LINUX PROGRAMMING

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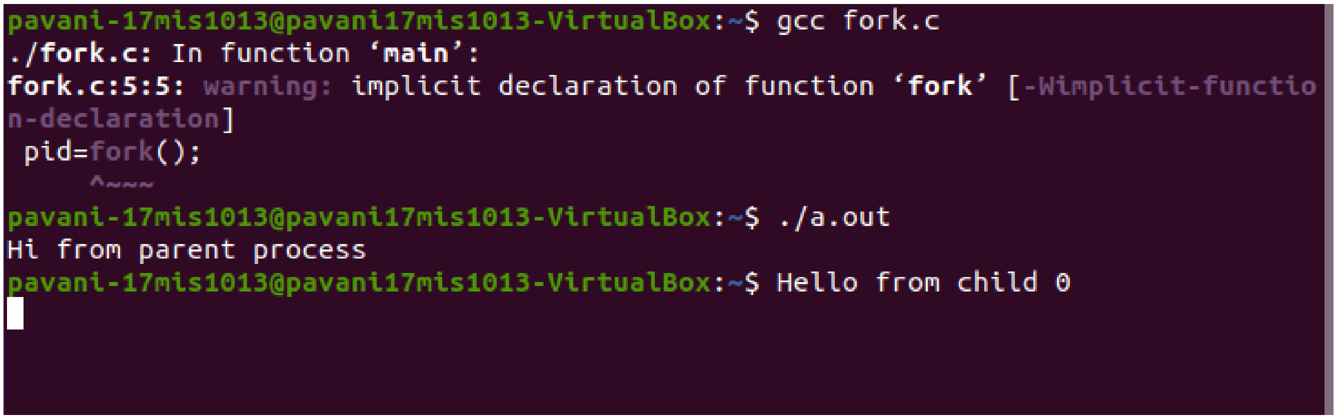
1) Using fork() method to create a child process

Code:

```
#include<stdio.h>
int main()
{
int pid;
pid=fork();
if(pid==0)
{
printf("Hello from child %d\n",pid);
}
else
{
printf("Hi from parent process\n");
}
}
```

Output:



```
pavani-17mis1013@pavani17mis1013-VirtualBox:~$ gcc fork.c
./fork.c: In function ‘main’:
fork.c:5:5: warning: implicit declaration of function ‘fork’ [-Wimplicit-functio
n-declaration]
 pid=fork();
     ^~~~
pavani-17mis1013@pavani17mis1013-VirtualBox:~$ ./a.out
Hi from parent process
pavani-17mis1013@pavani17mis1013-VirtualBox:~$ Hello from child 0
```

2) Using execve

Code:

sum.c

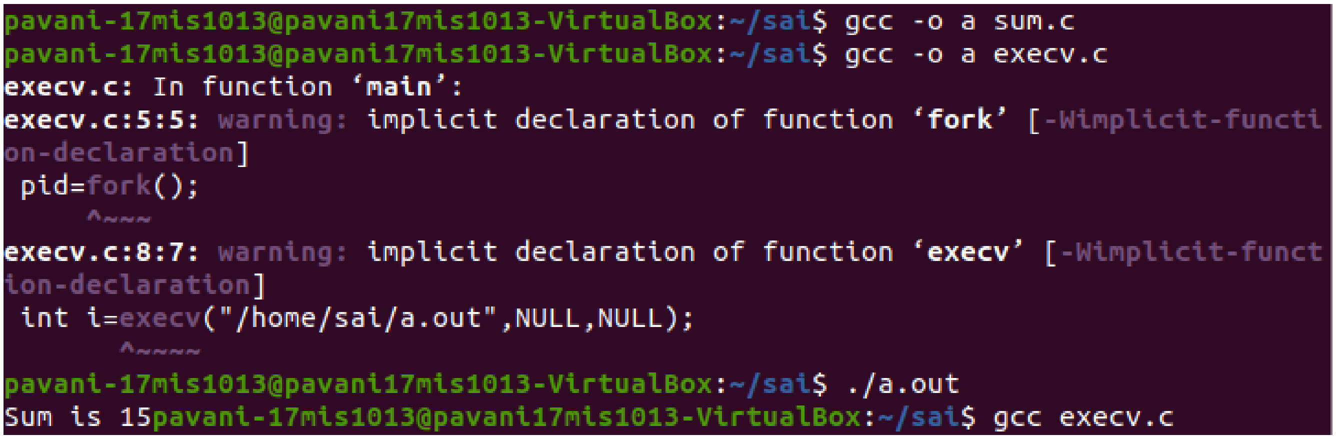
```
#include<stdio.h>
int main()
{
int i,s;
```

```
for(i=1;i<6;i++)
{
s=s+i;
}
printf("Sum is %d",s);
}
```

execv.c

```
#include<stdio.h>
int main()
{
int pid,i;
pid=fork();
if(pid==0)
{
int i=execv("/home/sai",NULL,NULL);
}
else
{
printf("This is the parent process");
}
}
```

Output:



```
pavani-17mis1013@pavani17mis1013-VirtualBox:~/sai$ gcc -o a sum.c
pavani-17mis1013@pavani17mis1013-VirtualBox:~/sai$ gcc -o a execv.c
execv.c: In function ‘main’:
execv.c:5:5: warning: implicit declaration of function ‘fork’ [-Wimplicit-functi
on-declaration]
 pid=fork();
     ^~~~
execv.c:8:7: warning: implicit declaration of function ‘execv’ [-Wimplicit-funct
ion-declaration]
 int i=execv("/home/sai/a.out",NULL,NULL);
       ^~~~~
pavani-17mis1013@pavani17mis1013-VirtualBox:~/sai$ ./a.out
Sum is 15pavani-17mis1013@pavani17mis1013-VirtualBox:~/sai$ gcc execv.c
```

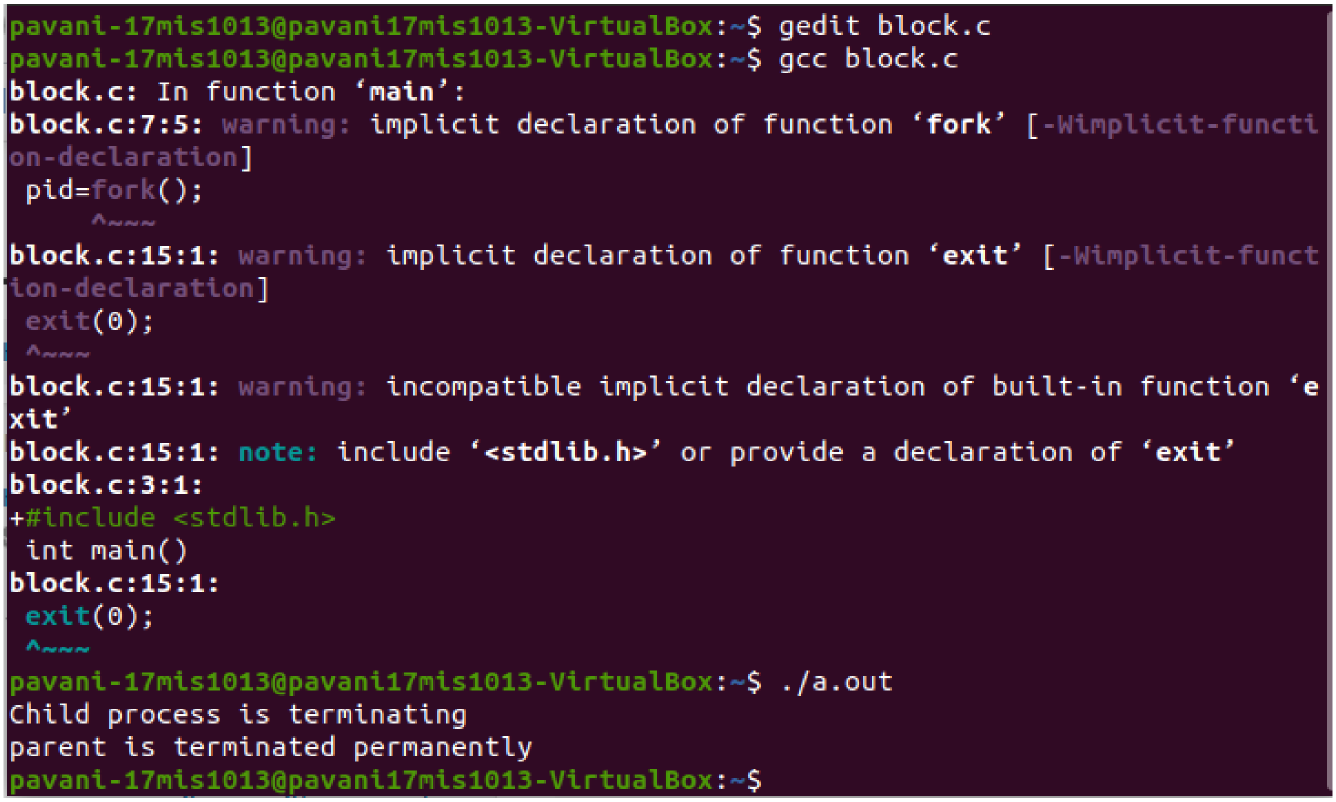
3) Blocking the parent process

Code:

```
#include<stdio.h>
#include<sys/wait.h>
int main()
{
```

```
pid_t pid;
int status;
pid=fork();
if(pid<0)
{
printf("fork error");
}
else if(pid==0)
{
printf("Child process is terminating\n");
exit(0);
}
if(wait(&status)!=pid)
{
printf("wait error");
}
else
{
printf("parent is terminated permanently\n");
}
}
```

Output:



```
pavani-17mis1013@pavani17mis1013-VirtualBox:~$ gedit block.c
pavani-17mis1013@pavani17mis1013-VirtualBox:~$ gcc block.c
block.c: In function ‘main’:
block.c:7:5: warning: implicit declaration of function ‘fork’ [-Wimplicit-functi
on-declaration]
 pid=fork();
     ^~~~
block.c:15:1: warning: implicit declaration of function ‘exit’ [-Wimplicit-funct
ion-declaration]
 exit(0);
 ^~~~
block.c:15:1: warning: incompatible implicit declaration of built-in function ‘e
xit’
block.c:15:1: note: include ‘<stdlib.h>’ or provide a declaration of ‘exit’
block.c:3:1:
+#include <stdlib.h>
 int main()
block.c:15:1:
 exit(0);
 ^~~~
pavani-17mis1013@pavani17mis1013-VirtualBox:~$ ./a.out
Child process is terminating
parent is terminated permanently
pavani-17mis1013@pavani17mis1013-VirtualBox:~$
```