

# **Operációs rendszerek BSc**

**10-11. Gyak.**

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**Készítette:**

Holczer Vanda Bsc

Programtervező informatikus

COLLER

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# 1. feladat – Bankár algoritmus

A  $P4(3, 0, 0)$  kérése nem elégíthető ki biztonságosan, a  $P1(1, 0, 2)$  és a  $P0(0, 2, 0)$  kérése viszont igen.

Excel screenshot showing the Banker's algorithm simulation. The spreadsheet is divided into two main sections: P1.xlsx and P0.xlsx.

**P1.xlsx (Top):** This section shows the initial state of the system. It includes a table for the Request Matrix (REQ) and a table for the Available Vector (AVAIL). The REQ matrix is:

	P0	P1	P2	P3	P4
Request	0	1	0	0	3

The AVAIL vector is:

Resource	Value
R1	10
R2	5
R3	10

**P0.xlsx (Bottom):** This section shows the state after the request for P4 has been granted. The REQ matrix is updated:

	P0	P1	P2	P3	P4
Request	0	1	0	0	0

The AVAIL vector is updated to:

Resource	Value
R1	7
R2	4
R3	7

The spreadsheet also includes a table for the Allocation Matrix (ALLO) and a table for the Need Matrix (NEED).

## 2. feladat – Csővezeték

```
holczer@lab101-01 ~ $ ./COLLER_unnamed
10095: fd1: 3, fd2: 4
10095: I'm the parent'
10095: I send the text: This is a text:14
10096: I'm the child'
10096:I look what's inside the pipe'
10096: This is a text
10096:The pipe's other side is closed'
holczer@lab101-01 ~ $
```

## 3. feladat – Nevesített csővezeték

```
holczer@lab101-01 ~ $ pico COLLER_named.c
holczer@lab101-01 ~ $ ./COLLER_named.c
bash: ./COLLER_named.c: Permission denied
holczer@lab101-01 ~ $ ./COLLER_named
I write fifo: I put this to the fifo:22
read() read 22 byte: I put this to the fifo
holczer@lab101-01 ~ $
```

## 4. feladat – Üzenetsor

```
holczer@lab101-01 ~ $ ./msgcreate
msgid has been created: 0, 0
1. msgsnd() gave: 0
The sent message: First message
2. msgsnd gave: 0
The sent message: Second message

holczer@lab101-01 ~ $ ./msgctl

Returned: 0

holczer@lab101-01 ~ $ ./msgrcv
msgid: 32768
Number of messages: 0
```

## 5. feladat – Osztott memória szegmens

```
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

sakuri@sakuri-VirtualBox:~$ pico shmcreate.c
sakuri@sakuri-VirtualBox:~$ pico shmctl.c
sakuri@sakuri-VirtualBox:~$ pico shmctl.c
sakuri@sakuri-VirtualBox:~$ gcc shmcreate.c -o shmcreate
shmcreate.c:1:10: fatal error: stdio.h: Nincs ilyen fájl vagy könyvtár
 1 | #include <stdio.h>
   | ^
compilation terminated.
sakuri@sakuri-VirtualBox:~$ pico shmcreate.c
sakuri@sakuri-VirtualBox:~$ gcc shmcreate.c -o shmcreate
shmcreate.c:1:10: fatal error: sys/types.h: Nincs ilyen fájl vagy könyvtár
 1 | #include <sys/types.h>
   | ^
compilation terminated.
```