

1. Contact tool

The tool can be utilized to add contacts with the following:

```
vagrant@ubuntu-hirsute: ~/Linux_Assignment_1$ ./contact_tool
Arguments required -n = [Normal start], -h = [Help]
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ ./contact_tool -n
Select from the following options:
1) Add a Contact
2) Remove a Contact
3) Display Contact Info
Selection: 1
You selected Add a Contact
Please Enter their Address: home
Please Enter their Email: email
Please Enter their Name: andrew
Please Enter their Phone: phone
This contact already exists would you like to overwrite it? :y
Overwriting...
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ ls
README.md  contact_tool  contacts  display_links  lnm
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ cd contacts
vagrant@ubuntu-hirsute:~/Linux_Assignment_1/contacts$ ls
andrew
vagrant@ubuntu-hirsute:~/Linux_Assignment_1/contacts$ cat andrew
Address: home
Email: email
Name: andrew
Phone: phone
vagrant@ubuntu-hirsute:~/Linux_Assignment_1/contacts$ |
```

The tool can be used to delete the contact:

```
vagrant@ubuntu-hirsute: ~/Linux_Assignment_1$ ls contacts
andrew
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ cat contacts/andrew
Address: home
Email: email
Name: andrew
Phone: phone
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ ./contact_tool
Arguments required -n = [Normal start], -h = [Help]
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ ./contact_tool -n
Select from the following options:
1) Add a Contact
2) Remove a Contact
3) Display Contact Info
Selection: 2
You selected to delete a Contact
Please enter the name you would like to delete: andrew
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ ls contacts
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ |
```

The tool can be used to display contacts:

```
vagrant@ubuntu-hirsute: ~/Linux_Assignment_1$ ./contact_tool -n
Select from the following options:
1) Add a Contact
2) Remove a Contact
3) Display Contact Info
Selection: 3
Contact info:
Please Enter the name of the contact you would like to view: andrew
Would you like to specify a specific data type to display? [y/n]: n
Address: home
Email: email
Name: andrew
Phone: phone
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ |
```

The Bonus data option:

```
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ ./contact_tool -n
Select from the following options:
1) Add a Contact
2) Remove a Contact
3) Display Contact Info
Selection: 3
Contact info:
Please Enter the name of the contact you would like to view: andrew
Would you like to specify a specific data type to display? [y/n]: y
Acceptable options are Address, Email, Name, Phone
Please enter the type of data you would like to display: Phone
Phone: phone
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ ./contact_tool -n
Select from the following options:
1) Add a Contact
2) Remove a Contact
3) Display Contact Info
Selection: 3
Contact info:
Please Enter the name of the contact you would like to view: andrew
Would you like to specify a specific data type to display? [y/n]: y
Acceptable options are Address, Email, Name, Phone
Please enter the type of data you would like to display: Name
Name: andrew
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ |
```

If the contact does not exist:

```
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ ./contact_tool -n
Select from the following options:
1) Add a Contact
2) Remove a Contact
3) Display Contact Info
Selection: 3
Contact info:
Please Enter the name of the contact you would like to view: invalid
User does not exist
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ |
```

With the -h option:

```
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ ./contact_tool -h
The contacts are identified by name only.
Case 1: Create a contact, adds the address,email,name and phone number to a file  named after the contact
Case 2: Deletes the contact file for a contact once the name is entered.
Case 3: Prints the information of a contact once you enter the name
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ |
```

2. Display Line numbers and file contents

Running the script with and without the -n option:

```
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ ./lnnm README.md
# Linux_Assignment_1

Script 1: contact_tool
Script 2: lnnm
Script 3: display_links
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ ./lnnm -n README.md
1 # Linux_Assignment_1
2
3 Script 1: contact_tool
4 Script 2: lnnm
5 Script 3: display_links
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ |
```

3. Display links from within a webpage

Done With and without a valid webpage:

```
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ ./display_links
This URL does not exist or is invalid
Usage: display_links [URL]
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ ./display_links http://alpinelinux.org
https://docs.alpinelinux.org
https://wiki.alpinelinux.org
https://git.alpinelinux.org
https://gitlab.alpinelinux.org/alpine/aports/-/issues
https://pkgs.alpinelinux.org
https://mirrors.alpinelinux.org
https://security.alpinelinux.org
https://git.alpinelinux.org/aports
http://git.alpinelinux.org/aports/commit/?id=ab603843842e0380f1a2696afaaab0dddf8853186
http://git.alpinelinux.org/aports/commit/?id=272bf7c9f6eff69545fb7d15774328428b847abf
http://git.alpinelinux.org/aports/commit/?id=837606f146dffca4a8e2bc3e43b8fe89528db8544
http://git.alpinelinux.org/aports/commit/?id=ac2116054e11213513cb07627d611aca62936e39
http://git.alpinelinux.org/aports/commit/?id=c9b5317c694b52aef30e10dbd0b336d8f5b35e6b
http://git.alpinelinux.org/aports/commit/?id=b066564173340f63776efa153a612dab0105c087
http://git.alpinelinux.org/aports/commit/?id=9d56b10ebab46e9c48942dc954824cc62c8cf1ff
http://git.alpinelinux.org/aports/commit/?id=1f2fe44a4d4e27e4bd8d844a8e56550a49d80777
http://git.alpinelinux.org/aports/commit/?id=43a14486b76513f2a0a812b306fd554899a46591
http://git.alpinelinux.org/aports/commit/?id=a024c11d588c8b1efaebd022a339aacea672f93a
https://git.alpinelinux.org/aports/log
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ |
```

The Help option:

```
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ ./display_links -h
There are two options
Usage: display_link [option] [link]
[No Option]: Prints the links in console from a link
-f : Saves the links to a file in the directory called page_links
-h : prints help
```

The -f option to save to a file called page_links:

```
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ ./display_links -f http://alpinelinux.org
https://docs.alpinelinux.org
https://wiki.alpinelinux.org
https://git.alpinelinux.org
https://gitlab.alpinelinux.org/alpine/aports/-/issues
https://pkgs.alpinelinux.org
https://mirrors.alpinelinux.org
https://security.alpinelinux.org
https://git.alpinelinux.org/aports
http://git.alpinelinux.org/aports/commit/?id=ab603843842e0380f1a2696afaaab0dddf8853186
http://git.alpinelinux.org/aports/commit/?id=272bf7c9f6eff69545fb7d15774328428b847abf
http://git.alpinelinux.org/aports/commit/?id=837606f146dff64a8e2bc3e43b8fe89528db8544
http://git.alpinelinux.org/aports/commit/?id=ac2116054e11213513cb07627d611aca62936e39
http://git.alpinelinux.org/aports/commit/?id=c9b5317c694b52aef30e10dbd0b336d8f5b35e6b
http://git.alpinelinux.org/aports/commit/?id=b066564173340f63776efa153a612dab0105c087
http://git.alpinelinux.org/aports/commit/?id=9d56b10ebab46e9c48942dc954824cc62c8cf1ff
http://git.alpinelinux.org/aports/commit/?id=1f2fe44a4d4e27e4bd8d844a8e56550a49d80777
http://git.alpinelinux.org/aports/commit/?id=43a14486b76513f2a0a812b306fd554899a46591
http://git.alpinelinux.org/aports/commit/?id=a024c11d588c8b1efaeabd022a339aacea672f93a
https://git.alpinelinux.org/aports/log
vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ ls
README.md      contact_tool.old  display_links     index.html      lnnm.old
contact_tool   contacts          display_links.old  lnnm            page_links

vagrant@ubuntu-hirsute:~/Linux_Assignment_1$ cat page_links
https://docs.alpinelinux.org
https://wiki.alpinelinux.org
https://git.alpinelinux.org
https://gitlab.alpinelinux.org/alpine/aports/-/issues
https://pkgs.alpinelinux.org
https://mirrors.alpinelinux.org
https://security.alpinelinux.org
https://git.alpinelinux.org/aports
http://git.alpinelinux.org/aports/commit/?id=ab603843842e0380f1a2696afaaab0dddf8853186
http://git.alpinelinux.org/aports/commit/?id=272bf7c9f6eff69545fb7d15774328428b847abf
http://git.alpinelinux.org/aports/commit/?id=837606f146dff64a8e2bc3e43b8fe89528db8544
http://git.alpinelinux.org/aports/commit/?id=ac2116054e11213513cb07627d611aca62936e39
http://git.alpinelinux.org/aports/commit/?id=c9b5317c694b52aef30e10dbd0b336d8f5b35e6b
http://git.alpinelinux.org/aports/commit/?id=b066564173340f63776efa153a612dab0105c087
http://git.alpinelinux.org/aports/commit/?id=9d56b10ebab46e9c48942dc954824cc62c8cf1ff
http://git.alpinelinux.org/aports/commit/?id=1f2fe44a4d4e27e4bd8d844a8e56550a49d80777
http://git.alpinelinux.org/aports/commit/?id=43a14486b76513f2a0a812b306fd554899a46591
http://git.alpinelinux.org/aports/commit/?id=a024c11d588c8b1efaeabd022a339aacea672f93a
https://git.alpinelinux.org/aports/log
```