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/LabQ1.zip

  unzip LabQ1

- `mkdir ~/NAME/Answers/Dir{1,2,3,4,5,6,7}`

- Your working directory could be LabQ, files that you operate on will be in LabQ. 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. write down conditions for a program to be **free software**. Be precise. write in 1.txt

2. list ways you can get help for a program, say, xyz (in 2.txt)

3. Find all files in the current directory (LabQ) which contains letters **a** and **t**

4. find all files which starts with a , b or d and ends with w or t and contains c followed by k

5. copy everything in LabQ into Dir1 with cp . Keep owner and date info. term LabQ will not be copied but everything inside it (recursively)

6. copy directories ABC .gizli .beta and xetc into directory Dir2.

7. copy all visible files in LabQ (on the surface not within directories) into Dir3

8. copy all files in LabQ (on the surface not within directories) into Dir4

9. Determine all programs related with disk

10. Determine all files related with programs **tar, ls, awk, cron, gimp**

11. combine all *.txt, *.SH and *.tex files in LabQ (at the surface) into file ALL.TXT in Answers

12. Use **here document construct** to generate the file birthday.sh (a bash script) when executed will write to standard output: (actual values)
    Your Name
    Your High School
    Your Birthday

13. change date of file birthday.sh as your actual birthday

    use date and/or touch

14. In a single command create directories XA XB XC XD each containing X Y Z , each of which containing W and T in directory Answers (we need to see directory and corresponding command); and copy file a.txt in each of T directories

15. Consider all *.txt files in the current directory: (do not consider sub directories)
    - determine total number of lines of all *.txt files

16. copy all *JPEG, *pdf and *txt files/directories starting with a and A into Dir5

17. move all pdf , JPEG files and .gizli and xetc directories into Dir6

18. copy all hidden directories in LabQ into Dir7

19. copy y.SH into Answers; and change permissions so that everybody can read and execute it, and runs with owners rights.

20. 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.

21. Create directory **Upload** in Answers so that everybody can upload a file, but can not see other files, and cannot delete files of other users. Give correct permissions