

Operációs rendszerek BSc

3. Gyak.

2022.02.22.

Készítette:

Zsigó Bence

Programtervező

informatikus

AGQU01

Miskolc, 2022

A)

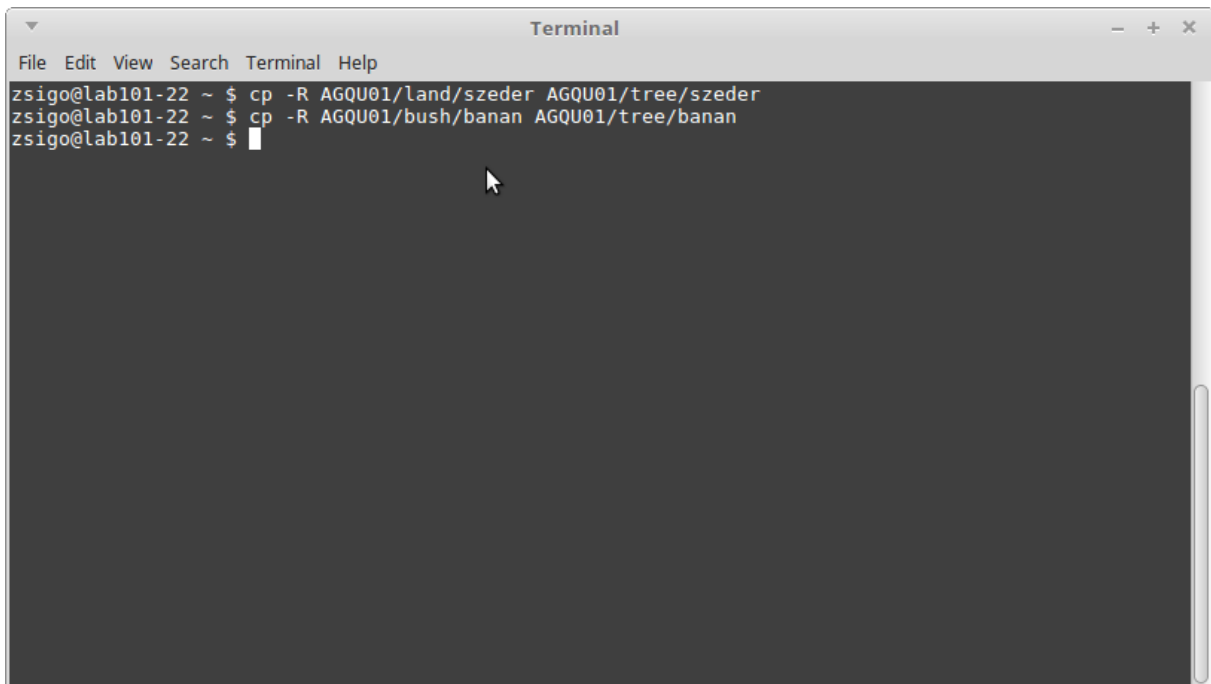
1.) Hozza létre a következő jegyzék szerkezetet, majd listázza ki

```
Terminal
File Edit View Search Terminal Help
zsigo@lab101-22 ~ $ mkdir AGQU01
zsigo@lab101-22 ~ $ cd AGQU01
zsigo@lab101-22 ~/AGQU01 $ mkdir bush
zsigo@lab101-22 ~/AGQU01 $ mkdir tree
zsigo@lab101-22 ~/AGQU01 $ mkdir land
zsigo@lab101-22 ~/AGQU01 $ cd bush
zsigo@lab101-22 ~/AGQU01/bush $ mkdir banan
zsigo@lab101-22 ~/AGQU01/bush $ mkdir mogyoro
zsigo@lab101-22 ~/AGQU01/bush $ mkdir barack
zsigo@lab101-22 ~/AGQU01/bush $ cd..
cd..: command not found
zsigo@lab101-22 ~/AGQU01/bush $ cd tree
bash: cd: tree: No such file or directory
zsigo@lab101-22 ~/AGQU01/bush $ mkdir korte
zsigo@lab101-22 ~/AGQU01/bush $ rmdir korte
zsigo@lab101-22 ~/AGQU01/bush $ cd ..
zsigo@lab101-22 ~/AGQU01 $ cd tree
zsigo@lab101-22 ~/AGQU01/tree $ mkdir korte
zsigo@lab101-22 ~/AGQU01/tree $ cd ..
zsigo@lab101-22 ~/AGQU01 $ cd land
zsigo@lab101-22 ~/AGQU01/land $ mkdir szeder
zsigo@lab101-22 ~/AGQU01/land $ mkdir kokusz
zsigo@lab101-22 ~/AGQU01/land $ tree
The program 'tree' is currently not installed. To run 'tree' please ask your administrator to install the package 'tree'
zsigo@lab101-22 ~/AGQU01/land $ cd ..
zsigo@lab101-22 ~/AGQU01 $ cd ..
zsigo@lab101-22 ~ $ tree
The program 'tree' is currently not installed. To run 'tree' please ask your administrator to install the package 'tree'
zsigo@lab101-22 ~ $ tree -d
The program 'tree' is currently not installed. To run 'tree' please ask your administrator to install the package 'tree'
zsigo@lab101-22 ~ $ tree -f
The program 'tree' is currently not installed. To run 'tree' please ask your administrator to install the package 'tree'
zsigo@lab101-22 ~ $ tree -a
The program 'tree' is currently not installed. To run 'tree' please ask your administrator to install the package 'tree'
zsigo@lab101-22 ~ $ sudo apt install tree
[sudo] password for zsigo:
Sorry, user zsigo is not allowed to execute '/usr/local/bin/apt install tree' as root on lab101-22.iit.uni-miskolc.hu.
zsigo@lab101-22 ~ $ sudo tree
[sudo] password for zsigo:
sudo: tree: command not found
zsigo@lab101-22 ~ $
```

```
jerry.iit.uni-miskolc.hu - PuTTY
zsigo@jerry:~/AGQU01$ cd ..
zsigo@jerry:~$ tree AGQU01
AGQU01
├── bush
│   ├── banan
│   │   └── description.txt
│   └── mogyoro
└── tree
    ├── banan
    ├── barack
    ├── kokusz
    ├── korte
    ├── listing.txt
    └── szeder
        └── szeder

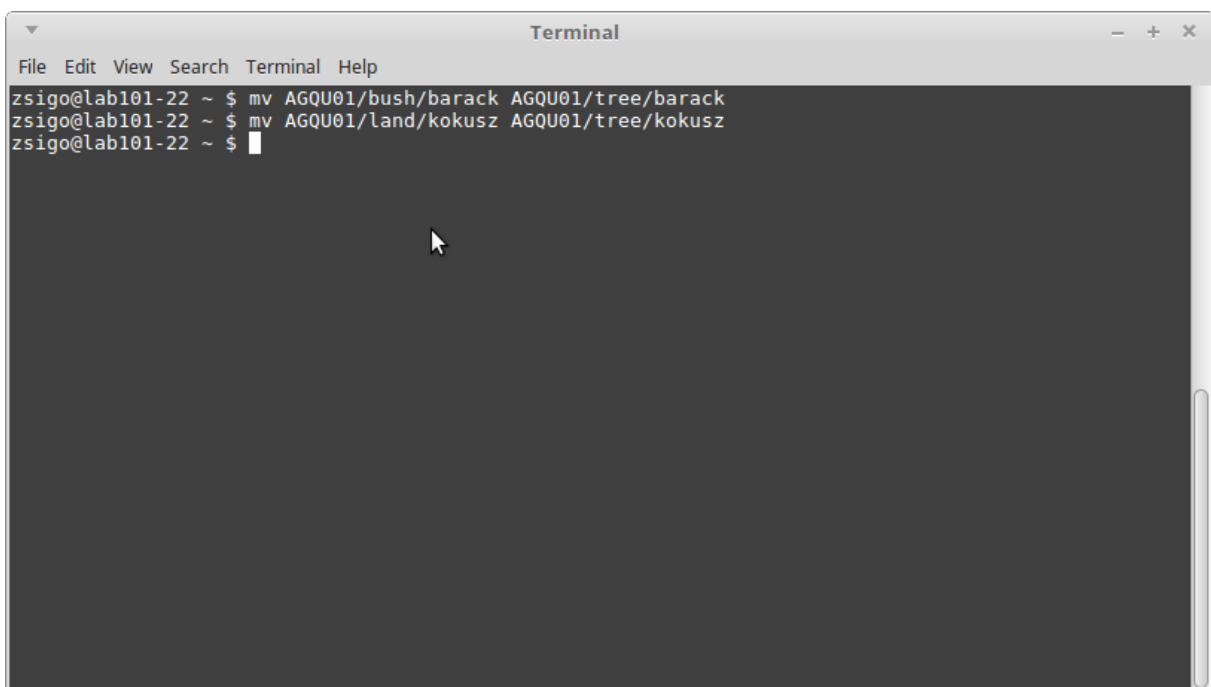
10 directories, 2 files
zsigo@jerry:~$
```

2.) Készítsen másolatot:

A screenshot of a macOS Terminal window titled "Terminal". The window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal text shows a user named "zsigo" at a prompt "zsigo@lab101-22 ~ \$". They enter two recursive copy commands: "cp -R AGQU01/land/szeder AGQU01/tree/szeder" and "cp -R AGQU01/bush/banan AGQU01/tree/banan". The cursor is on the line following the second command.

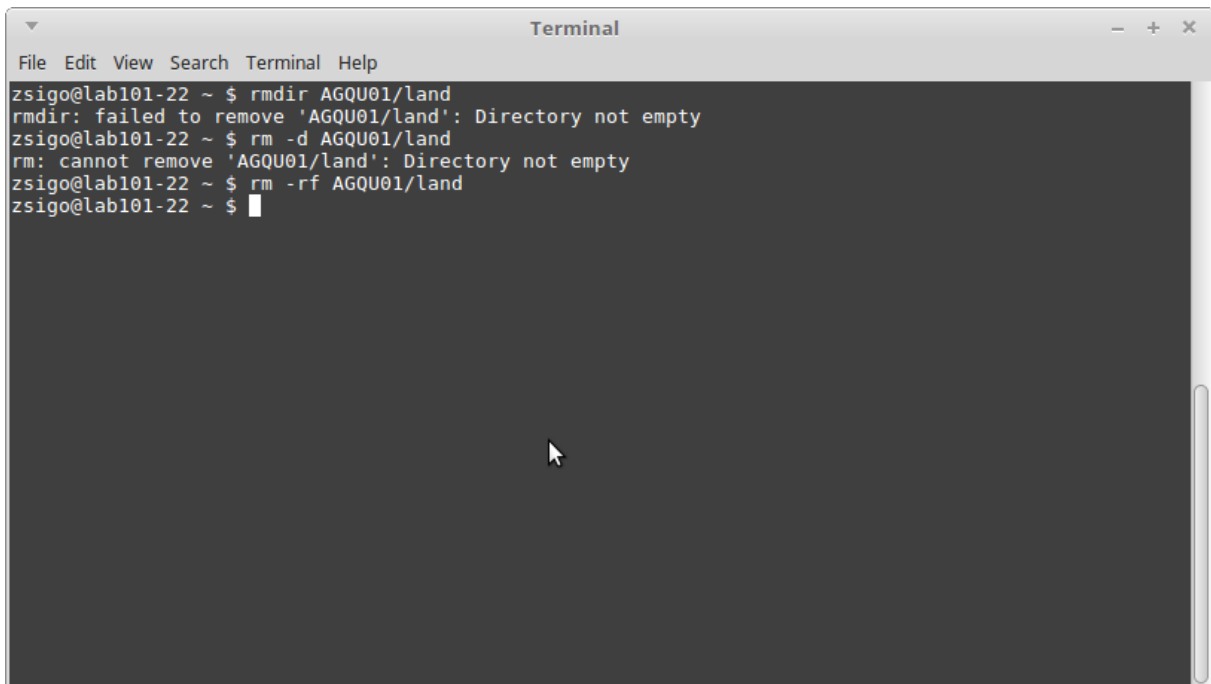
```
zsigo@lab101-22 ~ $ cp -R AGQU01/land/szeder AGQU01/tree/szeder
zsigo@lab101-22 ~ $ cp -R AGQU01/bush/banan AGQU01/tree/banan
zsigo@lab101-22 ~ $
```

3.) Végezze el a következő áthelyezéseket:

A screenshot of a macOS Terminal window titled "Terminal". The window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal text shows a user named "zsigo" at a prompt "zsigo@lab101-22 ~ \$". They enter two move commands: "mv AGQU01/bush/barack AGQU01/tree/barack" and "mv AGQU01/land/kokusz AGQU01/tree/kokusz". The cursor is on the line following the second command.

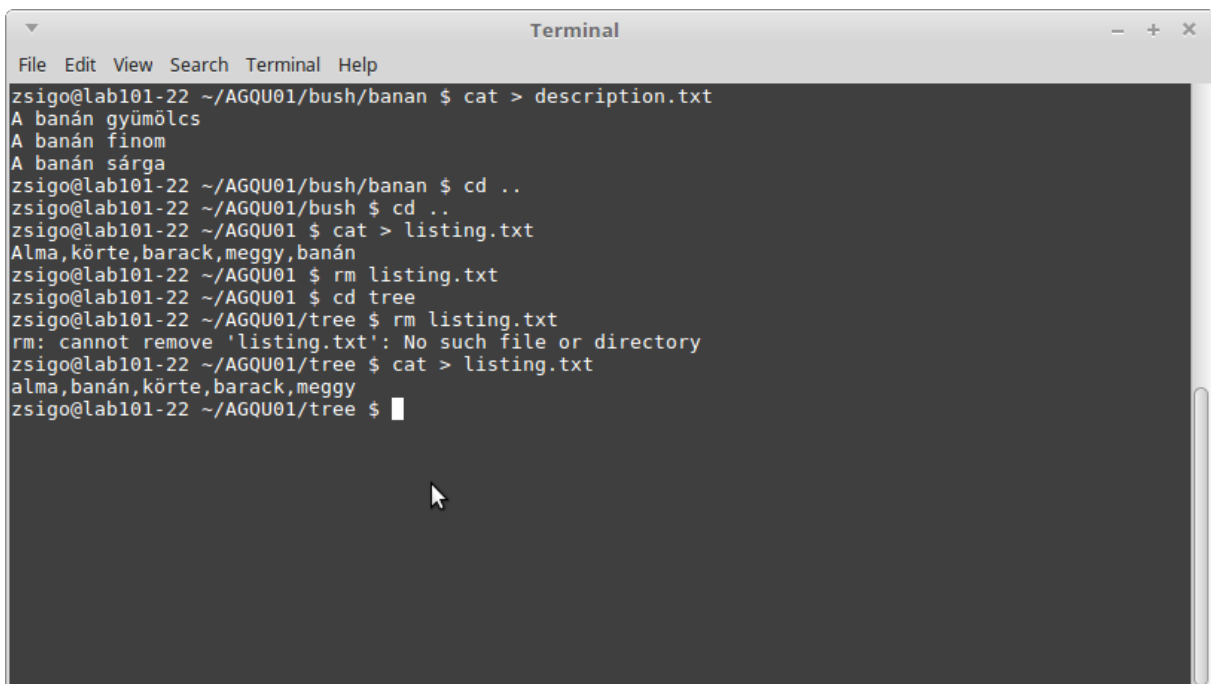
```
zsigo@lab101-22 ~ $ mv AGQU01/bush/barack AGQU01/tree/barack
zsigo@lab101-22 ~ $ mv AGQU01/land/kokusz AGQU01/tree/kokusz
zsigo@lab101-22 ~ $
```

4.) Törölje a neptunkod/land katalógust a teljes tartalmával. Hozza létre a következő szöveges állományokat:



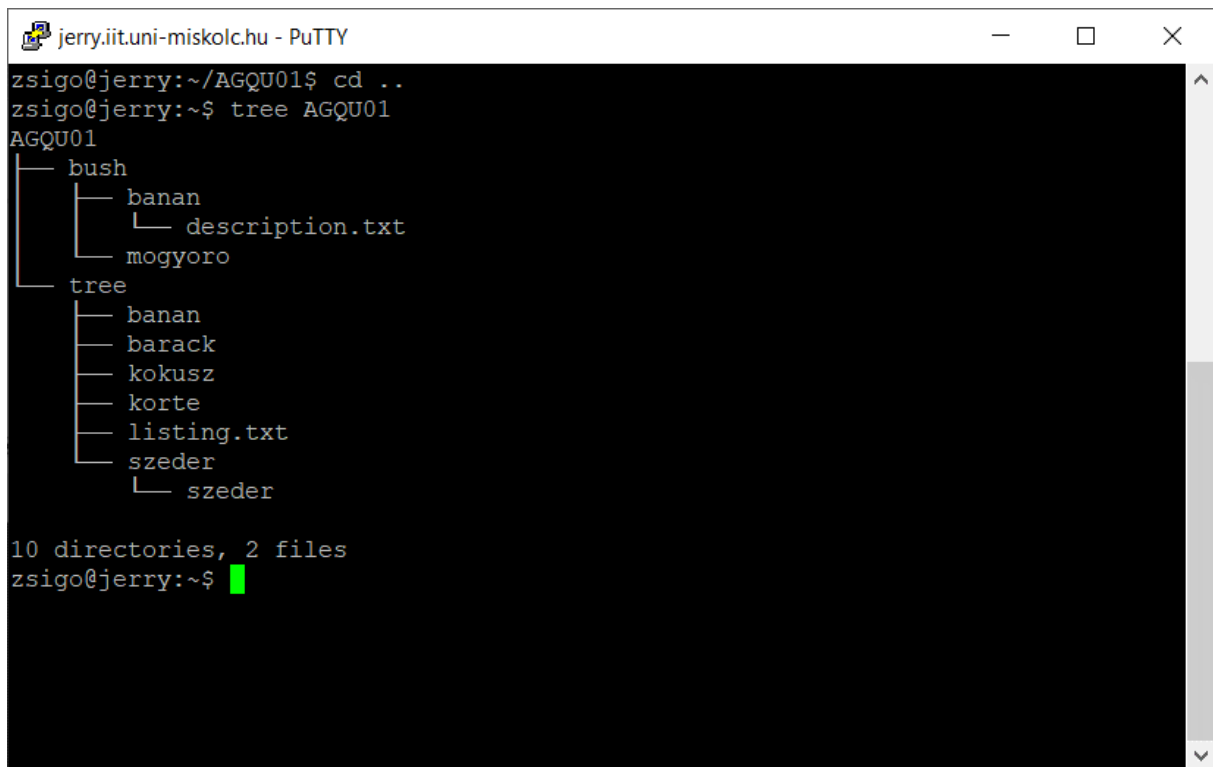
```
Terminal
File Edit View Search Terminal Help
zsigno@lab101-22 ~ $ rmdir AGQU01/land
rmdir: failed to remove 'AGQU01/land': Directory not empty
zsigno@lab101-22 ~ $ rm -d AGQU01/land
rm: cannot remove 'AGQU01/land': Directory not empty
zsigno@lab101-22 ~ $ rm -rf AGQU01/land
zsigno@lab101-22 ~ $
```

5.) A description szöveges állományba írjon 3 sort a málnáról. A listing szöveges állományba soroljon fel külön sorba 5 olyan gyümölcsöt, amelyek tree teremnek



```
Terminal
File Edit View Search Terminal Help
zsigno@lab101-22 ~/AGQU01/bush/banan $ cat > description.txt
A banán gyümölcs
A banán finom
A banán sárga
zsigno@lab101-22 ~/AGQU01/bush/banan $ cd ..
zsigno@lab101-22 ~/AGQU01/bush $ cd ..
zsigno@lab101-22 ~/AGQU01 $ cat > listing.txt
Alma,körte,barack,meggy,banán
zsigno@lab101-22 ~/AGQU01 $ rm listing.txt
zsigno@lab101-22 ~/AGQU01 $ cd tree
zsigno@lab101-22 ~/AGQU01/tree $ rm listing.txt
rm: cannot remove 'listing.txt': No such file or directory
zsigno@lab101-22 ~/AGQU01/tree $ cat > listing.txt
alma,banán,körte,barack,meggy
zsigno@lab101-22 ~/AGQU01/tree $
```

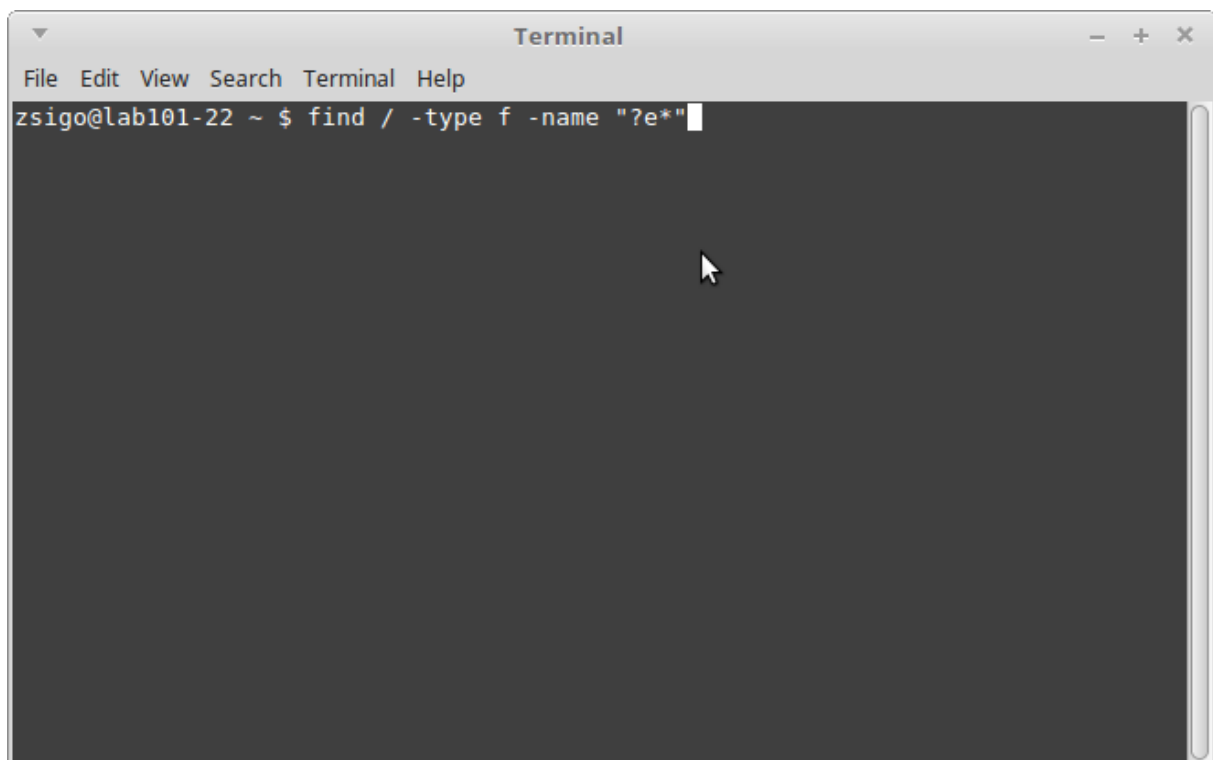
6.) Listázza a neptunkod katalógus tartalmát úgy, hogy megjelenjen az alkatalógusok tartalma is. Ezután listázza az aktuális (munka)katalógus nevét.

A terminal window titled 'jerry.iituni-miskolc.hu - PuTTY'. The user 'zsigo@jerry' is in the directory '~/AGQU01'. They execute 'cd ..' to move to the parent directory '~'. Then they execute 'tree AGQU01' to list the contents of the AGQU01 directory. The output shows a tree structure with two subdirectories: 'bush' and 'tree'. 'bush' contains 'banan' (with 'description.txt') and 'mogyoró'. 'tree' contains 'banan', 'barack', 'kokusz', 'korte', 'listing.txt', 'szeder' (with 'szeder' file), and 'szeder'. At the bottom, it says '10 directories, 2 files'. The prompt 'zsigo@jerry:~\$' is followed by a green cursor.

```
jerry.iituni-miskolc.hu - PuTTY
zsigo@jerry:~/AGQU01$ cd ..
zsigo@jerry:~$ tree AGQU01
AGQU01
├── bush
│   ├── banan
│   │   └── description.txt
│   └── mogyoró
└── tree
    ├── banan
    ├── barack
    ├── kokusz
    ├── korte
    ├── listing.txt
    ├── szeder
    │   └── szeder
    └── szeder

10 directories, 2 files
zsigo@jerry:~$
```

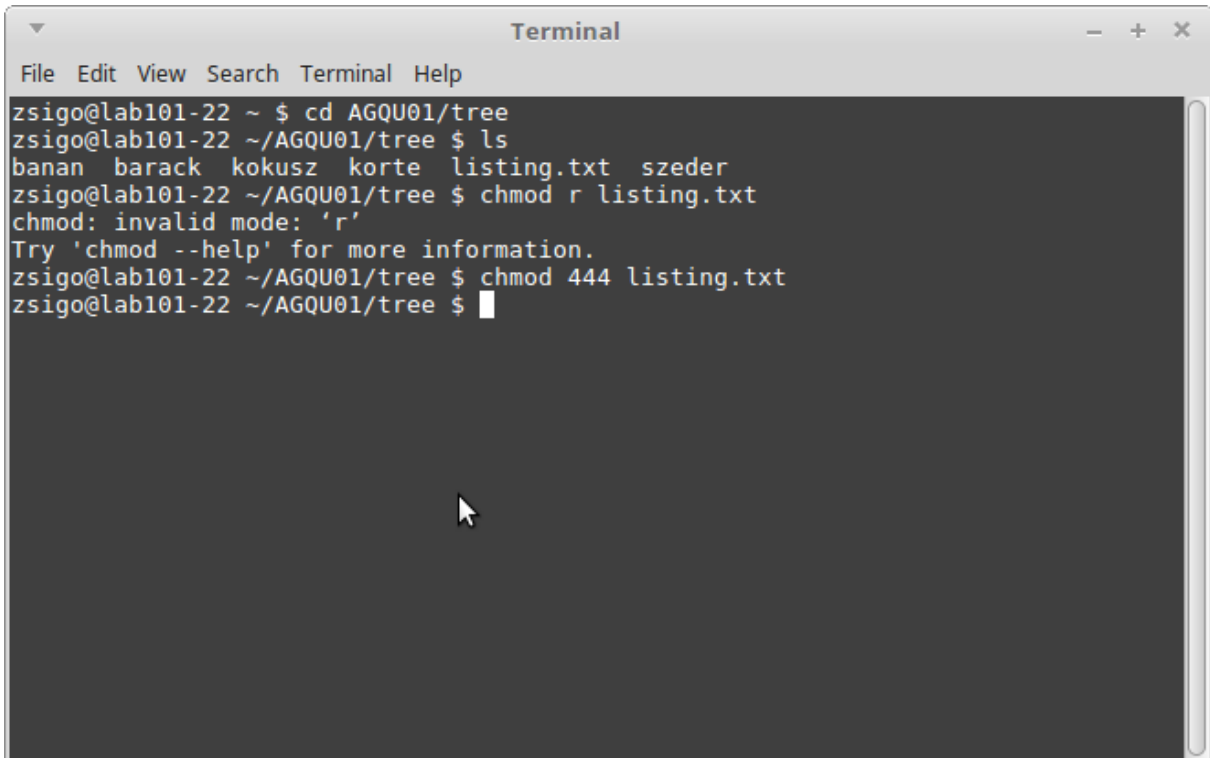
7.) Térjen vissza a saját home katalógusába és keresse meg az összes olyan file-t, amelyek nevének második betűje e.

A terminal window titled 'Terminal'. The user 'zsigo@lab101-22' is in the directory '~'. They execute the command 'find / -type f -name "?e*"'. The cursor is at the end of the command line.

```
Terminal
File Edit View Search Terminal Help
zsigo@lab101-22 ~ $ find / -type f -name "?e*"

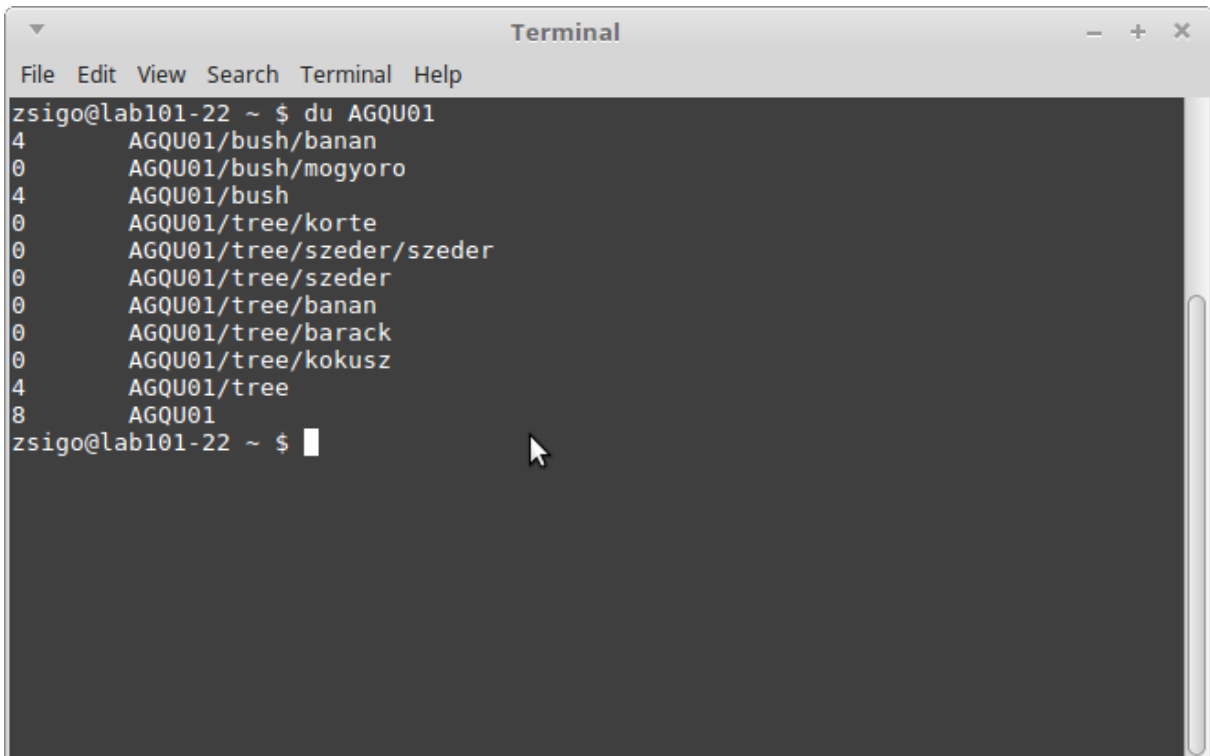
```

8.) Tegye mindenki számára olvashatóvá a listing file-t.

A terminal window titled "Terminal" with a menu bar (File, Edit, View, Search, Terminal, Help). The user is at the prompt "zsigo@lab101-22 ~". They execute "cd AGQU01/tree", then "ls", which shows "banan barack kokusz korte listing.txt szeder". Then they execute "chmod r listing.txt", which returns an error: "chmod: invalid mode: 'r'". They then execute "Try 'chmod --help' for more information.", followed by "chmod 444 listing.txt", which succeeds. The prompt returns to "zsigo@lab101-22 ~/AGQU01/tree \$".

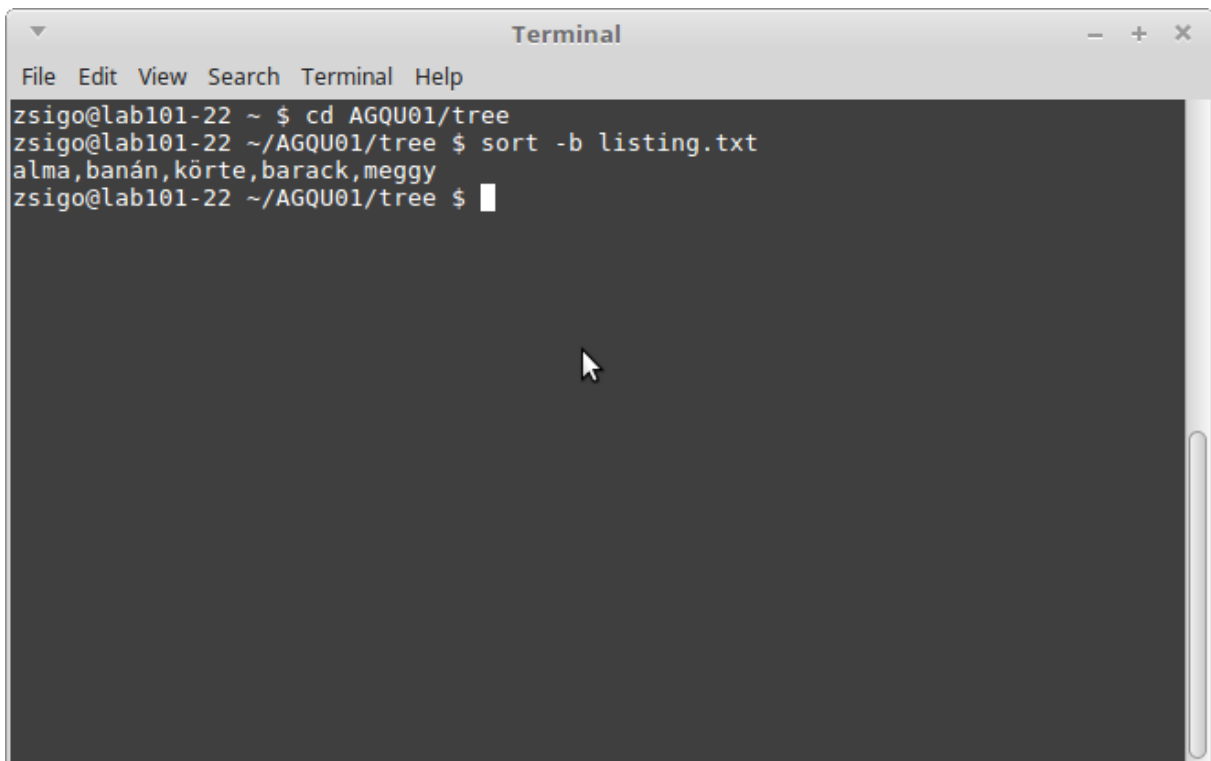
```
zsigo@lab101-22 ~ $ cd AGQU01/tree
zsigo@lab101-22 ~/AGQU01/tree $ ls
banan barack kokusz korte listing.txt szeder
zsigo@lab101-22 ~/AGQU01/tree $ chmod r listing.txt
chmod: invalid mode: 'r'
Try 'chmod --help' for more information.
zsigo@lab101-22 ~/AGQU01/tree $ chmod 444 listing.txt
zsigo@lab101-22 ~/AGQU01/tree $
```

9.) Listázza ki, hogy mennyi helyet foglal a merevlemezén a neptunkod katalógus az alkatalógusaival együtt. Az alkatalógusok méretei ne jelenjenek meg.

A terminal window titled "Terminal" with a menu bar (File, Edit, View, Search, Terminal, Help). The user is at the prompt "zsigo@lab101-22 ~". They execute "du AGQU01", which shows the disk usage for the directory and its subdirectories. The output is: "4 AGQU01/bush/banan", "0 AGQU01/bush/mogyoro", "4 AGQU01/bush", "0 AGQU01/tree/korte", "0 AGQU01/tree/szeder/szeder", "0 AGQU01/tree/szeder", "0 AGQU01/tree/banan", "0 AGQU01/tree/barack", "0 AGQU01/tree/kokusz", "4 AGQU01/tree", and "8 AGQU01". The prompt returns to "zsigo@lab101-22 ~ \$".

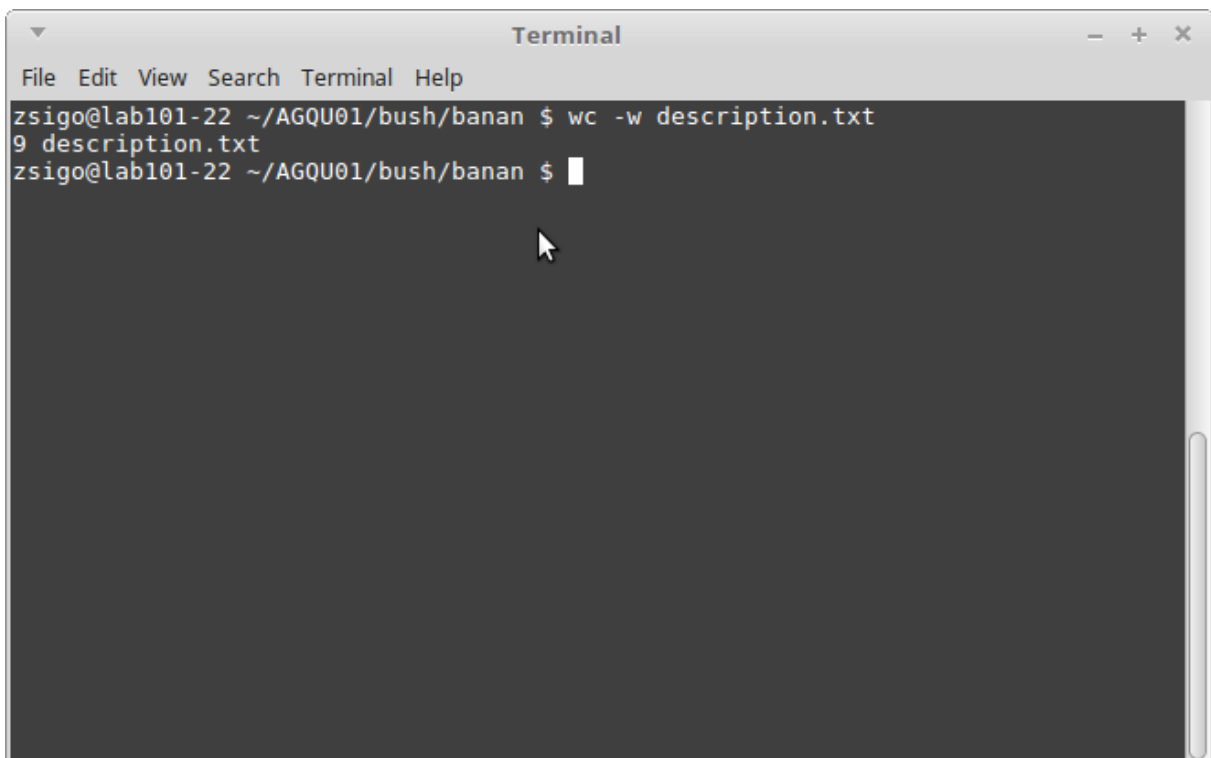
```
zsigo@lab101-22 ~ $ du AGQU01
4    AGQU01/bush/banan
0    AGQU01/bush/mogyoro
4    AGQU01/bush
0    AGQU01/tree/korte
0    AGQU01/tree/szeder/szeder
0    AGQU01/tree/szeder
0    AGQU01/tree/banan
0    AGQU01/tree/barack
0    AGQU01/tree/kokusz
4    AGQU01/tree
8    AGQU01
zsigo@lab101-22 ~ $
```

10.) Listázza ABC-szerint rendezve a listing file tartalmát.



```
Terminal
File Edit View Search Terminal Help
zsigno@lab101-22 ~ $ cd AGQU01/tree
zsigno@lab101-22 ~/AGQU01/tree $ sort -b listing.txt
alma,banán,körte,barack,meggy
zsigno@lab101-22 ~/AGQU01/tree $
```

11.) Számolja meg a description file-ban szereplő szavakat.



```
Terminal
File Edit View Search Terminal Help
zsigno@lab101-22 ~/AGQU01/bush/banan $ wc -w description.txt
9 description.txt
zsigno@lab101-22 ~/AGQU01/bush/banan $
```

B

Read all

GtkStressTesting

Stress tests

CPU: All methods

30 mins

Workers: Auto

Start

Elapsed Bogo Ops BOPSUST

▼ Processor

Processor #0 ▶

Name	Intel Core i5-6300U	Cores	1
Specification	Intel(R) Core(TM) i5-6300U CPU @ 2.40GHz	Threads	1
Package	<input type="text"/>	Microcode	<input type="text"/>
Bogomips	4992		
Family	6 (6h)	Model	78 (4Eh)
Stepping	3 (3h)		
Flags	MMX, SSE(1, 2, 3, 3S, 4.1, 4.2), AVX(1, 2), AES, CLMUL, RdRand, x86-64		More...
Bugs	Cpu Meltdown, Itlb Multihit, L1Tf, Mds, Spec Store Bypass, Spectre V1, Spectre V2, Srbds, Swapgs		More...

▼ Cache

L1 Data	1 x 32 KiB (32 KiB)	8-way	64 sets
L1 Inst.	1 x 32 KiB (32 KiB)	8-way	64 sets
Level 2	1 x 256 KiB (256 KiB)	4-way	1024 sets
Level 3	1 x 3 MiB (3 MiB)	12-way	4096 sets

▼ Motherboard

Vendor	Oracle Corporation	Vendor	innotek GmbH
Model	VirtualBox	Version	VirtualBox

BIOS

GST v0.7.5

Read all

GtkStressTesting

Stress tests

CPU: Ackermann

30 secs

1

Stop

Elapsed 0:01:36 Bogo Ops BOPSUST

▼ Processor

Processor #0 ▶

Name	Intel Core i5-6300U	Cores	1
Specification	Intel(R) Core(TM) i5-6300U CPU @ 2.40GHz	Threads	1
Package	<input type="text"/>	Microcode	<input type="text"/>
Bogomips	4992		
Family	6 (6h)	Model	78 (4Eh)
Stepping	3 (3h)		
Flags	MMX, SSE(1, 2, 3, 3S, 4.1, 4.2), AVX(1, 2), AES, CLMUL, RdRand, x86-64		More...
Bugs	Cpu Meltdown, Itlb Multihit, L1Tf, Mds, Spec Store Bypass, Spectre V1, Spectre V2, Srbds, Swapgs		More...

▼ Cache

L1 Data	1 x 32 KiB (32 KiB)	8-way	64 sets
L1 Inst.	1 x 32 KiB (32 KiB)	8-way	64 sets
Level 2	1 x 256 KiB (256 KiB)	4-way	1024 sets
Level 3	1 x 3 MiB (3 MiB)	12-way	4096 sets

▼ Motherboard

Vendor	Oracle Corporation	Vendor	innotek GmbH
Model	VirtualBox	Version	VirtualBox

BIOS

GST v0.7.5

