

Surname, Name:

Section:

Student No:

**Closed Book, closed note exam. You are required to write down commands with necessary arguments and options; and make sure that they work. Your script and output should match. Give the best result that you can give!**

**Each question worths 5 points unless otherwise stated.**

**Over 100 points is bonus.**

**Unless otherwise stated for question k, your answers as command must be in k.sh and output should in k.txt both should be in Answers directory.**

SIGNATURE . . . . .

Time of Submission:

**Prelude:** Before solving questions you should:

- let NAME be your FirstLast name as ascii (MAkgul, ASOzgur, LMessi, LionelMessi)
- create NAME and NAME/Answers directories `mkdir -p ~/NAME/Answers`
- script NAME/Answers/NAME.Log
- touch NAME/Answers/Your-Full-Name
- download the questions file and unzip it in NAME Directory, ( maintaining directory structure), unzip file-path  
`cd ~/NAME` or simply `cd NAME`  
 use the commands  
`wget http://liste.ctis.bilkent.edu.tr/courses/166/LabQ2.zip`  
`unzip LabQ2`
- `mkdir ~/NAME/Answers/Dir{1,2,3,4,5,6,7,8,19,10}`
- Your working directory could be LabQ, files that you operate on will be in LabQ; unless otherwise stated. Your answers will be written under NAME; shell scripts and solution files under NAME/Answers; you need to redirect selected output to NAME/Answers directory. Unless, target is specified, redirect output of question k to file k.txt in Answers. Also commands that you use should ve saved/copied under Answers. You can collect commands under cevaplar.sh provided you include question numbers
- **When you finish** (that is when exam ends), you will zip NAME directory with command  
`cd ; zip -r NAME NAME`
- upload NAME.zip

1. copy everything in LabQ into Dir1 using rsync
2. copy everything in LabQ into Dir2 using tar. Do not use an explicit tar file
3. copy all invisible directories in LabQ (on the surface not within directories) into Dir3
4. put all \*.txt files (in LabQ) on the surface into TXT.zip in Dir4 and extract all files into Dir4
5. put all files and directories visible in LabQ into My.tar.bz2 in Dir5 , and extract directories ABC and Data into Dir5
6. Determine all programs related with network
7. Consider all \*.txt files in the current directory: (do not consider sub directories) - determine list of files containing word **net** case insensitive in file **7.txt** and combine them to obtain MYTXT1.txt (in Answers) (Bonus 3 pts )
8. given A.txt delete empty lines obtaining **8.txt** (in Answers directory)
9. Given A.txt obtain **9.txt** such that each line contains exactly one of **net** or **fox** case insensitive
10. Consider all \*.txt files in LabQ (including in sub directories), combine lines containing neither net nor fox, case insensitive in the file **10.txt**
11. copy y.SH into Answers; and change permissions so that everybody can read and execute it, owner and group can change it, and it runs with owner and group rights. Use symbolic notation
12. Create directory **temp** in Answers so that every body can create files in it, see all file names, but can not delete files not owned by herself/himself. Give permission or give necessary commands to setup the necessary permissions.
13. unzip LabQ1.zip in Dir6 and work in Dir6/LabQ ( 3 pts each )
  - determine all empty files in Dir6 and write their names in Empty.txt (in Answers)
  - determine files modified later than mail.txt and write their names in Yeni.txt (in Answers)
  - delete all empty files
14. find all files under /usr/share whose size is bigger than 2M
15. find all empty directories under /etc (**Bonus: 3 pts - avoid "Permission Denied" if you can** )
16. i) copy AB.tar into Dir7  
ii) find all \*.txt files which are older than **net.txt** (in LabQ) and append them into AB.tar in Dir7
17. create NAME.txt (with your name) containing your name and your birthday (anyway you wish) and upload into gizli rsync module in liste.ctis.bilkent.edu.tr. gizli module requires user ctis with passwd ctisxx
18. download contents of gizli module into Dir8
19. download contents of public module temp into Dir9
20. copy AB.tar into Dir10 ; touch A.txt and aa.txt; and update aa.txt and A.txt in AB.tar in Dir10
21. delete ankara.txt from AB.tar in Dir10
22. Given Dene-txt.gz find lines in Dene-txt containing at least one of ayse or elif, working directly with Dene-txt.gz
23. copy Dene1.txt, Dene2.txt, Dene3.txt into Answers, compress Dene1 with gzip **most**, compress Dene2.txt with bzip2 **fast** and compress Dene3.txt with xz with default values.
24. Given AA.txt, obtain lines 21-50 into 24.txt and show line numbers of AA.txt