

CS256 ASSIGNMENT-5

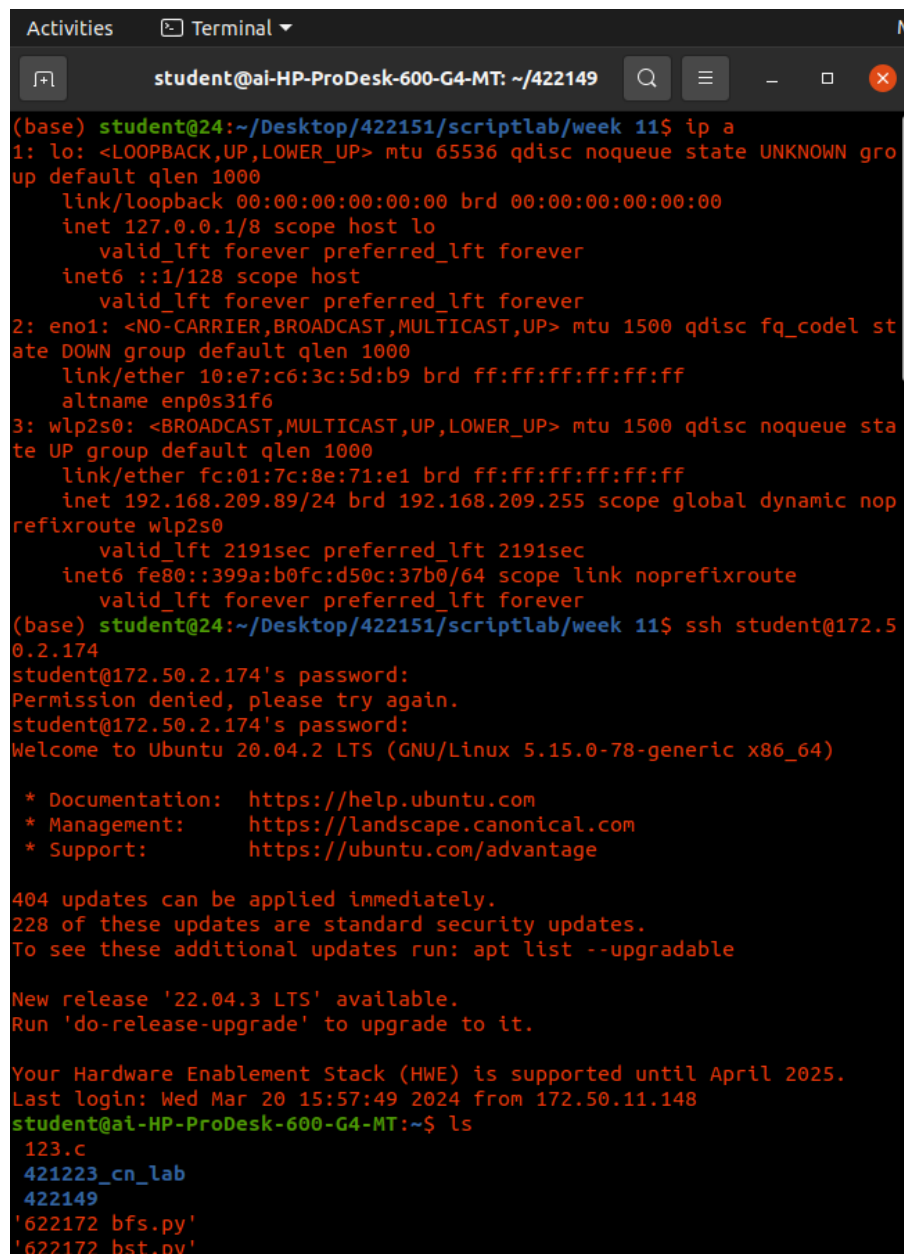
UNIX AND SHELL SCRIPTING LAB

ROLL NO -422151

SEC-A

1. Using SSH command execute the three programs on two different machines.

First machine:

A terminal window titled 'student@ai-HP-ProDesk-600-G4-MT: ~/422149' showing the execution of the 'ip a' command and an SSH connection attempt. The 'ip a' command output shows details for the loopback interface 'lo', the ethernet interface 'eno1', and the wireless interface 'wlp2s0'. The SSH command 'ssh student@172.50.2.174' is executed, leading to a password prompt, a 'Permission denied' message, another password prompt, and a successful login to Ubuntu 20.04.2 LTS. The terminal also shows system update information and the user's current directory listing.

```
(base) student@24:~/Desktop/422151/scriptlab/week 11$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: eno1: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc fq_codel state DOWN group default qlen 1000
    link/ether 10:e7:c6:3c:5d:b9 brd ff:ff:ff:ff:ff:ff
    altname enp0s31f6
3: wlp2s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default qlen 1000
    link/ether fc:01:7c:8e:71:e1 brd ff:ff:ff:ff:ff:ff
    inet 192.168.209.89/24 brd 192.168.209.255 scope global dynamic noprefixroute wlp2s0
        valid_lft 2191sec preferred_lft 2191sec
    inet6 fe80::399a:b0fc:d50c:37b0/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
(base) student@24:~/Desktop/422151/scriptlab/week 11$ ssh student@172.50.2.174
student@172.50.2.174's password:
Permission denied, please try again.
student@172.50.2.174's password:
Welcome to Ubuntu 20.04.2 LTS (GNU/Linux 5.15.0-78-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

404 updates can be applied immediately.
228 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

New release '22.04.3 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Your Hardware Enablement Stack (HWE) is supported until April 2025.
Last login: Wed Mar 20 15:57:49 2024 from 172.50.11.148
student@ai-HP-ProDesk-600-G4-MT:~$ ls
123.c
421223_cn_lab
422149
'622172 bfs.py'
'622172 bst.py'
```

```
Activities Terminal
student@ai-HP-ProDesk-600-G4-MT: ~/422149
wekafiles
student@ai-HP-ProDesk-600-G4-MT:~$ cd 422149
student@ai-HP-ProDesk-600-G4-MT:~/422149$ ls
1q.c          a.out          assignment    circularLL.c  DoubleLL.c
FindCycle.c   insert.c       OS           SKey3.c       temp.c
2_assignment.c ArrToMinheap.c BIQUEUES.c   delposll.c    FindCycle2.c
index.html    MinHeap.c     read.c       t.c           transverse.c
student@ai-HP-ProDesk-600-G4-MT:~/422149$ gcc FindCycle.c
student@ai-HP-ProDesk-600-G4-MT:~/422149$ ./a.out
enter no.of elements: 4
enter the data: 3
enter the data: 4
enter the data: 5
enter the data: 6
3 4 5 6 null
LOOP is PRESENTstudent@ai-HP-ProDesk-600-G4-MT:~/422149$ gcc insert.c
student@ai-HP-ProDesk-600-G4-MT:~/422149$ ./a.out
enter the size: 5
enter the position: 1
enter the value: 3
enter the element: 4
enter the element: 5
enter the element: 6
enter the element: 2
enter the element: 9
elements after insertion are:
4
3
5
6
2
9
student@ai-HP-ProDesk-600-G4-MT:~/422149$ gcc circularLL.c
student@ai-HP-ProDesk-600-G4-MT:~/422149$ ./a.out
Enter the number of elements:4
Enter the element:3
Enter the element:4
Enter the element:9
Enter the element:8
3->4->9->8->Enter the element to insert:19
Enter the element after you want to insert:
9
3->4->9->19->8->Enter the element to search:8
student@ai-HP-ProDesk-600-G4-MT:~/422149$
```

Second machine:

```
Activities Terminal ▾
student@ai-HP-ProDesk-600-G4-MT: ~/9221421

valid_lft 4954sec preferred_lft 4954sec
inet6 fe80::f924:707:dbcd:6c7c/64 scope link noprefixroute
valid_lft forever preferred_lft forever
(base) student@24:~/Desktop/422151/scriptlab/week 11$ ssh student@172.50.10.148
ssh: connect to host 172.50.10.148 port 22: Connection refused
(base) student@24:~/Desktop/422151/scriptlab/week 11$ ssh student@172.50.11.148
The authenticity of host '172.50.11.148 (172.50.11.148)' can't be established.
ECDSA key fingerprint is SHA256:6Eqh2BW8Jkme9CH4UA12ZODIFHTEYqA2k2/TccJdd9g.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '172.50.11.148' (ECDSA) to the list of known hosts.
student@172.50.11.148's password:
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.15.0-100-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

1 device has a firmware upgrade available.
Run `fwupdmgr get-upgrades` for more information.

Expanded Security Maintenance for Applications is not enabled.

25 updates can be applied immediately.
18 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

17 additional security updates can be applied with ESM Apps.
Learn more about enabling ESM Apps service at https://ubuntu.com/esm

New release '22.04.3 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Your Hardware Enablement Stack (HWE) is supported until April 2025.
Last login: Wed Mar 20 16:18:11 2024 from 172.50.0.253
student@ai-HP-ProDesk-600-G4-MT:~$ ls
1.c.sql                      DoublyLinkedList.class      kkd1.c
priorityqueueusinglinkedlist.py  'doubly linked list.py'    kkdsa1.c
2.3                          producer.c                  doublyll.py                 kkdsa2.c
3.2                          product1                    doublylnkedlist2.py         kkdsa3.c
3des.py                      product1.hi                 Downloads                   kl1.c
3.py                          product1.hs                 dsa.cinsert                 kno2.pl
4119                          product1.o                  eclipse                      kno3.pl
411935                       product.hs                  eclipse-workspace           kno.pl
411935.zip                   program_1.java              eg_static.a                 know.pl
420138                       Program.class               Employee.class              kos11.c
420203
```

```

student@ai-HP-ProDesk-600-G4-MT:~$ cd 9221421
student@ai-HP-ProDesk-600-G4-MT:~/9221421$ ls
9221421.sql      factorial.sh      main.c           'Screenshot from 2024-01-10 12-21-04.png'
g' 'Screenshot from 2024-01-19 11-57-42.png'
a.out           fibanocci.c      main_obj.o       'Screenshot from 2024-01-10 12-21-15.png'
g' 'Screenshot from 2024-01-19 11-58-46.png'
awk.sh          fibonacchi.sh    num              'Screenshot from 2024-01-10 12-21-23.png'
g' sed.sh
boat.sql        fibo.sh          number           'Screenshot from 2024-01-10 12-21-32.png'
g' square.sh
branch.sql      file3.sh         out_numbers.txt  'Screenshot from 2024-01-10 12-21-40.png'
g' student_1.sql
cap            file3.txt        output1.txt      'Screenshot from 2024-01-10 12-21-48.png'
g' student.sql
capital1        file4.sh         output.sh        'Screenshot from 2024-01-10 12-21-53.png'
g' sum.c
caps           file.txt         output.txt       'Screenshot from 2024-01-10 12-22-01.png'
g' sum_obj.o
depatment.sql  fle.txt          palind.c         'Screenshot from 2024-01-10 12-22-06.png'
g' teacher.sql
double.c       hash.c           pipes.c          'Screenshot from 2024-01-10 12-22-13.png'
g' unix
employee.sql   html.html        prime.c          'Screenshot from 2024-01-10 12-22-15.png'
g'
fact.c         infixtopostfix.c reserves_table.sql 'Screenshot from 2024-01-10 12-22-21.png'
g'
fact_obj.o     list.txt         sailor.sql       'Screenshot from 2024-01-10 12-22-28.png'
g'
student@ai-HP-ProDesk-600-G4-MT:~/9221421$ gcc prime.c
student@ai-HP-ProDesk-600-G4-MT:~/9221421$ ./a.ou
-bash: ./a.ou: No such file or directory
student@ai-HP-ProDesk-600-G4-MT:~/9221421$ ./a.out
Enter the number of elements in the array: 4
Enter the elements of the array:
4
3
17
19
The prime numbers in the array are: 3 17 19

```

```
student@ai-HP-ProDesk-600-G4-MT:~/9221421$ gcc fibanocci.c
```

```
student@ai-HP-ProDesk-600-G4-MT:~/9221421$ ./a.out
```

```
fibanocci series upto 10:
```

```
0112358132134
```

```
student@ai-HP-ProDesk-600-G4-MT:~/9221421$ gcc hash.c
```

```
student@ai-HP-ProDesk-600-G4-MT:~/9221421$ ./a.out
```

```
hash table after inserting 2,26,19,95,67,13:
```

```
Slot 0 : -1
```

```
Slot 1 : 67 -1
```

```
Slot 2 : 13 2 -1
```

```
Slot 3 : -1
```

```
Slot 4 : 26 -1
```

```
Slot 5 : -1
```

```
Slot 6 : -1
```

```
Slot 7 : 95 -1
```

```
Slot 8 : 19 -1
```

```
Slot 9 : -1
```

```
Slot 10 : -1
```

```
Seaching For 13 : 13 Found!
```

```
Seaching For 26 : 26 Found!
```

```
Seaching For 19 : 19 Found!
```

```
Hash table after deleting 10,95:
```

```
Slot 0 : -1
```

```
Slot 1 : 67 -1
```

```
Slot 2 : 2 -1
```

```
Slot 3 : -1
```

```
Slot 4 : 26 -1
```

```
Slot 5 : -1
```

```
Slot 6 : -1
```

```
Slot 7 : -1
```

```
Slot 8 : 19 -1
```

```
Slot 9 : -1
```

```
Slot 10 : -1
```

```
student@ai-HP-ProDesk-600-G4-MT:~/9221421$ █
```

2. Create a project under CVS/git repository and record multiple versions/branches and practice merging of branches (with a batch of 2 members) using gitbash commands and upload all your previous lab tasks to this repository .

```
(base) student@24:~/Desktop/422151$ git clone https://github.com/bhupathi-guntupalli/UNIX
Cloning into 'UNIX'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 864 bytes | 864.00 KiB/s, done.
(base) student@24:~/Desktop/422151$ ls
'code pics'  dbms  oops  scriptlab  UNIX  'UNIX GIT Assignments'
(base) student@24:~/Desktop/422151$ cd UNIX
(base) student@24:~/Desktop/422151/UNIX$ git status
On branch main
Your branch is up to date with 'origin/main'.

(base) student@24:~/Desktop/422151/UNIX$ git add /home/student/Desktop/422151
fatal: /home/student/Desktop/422151: '/home/student/Desktop/422151' is outside repository
(base) student@24:~/Desktop/422151/UNIX$ git checkout -b branch_1
Switched to a new branch 'branch_1'
(base) student@24:~/Desktop/422151/UNIX$ ls
Assignment-1  Assignment-3  'initial codes'
Assignment-2  Assignment-4  README.md
(base) student@24:~/Desktop/422151/UNIX$ git status
On branch branch_1
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Assignment-1/
    Assignment-2/
    Assignment-3/
    Assignment-4/
    initial codes/

nothing added to commit but untracked files present (use "git add" to track)
(base) student@24:~/Desktop/422151/UNIX$ git add .
(base) student@24:~/Desktop/422151/UNIX$ git status
On branch branch_1
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   Assignment-1/422151_CS256_Assignment_1.pdf
    new file:   Assignment-1/City.txt
    new file:   Assignment-1/City2.txt
    new file:   Assignment-1/City3.txt
    new file:   Assignment-1/numbers.txt
    new file:   Assignment-1/out_numbers.txt
    new file:   Assignment-2/422151_CS256_Assignment_2.pdf
    new file:   Assignment-2/awk.png
    new file:   Assignment-2/awk_file1.sh
    new file:   Assignment-2/cpio.sh
```

```
new file: Assignment-4/fact_gdb.c
new file: Assignment-4/linked_eg.c
new file: initial codes/eg1.sh
new file: initial codes/eg1_output.png
new file: initial codes/fact.sh
new file: initial codes/fact_output.png
new file: initial codes/fib.sh
new file: initial codes/fib_output.png
new file: initial codes/freq.sh
new file: initial codes/freq_output.png
new file: initial codes/sqsum2.sh
new file: initial codes/sqsum_2_ouput.png
```

```
(base) student@24:~/Desktop/422151/UNIX$ git commit -m "added files"
```

```
*** Please tell me who you are.
```

```
Run
```

```
git config --global user.email "you@example.com"
git config --global user.name "Your Name"
```

```
to set your account's default identity.
```

```
Omit --global to set the identity only in this repository.
```

```
fatal: unable to auto-detect email address (got 'student@24.(none)')
```

```
(base) student@24:~/Desktop/422151/UNIX$ git config --global user.email "you@example.com"
```

```
(base) student@24:~/Desktop/422151/UNIX$ git config --global user.email "bhupathiguntupalli587@gmail.com"
```

```
(base) student@24:~/Desktop/422151/UNIX$ git config --global user.name "bhupathi-guntupalli"
```

```
(base) student@24:~/Desktop/422151/UNIX$ commit
```

```
Command 'commit' not found, did you mean:
```

```
command 'commix' from snap commix (v3.9-7-g55a12422)
command 'kommit' from snap kommit (1.0.2)
```

```
See 'snap info <snapname>' for additional versions.
```

```
(base) student@24:~/Desktop/422151/UNIX$ git commit -m "added files"
```

```
[branch_1 e83c766] added files
```

```
46 files changed, 637 insertions(+)
```

```
create mode 100644 Assignment-1/422151_CS256_Assignment_1.pdf
```

```
create mode 100644 Assignment-1/City.txt
```

```
create mode 100644 Assignment-1/City2.txt
```

```
create mode 100644 Assignment-1/City3.txt
```

```
create mode 100644 Assignment-1/numbers.txt
```


See 'snap info <snapname>' for additional versions.

```
(base) student@24:~/Desktop/422151/UNIX$ git commit -m "added files"
[branch_1 e83c766] added files
46 files changed, 637 insertions(+)
create mode 100644 Assignment-1/422151_CS256_Assignment_1.pdf
create mode 100644 Assignment-1/City.txt
create mode 100644 Assignment-1/City2.txt
create mode 100644 Assignment-1/City3.txt
create mode 100644 Assignment-1/numbers.txt
create mode 100644 Assignment-1/out_numbers.txt
create mode 100644 Assignment-2/422151_CS256_Assignment_2.pdf
create mode 100644 Assignment-2/awk.png
create mode 100755 Assignment-2/awk_file1.sh
create mode 100644 Assignment-2/cpio.sh
create mode 100644 Assignment-2/cpio_out.txt
create mode 100644 Assignment-2/file1.txt
create mode 100644 Assignment-2/sed.sh
create mode 100644 Assignment-2/sed_output.txt
create mode 100644 Assignment-2/tar.sh
create mode 100644 Assignment-2/tar_out.txt
create mode 100644 Assignment-3/422151_CS256_Assignment_3.pdf
create mode 100644 Assignment-3/first example/dyn1.png
create mode 100644 Assignment-3/first example/dyn_2.png
create mode 100644 Assignment-3/first example/fact.c
create mode 100644 Assignment-3/first example/head.h
create mode 100644 Assignment-3/first example/main.c
create mode 100644 Assignment-3/first example/static_output.png
create mode 100644 Assignment-3/first example/sum.c
create mode 100644 Assignment-3/second example/bst_delete.c
create mode 100644 Assignment-3/second example/bst_functions.h
create mode 100644 Assignment-3/second example/bst_insert.c
create mode 100644 Assignment-3/second example/bst_print.c
create mode 100644 Assignment-3/second example/bst_search.c
create mode 100755 Assignment-3/second example/build_and_run.sh
create mode 100644 Assignment-3/second example/main.c
create mode 100644 Assignment-3/second example/output.png
create mode 100644 Assignment-4/422151_CS256_Assignment_4.pdf
create mode 100644 Assignment-4/eg_code.c
create mode 100644 Assignment-4/fact_gdb.c
create mode 100644 Assignment-4/linked_eg.c
create mode 100755 initial codes/eg1.sh
create mode 100644 initial codes/eg1_output.png
create mode 100755 initial codes/fact.sh
create mode 100644 initial codes/fact output.png
```



```
create mode 100644 Assignment-4/422151_CS256_Assignment_4.pdf
create mode 100644 Assignment-4/eg_code.c
create mode 100644 Assignment-4/fact_gdb.c
create mode 100644 Assignment-4/linked_eg.c
create mode 100755 initial codes/eg1.sh
create mode 100644 initial codes/eg1_output.png
create mode 100755 initial codes/fact.sh
create mode 100644 initial codes/fact_output.png
create mode 100755 initial codes/fib.sh
create mode 100644 initial codes/fib_output.png
create mode 100755 initial codes/freq.sh
create mode 100644 initial codes/freq_output.png
create mode 100755 initial codes/sqsum2.sh
create mode 100644 initial codes/sqsum_2_output.png
(base) student@24:~/Desktop/422151/UNIX$ git push origin branch_1
Username for 'https://github.com': bhupathi-guntupalli
Password for 'https://bhupathi-guntupalli@github.com':
remote: Support for password authentication was removed on August 13, 2021.
remote: Please see https://docs.github.com/get-started/getting-started-with-git/about-remote-repositories#cloning-with-https-urls for information on currently recommended modes of authentication.
fatal: Authentication failed for 'https://github.com/bhupathi-guntupalli/UNIX/'
(base) student@24:~/Desktop/422151/UNIX$ git push origin branch_1
Username for 'https://github.com': bhupathi-guntupalli
Password for 'https://bhupathi-guntupalli@github.com':
remote: Support for password authentication was removed on August 13, 2021.
remote: Please see https://docs.github.com/get-started/getting-started-with-git/about-remote-repositories#cloning-with-https-urls for information on currently recommended modes of authentication.
fatal: Authentication failed for 'https://github.com/bhupathi-guntupalli/UNIX/'
(base) student@24:~/Desktop/422151/UNIX$ git remote set-url origin https://ghp_wre2CU3RU19H4j8s54RK72Tj96spIF4ddmLv@github.com/bhupathi-guntupalli/UNIX
(base) student@24:~/Desktop/422151/UNIX$ git push origin branch_1
Enumerating objects: 55, done.
Counting objects: 100% (55/55), done.
Delta compression using up to 12 threads
Compressing objects: 100% (52/52), done.
Writing objects: 100% (54/54), 3.43 MiB | 136.00 KiB/s, done.
Total 54 (delta 3), reused 0 (delta 0)
remote: Resolving deltas: 100% (3/3), done.
remote:
remote: Create a pull request for 'branch_1' on GitHub by visiting:
remote:   https://github.com/bhupathi-guntupalli/UNIX/pull/new/branch_1
remote:
To https://github.com/bhupathi-guntupalli/UNIX
 * [new branch]   branch_1 -> branch_1
(base) student@24:~/Desktop/422151/UNIX$
```

bhupathi-guntupalli / UNIX

Type ↵ to search

+ - ⌂ 📧 🔍

<> Code Issues Pull requests Actions Projects Wiki Security Insights Settings

UNIX Public

Pin Unwatch 1 Fork 0 Star 0

main 2 Branches 0 Tags Go to file Add file <> Code About

bhupathi-guntupalli Merge pull request #1 from bhupathi-guntupalli/branch_1 3ac9a80 · now 3 Commits

Assignment-1	added files	21 minutes ago
Assignment-2	added files	21 minutes ago
Assignment-3	added files	21 minutes ago
Assignment-4	added files	21 minutes ago
initial codes	added files	21 minutes ago
README.md	Initial commit	41 minutes ago

README

UNIX

About
No description, website, or topics provided.

Readme Activity 0 stars 1 watching 0 forks

Releases
No releases published
[Create a new release](#)

Packages
No packages published
[Publish your first package](#)

Languages

Final github repository link:

[GitHub - bhupathi-guntupalli/UNIX](#)

