

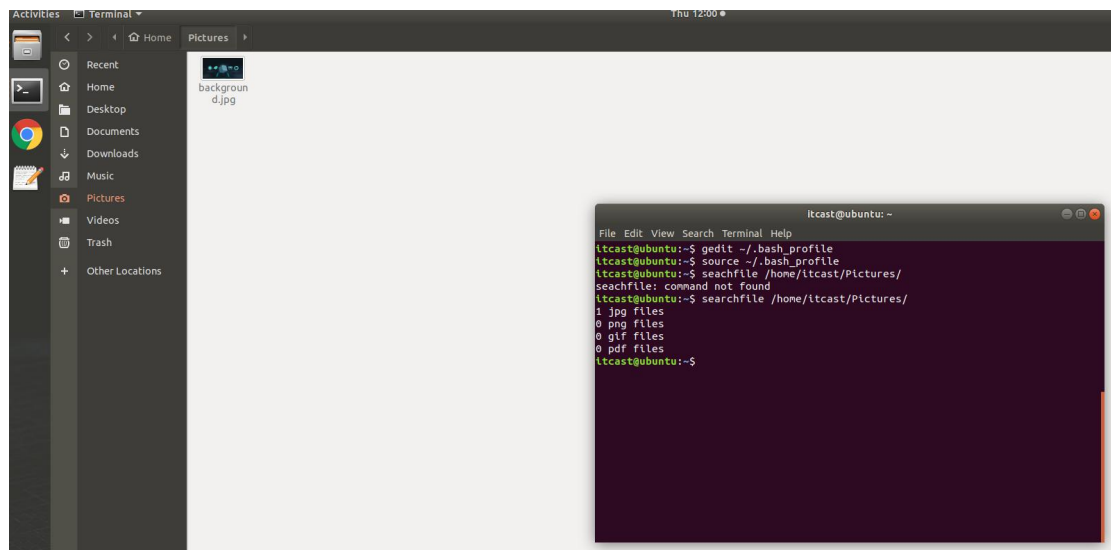
2. Practice

2-1. 统计文件

写一个名为 `searchfile` 的命令程序，接收一个命令行参数，参数为一个目录，统计这个目录下有多少个图片文件（只考虑 jpg, png, gif, pdf 这几种类型的文件），你的代码应该能够处理以下的问题。

本题代码在 `searchfile.sh` 和 `searchfile.py` 里面

1. 分类列出文件的个数



2. 这个程序是否可以在 Linux 和 Windows 下都能正确运行？

`Searchfile.py` 能在 linux 和 Windows 下正常运行。

`searchfile.sh` 能在 Linux 下运行

3. 如果把 searchfile 封装成一个函数，那么在多线程环境下，是否能正确运行？

Python 文件能

4. 软链或者快捷方式接怎么处理？

注意：不能使用walkFileTree, os.walk 这类直接遍历

创建图片路径软连接：

`ln -s 路径 pictures`

searchfile.sh 文件在 bash_profile 中用 alias 命名为：

`Alias=' 路径+searchfile.sh'`

然后：`source ~/.bash_profile`

见下图



```
#!/bin/bash
path=$1
#echo $1

function search {
    cd $@
    num_jpg=`ls |grep -l '\.jpg$' |wc -l`
    num_png=`ls |grep -l '\.png$' |wc -l`
    num_gif=`ls |grep -l '\.gif$' |wc -l`
    num_pdf=`ls |grep -l '\.pdf$' |wc -l`
    echo "$num_jpg jpg files"
    echo "$num_png png files"
    echo "$num_gif gif files"
    echo "$num_pdf pdf files"
}

search $path
```

```

File Edit View Search Terminal Help
itcast@ubuntu:~$ ln -s /home/itcast/P
Pictures/          Public/          PycharmProjects/
itcast@ubuntu:~$ ln -s /home/itcast/Pictures/ picture
itcast@ubuntu:~$ ls
anaconda3  CLionProjects  Desktop  devtools  Documents  Downloads  examples.desktop  Music  notebook  picture
Pictures  Public  PycharmProjects  searchfile.sh  snap  software  Templates  udacity  Videos
itcast@ubuntu:~$ ls -l
total 80
drwxr-xr-x 26 itcast itcast 4096 Dec 30 07:15 anaconda3
drwxrwxr-x 3 itcast itcast 4096 Aug 17 19:13 CLionProjects
drwxr-xr-x 2 itcast itcast 4096 Jan 22 06:17 Desktop
drwxr-xr-x 5 itcast itcast 4096 Aug 17 19:38 devtools
drwxr-xr-x 2 itcast itcast 4096 Dec 11 16:05 Documents
drwxr-xr-x 22 itcast itcast 4096 Jan 28 11:42 Downloads
-rw-r--r-- 1 itcast itcast 8980 Jul 30 07:34 examples.desktop
drwxr-xr-x 2 itcast itcast 4096 Jul 30 18:19 Music
drwxr-xr-x 4 itcast itcast 4096 Aug 17 22:33 notebook
lrwxrwxrwx 1 itcast itcast 22 Jan 28 12:42 picture -> /home/itcast/Pictures/
drwxr-xr-x 2 itcast itcast 4096 Aug 17 18:37 Pictures
drwxr-xr-x 2 itcast itcast 4096 Jul 30 18:19 Public
drwxr-xr-x 5 itcast itcast 4096 Dec 25 11:02 PycharmProjects
-rwx----- 1 itcast itcast 344 Jan 28 07:01 searchfile.sh
drwxr-xr-x 3 itcast itcast 4096 Jan 8 10:30 snap
drwxr-xr-x 2 itcast itcast 4096 Dec 11 16:25 software
drwxr-xr-x 2 itcast itcast 4096 Jul 30 18:19 Templates
drwxr-xr-x 3 itcast itcast 4096 Dec 30 08:15 udacity
drwxr-xr-x 2 itcast itcast 4096 Jul 30 18:19 Videos
itcast@ubuntu:~$ searchfile picture
searchfile: command not found
itcast@ubuntu:~$ searchfile /home/itcast/Pictures/
searchfile: command not found
itcast@ubuntu:~$ gedit ~/.bash_profile
itcast@ubuntu:~$ source ~/.bash_profile
itcast@ubuntu:~$ searchfile picture
1 jpg files
0 png files
0 gif files
0 pdf files
itcast@ubuntu:~$

```

```

Open  *searchfile.py
      ~/Downloads

import os
import argparse

def main():
    parser = argparse.ArgumentParser()
    parser.add_argument('--path', type=str, default='/home/itcast/Pictures')
    config = parser.parse_args()
    path = config.path
    print(path)
    list_dir = os.listdir(path)
    type_dict = {'jpg':0, 'png':0, 'gif':0, 'pdf':0}
    for fn in list_dir:
        suffix = fn.split('.')[-1]
        if suffix not in type_dict.keys():
            continue
        type_dict[suffix] += 1

    for key, values in type_dict.items():
        if values==0:
            continue
        print(values, key, 'files')

if __name__ == '__main__':
    main()

```