 4.7,
                      'male': 5 if use m else 12.7})
```

```
git log --
                 if gender == 'female':
oneline -p
                   return (
                       655 + w_const[gender] * weight + h_const[gender] * height -
-1
                       4.7 * age) * 1.1
                       655 + const.weight[gender] * weight +
                       const.height[gender] * height - 4.7 * age) * 1.1
                 else:
                   return (
                       66 + w_const[gender] * weight + h_const[gender] * height -
                       6.76 * age) * 1.1
                       66 + const.weight[gender] * weight +
                       const.height[gender] * height - 6.76 * age) * 1.1
               if __name__ == '__main__':
```

```
git log 9afbe76 switch to using nt for consts b530b05 meters feature oneline a9a2895 fix shebang f79c92b Merge branch 'feat/kilos' into tmp 32ef741 kilos improvements 9a33c59 fix error checking bug c34c636 kilos feature c23a513 added readme 333ed80 first cut at fit-cli app 85e982f Initialize repository
```