

Welcome to your interview with the SimpleHomestead - "The crunchiest products you could want!". Here at SimpleHomestead we like to begin our process with evaluating how our applicants do with source control activities. We, like many other places in the industry, use Github and Git for our repositories. The following questions should be answered in a separate plain text document. Please put your name at the top of the separate document and then enter the exact command that you would use for each question. Do NOT use a Microsoft Word, Apple Pages, WordPerfect, or similar rich text editor as it can result in autocorrections that will effect your score.

A few details to help with the questions below. We have set you up on a computer that has already had SSH keys shared with Github. The user that you will be operating under is Farmer01. The machine's operating systems is Ubuntu Linux.

To begin with, we are asking that you make a local copy of an existing repository we have previously established. The contents of the repository should be stored at /Users/Farmer01/Interview/MoreDetails/interview. The link to the remote repository is

`git@github.com:simplehomestead/interview.git`

1. Given the prompt below, what is the command(s) that you will use to create the repository in the directory given above without creating additional sub directories? Please note that the Farmer01 home directory is currently **empty**.

```
Farmer01@InterviewPC ~ %
```

2. After you have made a local copy of the repository, we would like for you to use a command within terminal to create a new, empty file - YourName.txt - inside the newly created repository. Please replace 'YourName' with your actual first name. Note, the use of nano is **not valid** in this case. Given the prompt below, what is the command(s) that you will use to create the file with the filename given? Additional note of importance, this should be done in a **single line**, not multiple.

```
Farmer01@InterviewPC Interview %
```

3. Which command was used to return the contents of the directory below? Note the order of the files when answering this question.

```
Total 16
-rw-r--r--  1 Farmer01  staff   15 Sep  11 02:12 YourName.txt
-rw-r--r--  1 Farmer01  staff   19 Sep  11 02:12 SeptemberSales.txt
Farmer01@InterviewPC interview %
```

4. Given the prompt and screen readout below, what command was used to return this information?

```
On branch developer
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working
directory)
        modified:   SeptemberSales.txt
```

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

```
no changes added to commit (use "git add" and/or "git commit -a")
Farmer01@InterviewPC interview %
```

5. Please note that the files listed are not related. The YourName.txt is the new file recently created by you during this process and the SeptemberSales has recently been updated with the newest sales figures for this week.

Given the information above, and the prompt below: What are the command(s) to create a new checkpoint(s) within the repository with the changes? Please add an appropriate message to your checkpoint indicating what could have been done. Failing to give an appropriate message will result in significant points deduction.

```
Farmer01@InterviewPC MoreDetails %
```

6. Upon review of the information shared on the previous page, we have discovered that the current repository was created with an incorrect default branch. Assuming the prompt below, what command could be run that will allow you to rename the branch shown on the previous page to the current accepted default branch (main) even if you are uncertain which branch is currently checked out?

```
Farmer01@InterviewPC MoreDetails %
```

7. After completing all the tasks above, you must ensure that the changes made are reflected within our repository on Github. Given the prompt below, what are the command(s) needed to do this?

```
Farmer01@InterviewPC interview %
```

Even as a junior developer there will be times that you will be given a new project that does not have any previous history. As such, it will be your responsibility to create a new repository to track changes that you make. For the next set of questions, you will need to create a new repository for one of these projects, tacoCounter.

8. Given the prompt below, what command(s) would you use to create a new repository with the appropriate default branch name (main) in the directory /Users/Farmer01/Interview/tacos/tacoCounter? Please note, we are uncertain what version of Git is installed on this computer.

```
Total 0
drwxr-xr-x@  5 Applicant01  staff  160 Sep 12 08:42 ACMESolutions
drwxr-xr-x@  5 Applicant01  staff  160 Sep 10 12:15 SecretProject
Farmer01@InterviewPC interview %
```

9. After creating the repository above, you should create a new 'channel' within it to allow you to track the development of a new user nterface. Please name this new channel, NewUI. Given the prompt below, what are the command(s) needed to accomplish creating the channel and preparing to use it?

```
Farmer01@InterviewPC tacoCounter %
```

10. Given the prompt below, please share the command(s) that you would use to create appropriate checkpoint(s) for the three unrelated files.

```
On branch NewUI
```

```
No commits yet
```

```
Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   designdocument.txt
    new file:   registrationmockup.ai
    new file:   dashboard.html
```

11. This Git operation enables users to unify two commit histories, effectively bringing them together. For instance, it is employed to integrate a feature branch into the main branch while preserving the complete commit history.

12. A user in the repository above has made a number of small commits that have adjusted the spacing on the Login screen's UI. These changes, individually, do not need to be tracked and are not significant. What action can the user do to combine these commits into a single, trackable commit? NOTE: Although this was not discussed in direct lecture, I did mention it along with a can analogy and it was mentioned in the Git certification course.

13. Which command would you employ to transfer your local repository changes to a repository on GitHub, for instance?

14. What git command is used to retrieve/gather changes in a remote repository as compared to your local repository?

15. You have a repository that currently tracks only the file names.json. You've made several changes to the file in the past few hours but haven't committed these changes yet. Before creating a new commit, you want to review the modifications you've made, but you can't recall all of them. Which Git command could you use to review the changes made to this file since the last commit? NOTE: This command was covered in the Git certification course.

16. Where is a local repository stored in a repo's directory?

17. In the initial DevOps LinkedIn Learning course the commentators/instructors mentioned that servers should be treated differently now as compared to the past. What was the analogy they used and what does it mean?

18. A repository that is not stored on a user's machine is referred to as a _____ repository.

19. In your own words, please explain what DevOps is.

20. Explain the concept of a Git conflict and provide a brief overview of the steps involved in resolving a conflict during a merge operation.