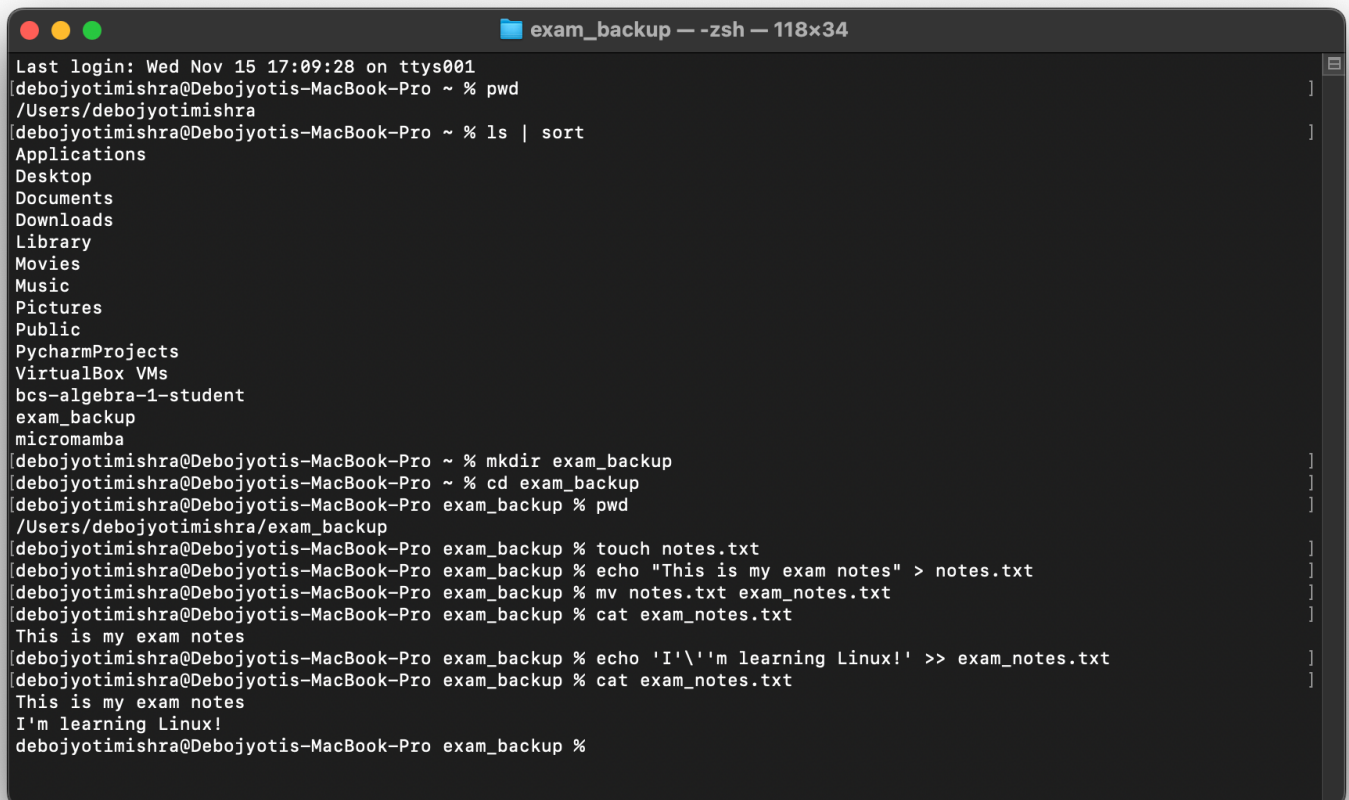


Linux Assignment

Name: Debojyoti Mishra

Class: L1, B.Sc. Computer Science, 2023 - 2026

Problem 1





```
exam_backup — zsh — 118x34
Last login: Wed Nov 15 17:09:28 on ttys001
debojyotimishra@Debojyotis-MacBook-Pro ~ % pwd
/Users/debojyotimishra
debojyotimishra@Debojyotis-MacBook-Pro ~ % ls | sort
Applications
Desktop
Documents
Downloads
Library
Movies
Music
Pictures
Public
PycharmProjects
VirtualBox VMs
bcs-algebra-1-student
exam_backup
micromamba
debojyotimishra@Debojyotis-MacBook-Pro ~ % mkdir exam_backup
debojyotimishra@Debojyotis-MacBook-Pro ~ % cd exam_backup
debojyotimishra@Debojyotis-MacBook-Pro exam_backup % pwd
/Users/debojyotimishra/exam_backup
debojyotimishra@Debojyotis-MacBook-Pro exam_backup % touch notes.txt
debojyotimishra@Debojyotis-MacBook-Pro exam_backup % echo "This is my exam notes" > notes.txt
debojyotimishra@Debojyotis-MacBook-Pro exam_backup % mv notes.txt exam_notes.txt
debojyotimishra@Debojyotis-MacBook-Pro exam_backup % cat exam_notes.txt
This is my exam notes
debojyotimishra@Debojyotis-MacBook-Pro exam_backup % echo 'I\'\'m learning Linux!' >> exam_notes.txt
debojyotimishra@Debojyotis-MacBook-Pro exam_backup % cat exam_notes.txt
This is my exam notes
I'm learning Linux!
debojyotimishra@Debojyotis-MacBook-Pro exam_backup %
```

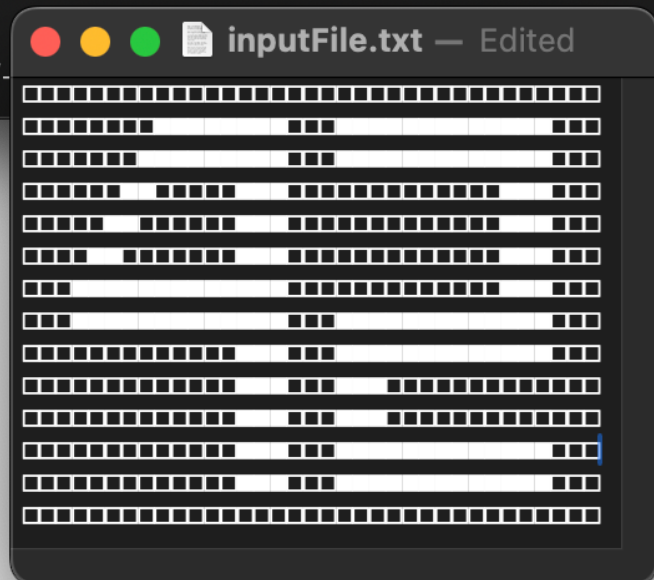
Problem 2

```
phonebook — -zsh — 105x58
Last login: Wed Nov 15 17:48:36 on ttys001
debojyotimishra@Debojyotis-MacBook-Pro ~ % pwd
/Users/debojyotimishra
debojyotimishra@Debojyotis-MacBook-Pro ~ % mkdir phonebook
debojyotimishra@Debojyotis-MacBook-Pro ~ % cd phonebook
debojyotimishra@Debojyotis-MacBook-Pro phonebook % pwd
/Users/debojyotimishra/phonebook
debojyotimishra@Debojyotis-MacBook-Pro phonebook % touch phonebook_file.txt
debojyotimishra@Debojyotis-MacBook-Pro phonebook % echo 'Laura!1987!Maceio' > phonebook_file.txt
debojyotimishra@Debojyotis-MacBook-Pro phonebook % echo 'Miguel!2022!JoaoPessoa' >> phonebook_file.txt
debojyotimishra@Debojyotis-MacBook-Pro phonebook % echo 'Azin!1990!Zahedan' >> phonebook_file.txt
debojyotimishra@Debojyotis-MacBook-Pro phonebook % echo 'Paula!1988!SaoPaulo' >> phonebook_file.txt
debojyotimishra@Debojyotis-MacBook-Pro phonebook % echo 'David!1989!Arcoverde' >> phonebook_file.txt
debojyotimishra@Debojyotis-MacBook-Pro phonebook % echo 'Luis!1984!Madrid' >> phonebook_file.txt
debojyotimishra@Debojyotis-MacBook-Pro phonebook % wc -m phonebook_file.txt
117 phonebook_file.txt
debojyotimishra@Debojyotis-MacBook-Pro phonebook % sort phonebook_file.txt
Azin!1990!Zahedan
David!1989!Arcoverde
Laura!1987!Maceio
Luis!1984!Madrid
Miguel!2022!JoaoPessoa
Paula!1988!SaoPaulo
debojyotimishra@Debojyotis-MacBook-Pro phonebook % sort -k2 -t '!' -n phonebook_file.txt
Luis!1984!Madrid
Laura!1987!Maceio
Paula!1988!SaoPaulo
David!1989!Arcoverde
Azin!1990!Zahedan
Miguel!2022!JoaoPessoa
debojyotimishra@Debojyotis-MacBook-Pro phonebook % cut -d '!' -f1 -f3 phonebook_file.txt
Laura!Maceio
Miguel!JoaoPessoa
Azin!Zahedan
Paula!SaoPaulo
David!Arcoverde
Luis!Madrid
debojyotimishra@Debojyotis-MacBook-Pro phonebook % tr '!' ':' < phonebook_file.txt
Laura:1987:Maceio
Miguel:2022:JoaoPessoa
Azin:1990:Zahedan
Paula:1988:SaoPaulo
David:1989:Arcoverde
Luis:1984:Madrid
debojyotimishra@Debojyotis-MacBook-Pro phonebook % head -n 1 phonebook_file.txt
Laura!1987!Maceio
debojyotimishra@Debojyotis-MacBook-Pro phonebook % cut -d '!' -f3 phonebook_file.txt
Maceio
JoaoPessoa
Zahedan
SaoPaulo
Arcoverde
Madrid
debojyotimishra@Debojyotis-MacBook-Pro phonebook % tar -cvf phonebook_file.tar phonebook_file.txt
a phonebook_file.txt
debojyotimishra@Debojyotis-MacBook-Pro phonebook %
```

Problem 3

[illegible]

Converting all '1's to  and all '0's to  for better readability, we get:



Problem 4

```
debojyotimishra — zsh — 80x24
Last login: Thu Nov 16 09:37:28 on ttys003
debojyotimishra@Debojyotis-MacBook-Pro ~ % ps -e -o pid,comm,rss,%cpu | sort -k3
-nr | head -n 11
84282 /Applications/Py 871584 7.1
93970 /Applications/Go 397632 0.1
88513 /Applications/Go 292464 1.0
40911 /System/Applicat 250320 0.0
88236 /Applications/Go 246432 0.0
88220 /Applications/Go 218112 0.0
3071 /Applications/Mi 216992 0.0
93991 /Applications/Go 212640 1.1
80758 /Applications/No 183488 0.3
88175 /System/Applicat 183296 0.0
63059 /System/Applicat 183008 1.9
debojyotimishra@Debojyotis-MacBook-Pro ~ %
```