

```
genesys@DESKTOP-3KB733B: ~
Welcome to Ubuntu 18.04.2 LTS (GNU/Linux 4.4.0-19041-Microsoft x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage

System information as of Fri Apr 16 14:02:11 CEST 2021

System load:  0.52      Memory usage: 59%   Processes:    8
Usage of /home: unknown  Swap usage:  0%     Users logged in: 0

=> There were exceptions while processing one or more plugins. See
/var/log/landscape/sysinfo.log for more information.

261 packages can be updated.
160 updates are security updates.

genesys@DESKTOP-3KB733B:~$ nano NWTTCa_unnamed.c
genesys@DESKTOP-3KB733B:~$ gcc NWTTCa_unnamed.c -o test
genesys@DESKTOP-3KB733B:~$ ./test
Child most irja a pipeba!
Child irt a pipe-ba, lehet olvasni
Parent most fog kiolvasni a pipebol
Parent ezt olvasta ki: BB NWTTCa
genesys@DESKTOP-3KB733B:~$
```

```
GNU nano 2.9.3 NWTTCa_unnamed.c

#include <stdio.h>
#include <unistd.h>
#include <stdlib.h>
#include <sys/wait.h>

#define MSIZE 128

int main()
{
    char inBuffer[MSIZE];
    int p[2], nbytes, pid;

    if(pipe(p) < 0)
    {
        perror("Hiba tortent! \n");
        exit(1);
    }

    pid = fork();

    if (pid < 0)
        exit(2);

    if (pid == 0)
    {
        printf("Child most irja a pipeba! \n");
        write(p[1], "BB NWTTCa", MSIZE);
        printf("Child irt a pipe-ba, lehet olvasni \n");
    }
    else if (pid > 0)
    {
        wait(NULL);
        printf("Parent most fog kiolvasni a pipebol \n");
        read(p[0], inBuffer, MSIZE);
        printf("Parent ezt olvasta ki: %s \n", inBuffer);
    }

    return 0;
}
```

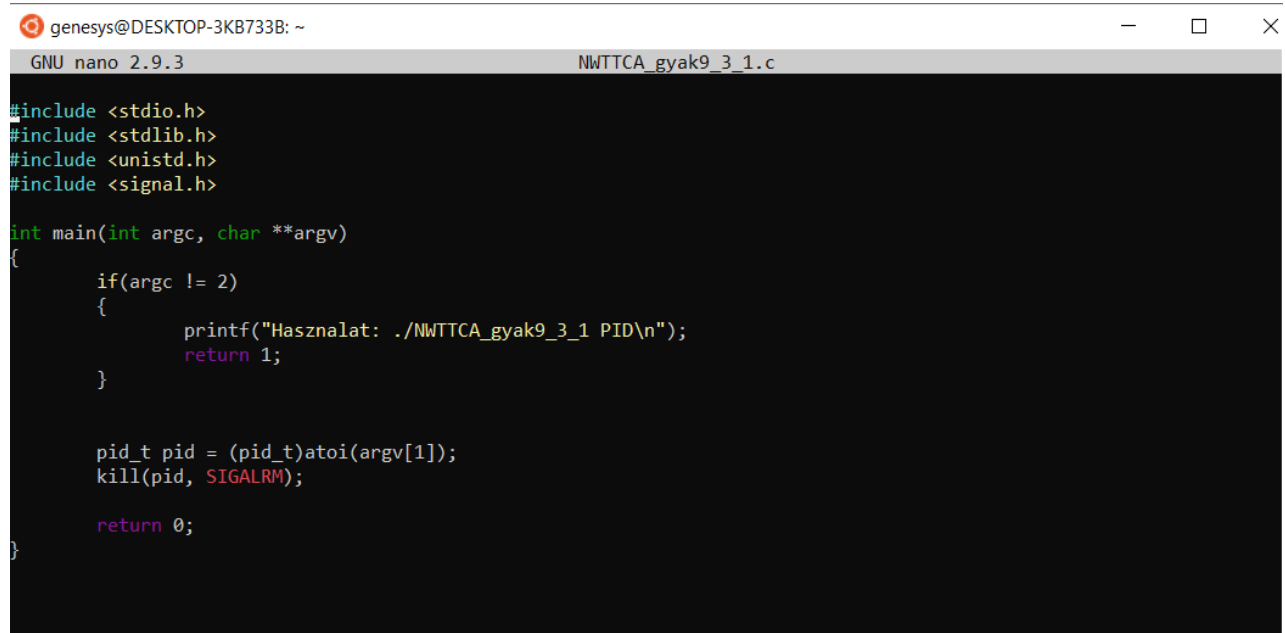
## 2.feladat

```
genesys@DESKTOP-3KB733B: ~  
genesys@DESKTOP-3KB733B:~$ nano NWTTCAnamed.c  
genesys@DESKTOP-3KB733B:~$ gcc NWTTCAnamed.c -o test  
genesys@DESKTOP-3KB733B:~$ ./test  
Child most fog beirni a fifo pipe-ba  
Child sikeresen irt a pipe.ba  
Parent ezt kaptam: Bartfai Balint  
genesys@DESKTOP-3KB733B:~$
```

```
genesys@DESKTOP-3KB733B: ~  
GNU nano 2.9.3 NWTTCAnamed.c  
#include <stdio.h>  
#include <unistd.h>  
#include <stdlib.h>  
#include <fcntl.h>  
#include <sys/stat.h>  
#include <sys/types.h>  
#include <sys/wait.h>  
#include <string.h>  
  
#define MSIZE 128  
  
int main()  
{  
    char inBuffer[MSIZE];  
    int pid, fileDesc;  
    char input[] = "Bartfai Balint";  
    char * fifo = "/tmp/nwttcA";  
  
    mkfifo(fifo, 0666);  
  
    pid = fork();  
  
    if (pid < 0)  
    {  
        exit(2);  
    }  
  
    if (pid == 0)  
    {  
        printf("Child most fog beirni a fifo pipe-ba \n");  
        fileDesc = open(fifo, O_WRONLY);  
        write(fileDesc, input, strlen(input) + 1);  
        printf("Child sikeresen irt a pipe.ba \n");  
    }  
    else if (pid > 0)  
    {  
        fileDesc = open(fifo, O_RDONLY);  
        read(fileDesc, inBuffer, strlen(input)+1);  
        printf("Parent ezt kaptam: %s \n", inBuffer);  
        close(fileDesc);  
    }  
  
    return 0;  
}
```

### 3.feladat

```
genesys@DESKTOP-3KB733B:~$ nano NWTTC_gyak9_3_1.c
genesys@DESKTOP-3KB733B:~$ gcc NWTTC_gyak9_3_1.c -o test
genesys@DESKTOP-3KB733B:~$ ./test
Hasznalat: ./NWTTC_gyak9_3_1 PID
```



The screenshot shows a terminal window with the nano editor open to the file NWTTC\_gyak9\_3\_1.c. The code includes standard headers and a main function that checks the number of arguments. If there are not exactly 2 arguments, it prints a usage message and returns 1. Otherwise, it converts the second argument to an integer, kills the process with PID equal to that integer using SIGALRM, and returns 0.

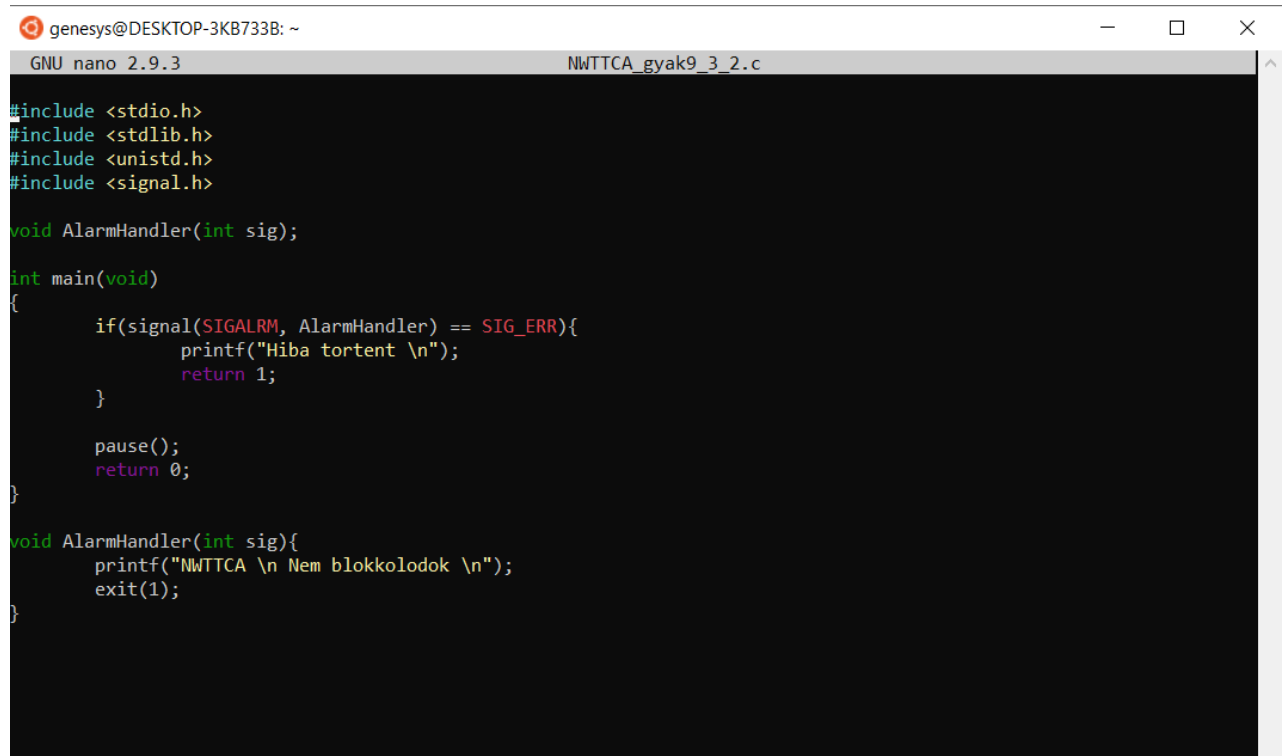
```
genesys@DESKTOP-3KB733B: ~
GNU nano 2.9.3 NWTTC_gyak9_3_1.c

#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <signal.h>

int main(int argc, char **argv)
{
    if(argc != 2)
    {
        printf("Hasznalat: ./NWTTC_gyak9_3_1 PID\n");
        return 1;
    }

    pid_t pid = (pid_t)atoi(argv[1]);
    kill(pid, SIGALRM);

    return 0;
}
```



The screenshot shows a terminal window with the nano editor open to the file NWTTC\_gyak9\_3\_2.c. The code includes standard headers and defines an AlarmHandler function. The main function sets up a signal handler for SIGALRM, prints an error message if the setup fails, pauses the program, and then returns 0. The AlarmHandler function prints a message and exits with status 1 when it receives the signal.

```
genesys@DESKTOP-3KB733B: ~
GNU nano 2.9.3 NWTTC_gyak9_3_2.c

#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <signal.h>

void AlarmHandler(int sig);

int main(void)
{
    if(signal(SIGALRM, AlarmHandler) == SIG_ERR){
        printf("Hiba tortent \n");
        return 1;
    }

    pause();
    return 0;
}

void AlarmHandler(int sig){
    printf("NWTTC \n Nem blokkolodok \n");
    exit(1);
}
```

#### 4.feladat

```

GNU nano 2.9.3 NWTTC_gyak9_4.c

#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <signal.h>

void TerminationHandler(int sig);

int main(void)
{
    if(signal(SIGTERM, TerminationHandler) == SIG_ERR){
        printf("Nem sikerult handlert allitani a \"SIGTERM\" jelre \n");
        return 0;
    }

    while(1){
        printf("Varakozas \n");
        sleep(3);
    }

    return 0;
}

void TerminationHandler(int sig){
    signal(sig, SIG_IGN);
    printf("SIGTERM signal: %d\n", sig);
}

```

```

genesys@DESKTOP-3KB733B:~$ nano NwTTCa_gyak9_4.c
genesys@DESKTOP-3KB733B:~$ gcc NwTTCa_gyak9_4.c -o test
genesys@DESKTOP-3KB733B:~$ ./test
/arakozas
/arakozas
/arakozas
/arakozas
/arakozas
/arakozas
/arakozas
/arakozas

```