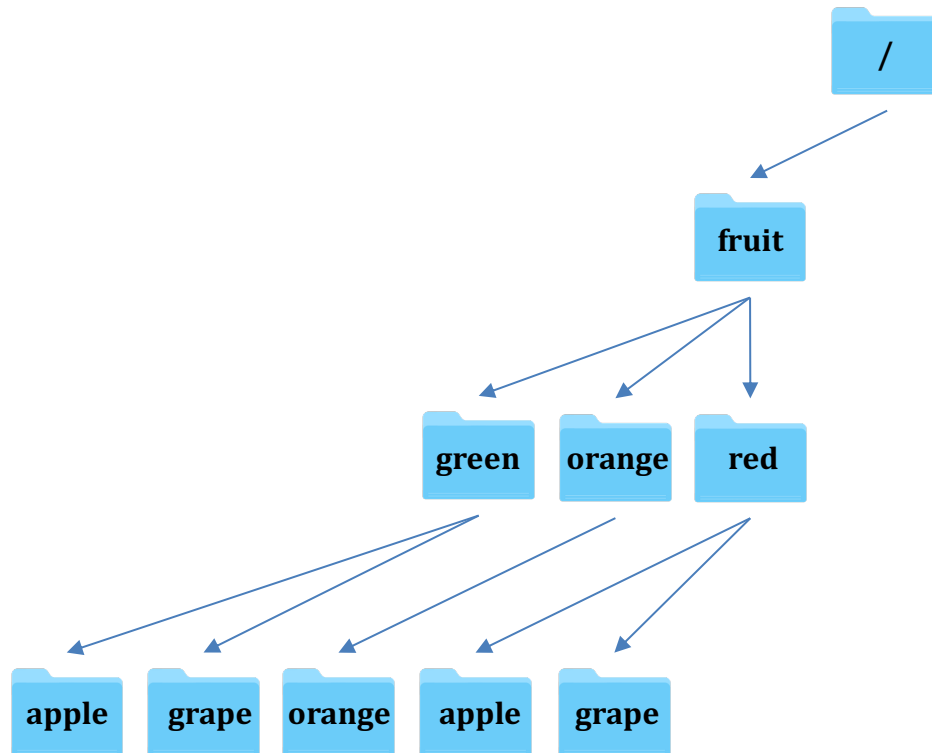


**Absolute Path Worksheet;** Simple "fruit tree" example (file system) diagram



```
# Simple "fruit tree" example (file system) command-line hierarchy
/  
/fruit  
/fruit/green  
/fruit/green/apple  
/fruit/green/grape  
/fruit/orange  
/fruit/orange/orange  
/fruit/red  
/fruit/red/apple  
/fruit/red/grape
```

### Questions

1) Fill in all of the absolute paths to the apples

/fruit/\_\_\_\_\_/apple/  
/fruit/\_\_\_\_\_/apple/

3) A “child” directory can have the same name as its “parent” directory, fill in the absolute path of an example from this tree:

/fruit/\_\_\_\_\_/\_\_\_\_\_/

3) The root level of the file system is denoted by what directory?

4) Can an absolute path be constructed that goes “higher” (above) the root level?

5) List the absolute path to the red grape directory

6) List the absolute paths to the directories whose names are colors (Hint: There are 4 absolute paths to list).

7) How many (total) subdirectories does the fruit directory contain?

8) Absolute paths always start with what character?

9) Can a directory contain two subdirectories of the same name? e.g., can the ‘fruit’ directory contain two directories named ‘red’?

**Answer Key**

1)

```
/fruit/green/apple/  
/fruit/red/apple/
```

2) /fruit/orange/orange/

3) /

4) No, there is no path above / (the “root level” of the directory)

5) /fruit/red/grape

6)

```
/fruit/green/  
/fruit/orange/  
/fruit/orange/orange/  
/fruit/red/
```

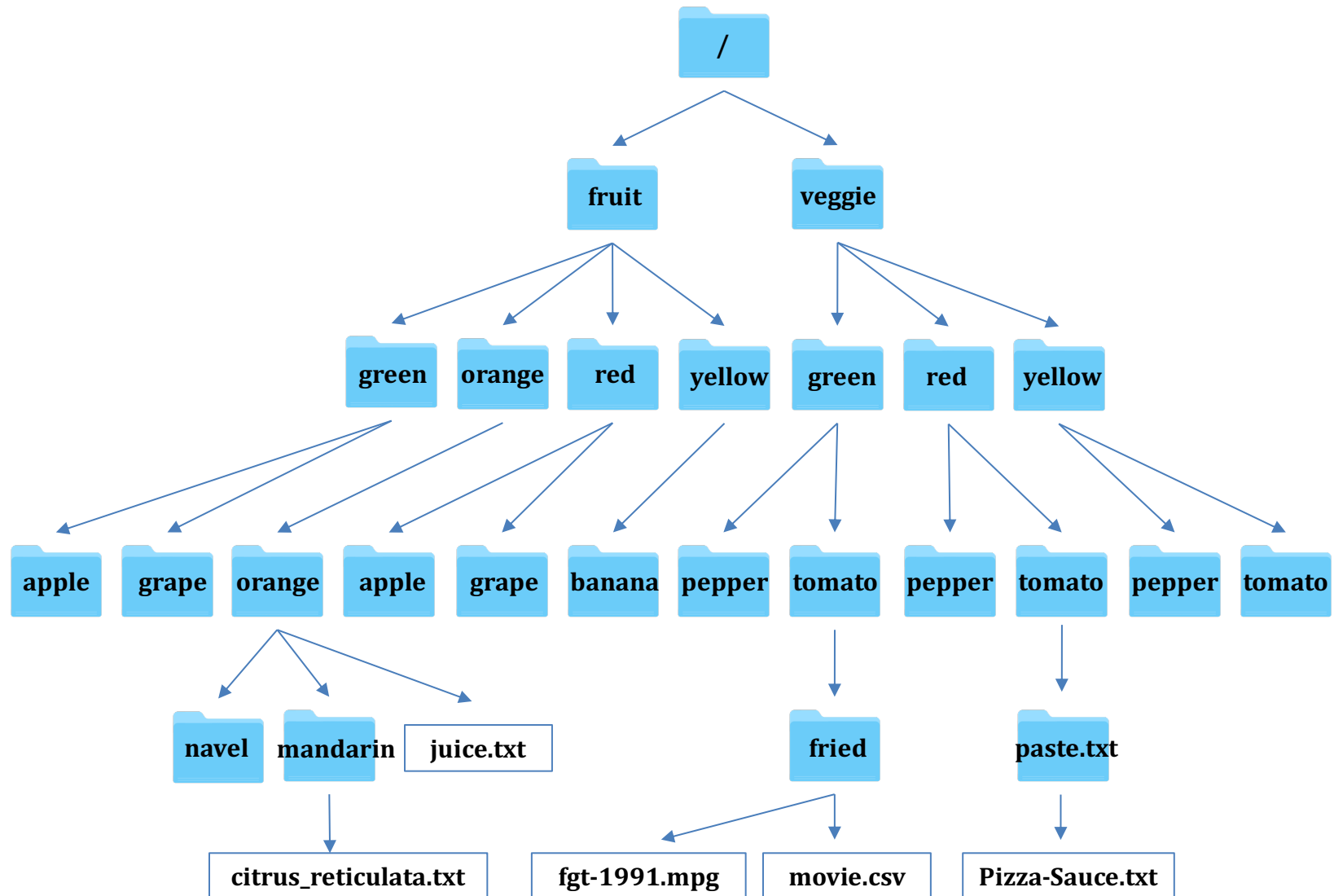
7) Eight subdirectories, i.e., green, orange, and red as immediate subdirectories and apple, grape, orange, apple, grape underneath.

8) / Remember, any time you write out an absolute path, the first character you will always start with is: /

9) No, directories names must be unique, e.g., you cannot have two unique directories named: /fruit/red/ and /fruit/red/

The Linux file system is case sensitive, so you are allowed to have two directories named: /fruit/red/ and /fruit/**R**ed/

**Absolute Path Worksheet;** Complex "fruit/veggie tree" example (file system) diagram



```
# Complex "fruit/veggie tree" example (file system) command-line hierarchy
/
/fruit
/fruit/green
/fruit/green/apple
/fruit/green/grape
/fruit/orange
/fruit/orange/orange
/fruit/orange/orange/juice.txt
/fruit/orange/orange/mandarin
/fruit/orange/orange/mandarin/citrus_reticulata.txt
/fruit/orange/orange/navel
/fruit/red
/fruit/red/apple
/fruit/red/grape
/fruit/yellow
/fruit/yellow/banana
/veggie
/veggie/green
/veggie/green/pepper
/veggie/green/tomato
/veggie/green/tomato/fried
/veggie/green/tomato/fried/fgt-1991.mpg
/veggie/green/tomato/fried/movie.csv
/veggie/red
/veggie/red/pepper
/veggie/red/tomato
/veggie/red/tomato/paste
/veggie/red/tomato/paste/Pizza-Sauce.txt
/veggie/yellow
/veggie/yellow/pepper
/veggie/yellow/tomato
```

### Questions

- 1) List the absolute path to the file “movie.csv”
- 2) Can a directory contain both subdirectories and files (immediately underneath it)? Is there an example in the “fruit/veggie tree”?
- 3) List the absolute paths to all of the files ending in .txt (Hint: there are three absolute paths to list).
- 4) Can directories have extensions? Is there an example in the “fruit tree”? If a directory has an extension, does it change its behavior or function in any way?
- 5) List the absolute paths to all of the directories named “pepper” (Hint: there are three absolute paths to list).

**Answer Key**

1) `/veggie/green/tomato/fried/movie.csv`

2) Yes. `/fruit/orange/orange/` contains two subdirectories, i.e., `navel` and `mandarin`, and one file `juice.txt`

3)

`/fruit/orange/orange/juice.txt`  
`/fruit/orange/orange/mandarin/citrus_reticulata.txt`  
`/veggie/red/tomato/paste.txt/Pizza-Sauce.txt`

**Note:** The following is a directory, not a file: `/veggie/red/tomato/paste.txt/`

4) Yes. `/veggie/red/tomato/paste.txt/` A directory can be named anything and it does not change its behavior, it is still “just a directory,” and not a text file. The only issue is if you or someone else is navigating the file system, it may look confusing. Best practice is to not name directories with an extension that make it “look” like it’s a file.

5)

`/veggie/red/pepper/`  
`/veggie/green/pepper/`  
`/veggie/yellow/pepper/`