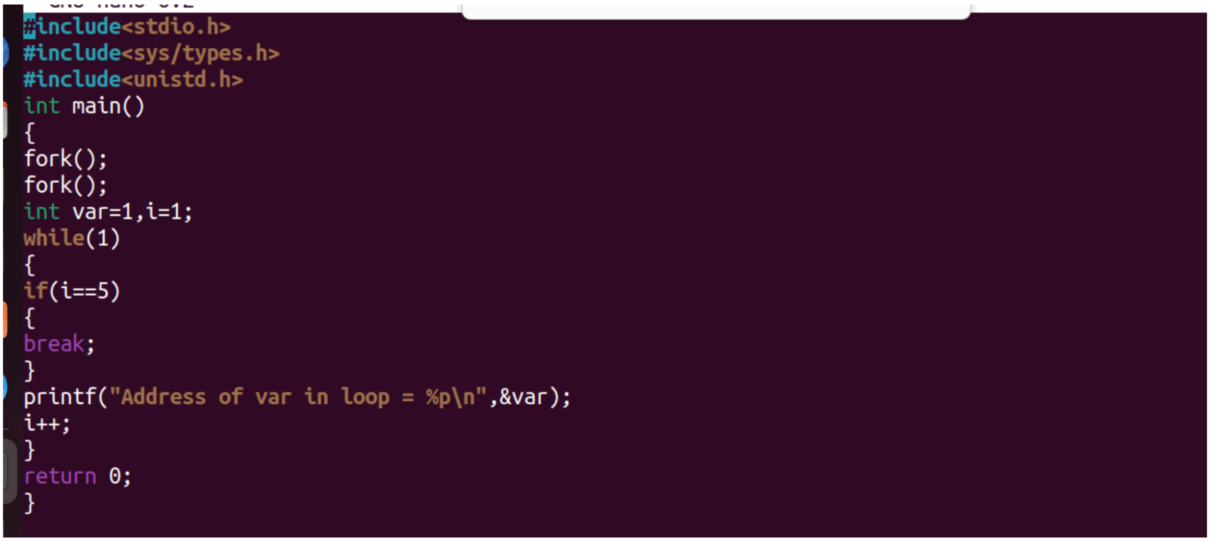
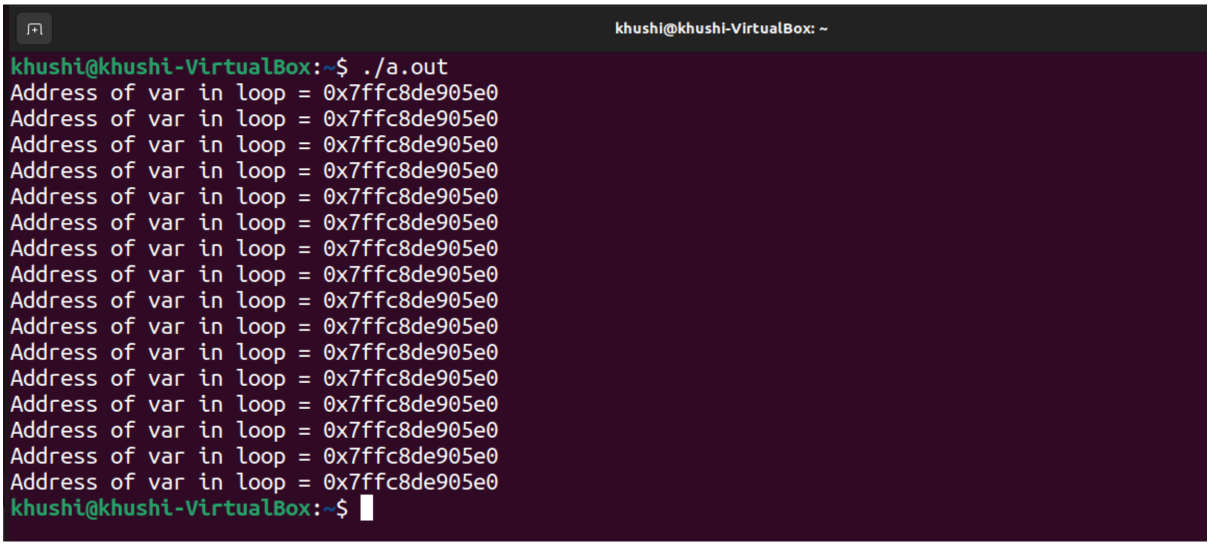
EXPERIMENT NO:- 10

Write a C program to print the address of a variable and enter a long loop (say using while(1)).

→Start three to four processes of the same program and observe the printed address values.



```c
#include<stdio.h>
#include<sys/types.h>
#include<unistd.h>
int main()
{
fork();
fork();
int var=1,i=1;
while(1)
{
if(i==5)
{
break;
}
printf("Address of var in loop = %p\n",&var);
i++;
}
return 0;
}
```



```
khushi@khushi-VirtualBox:~$ ./a.out
Address of var in loop = 0x7ffc8de905e0
Address of var in loop = 0x7ffc8de905e0
Address of var in loop = 0x7ffc8de905e0
Address of var in loop = 0x7ffc8de905e0
Address of var in loop = 0x7ffc8de905e0
Address of var in loop = 0x7ffc8de905e0
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Address of var in loop = 0x7ffc8de905e0
Address of var in loop = 0x7ffc8de905e0
Address of var in loop = 0x7ffc8de905e0
Address of var in loop = 0x7ffc8de905e0
Address of var in loop = 0x7ffc8de905e0
khushi@khushi-VirtualBox:~$ 
```
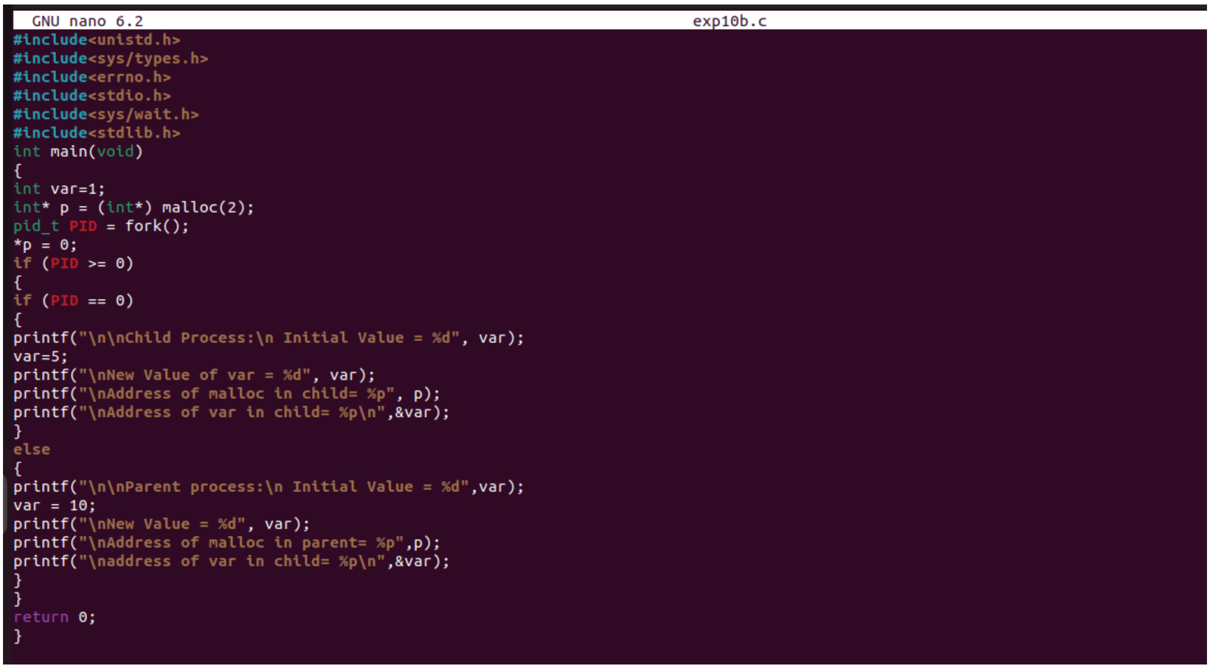
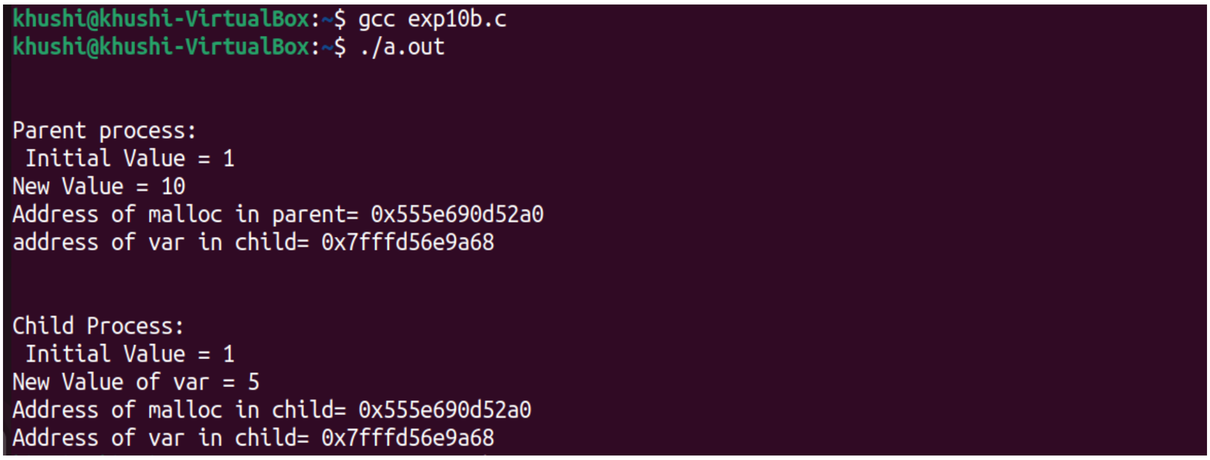

→Show how two processes which are members of the relationship parent child are connected from execution point of view, initially the child is copy of the parent, but every process has its own data.



```
#include<unistd.h>
#include<sys/types.h>
#include<errno.h>
#include<stdio.h>
#include<sys/wait.h>
#include<stdlib.h>
int main(void)
{
int var=1;
int* p = (int*) malloc(2);
pid_t PID = fork();
*p = 0;
if (PID >= 0)
{
if (PID == 0)
{
printf("\n\nChild Process:\n Initial Value = %d", var);
var=5;
printf("\nNew Value of var = %d", var);
printf("\nAddress of malloc in child= %p", p);
printf("\nAddress of var in child= %p\n",&var);
}
else
{
printf("\n\nParent process:\n Initial Value = %d",var);
var = 10;
printf("\nNew Value = %d", var);
printf("\nAddress of malloc in parent= %p",p);
printf("\naddress of var in child= %p\n",&var);
}
}
return 0;
}
```



```
khushi@khushi-VirtualBox:~$ gcc exp10b.c
khushi@khushi-VirtualBox:~$ ./a.out


Parent process:
 Initial Value = 1
New Value = 10
Address of malloc in parent= 0x555e690d52a0
address of var in child= 0x7fffd56e9a68


Child Process:
 Initial Value = 1
New Value of var = 5
Address of malloc in child= 0x555e690d52a0
Address of var in child= 0x7fffd56e9a68
```