

PRACTICAL-1

AIM: WRITE A PROGRAM (USING FORK() AND /OR EXEC() COMMANDS) WHERE PARENT CHILD EXECUTE:

1. SAME PROGRAM SAME CODE.
2. SAME PROGRAM DIFFERENT CODE.
3. BEFORE TERMINATING , THE PARENT WAIT FOR THE CHILD TO FINISH ITS TASK.

SOL:

1. Code with Output

```
#include<stdio.h>

#include<stdlib.h>

#include<unistd.h>

int main(){

pid_t p, pid;

p=fork();

pid=getpid();

if(p<0){

fprintf(stderr,"Fork Failed \n");

return 1;

}

printf("My PID is :%d, My Parent PID is: %d \n",p,pid);

return 0;

}
```

Output:



```
My PID is: 0, My Parent PID is: 187
My PID is: 187, My Parent PID is: 186
```

2.

```
#include<stdio.h>

#include<stdlib.h>

#include<unistd.h>

#include<sys/wait.h>

int main(){

pid_t pid , p;

p=fork();

if(p<0){

fprintf(stderr, "Fork Failed \n");

exit(1);

}

else if(p==0){

printf("\n This is Child Process\n");

printf("Process id of Child Process: %d \n", getpid());

exit(0);

}

else{

printf("\n This is the Parent Process \n");

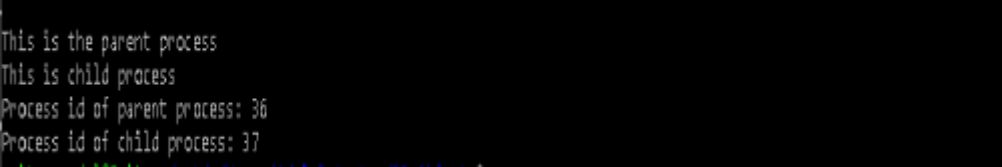
printf("Process id of Parent Process: %d \n",getpid());

exit(1);

}

}
```

Output:



```
This is the parent process
This is child process
Process id of parent process: 36
Process id of child process: 37
```

3.

```
#include<stdio.h>

#include<stdlib.h>

#include<unistd.h>

#include<sys/wait.h>

int main(){

pid_t pid,p;

p=fork();

if(p<0){

fprintf(stderr,"Fork Failed\n");

}

else if(p==0){

printf("Child Process \n");

printf("Child Process id: %d \n", getpid());

}

else {

wait(NULL);

printf("Parent Process \n");

printf("Parent Process id: %d \n", getpid());

}

}
```

Output:



```
Child process
Child process id: 73
Parent process
Parent process id: 72
```

UNIX COMMANDS

```
C:\Users\hp\Desktop>ls -l
total 1517
-rwxr-xr-x 1 hp 197610 913 Sep 11 19:21 BitTorrent.lnk
drwxr-xr-x 1 hp 197610 0 Sep 17 15:05 Books
-rwxr-xr-x 1 hp 197610 949 Jul 22 14:28 CodeBlocks.lnk
-rw-r--r-- 1 hp 197610 93444 Sep 17 12:50 FeeSlip.pdf
-rwxr-xr-x 1 hp 197610 1410 Sep 20 19:08 Grammarly.lnk
-rwxr-xr-x 1 hp 197610 2352 Mar 16 2022 'Microsoft Edge.lnk'
-rw-r--r-- 1 hp 197610 460339 Sep 25 13:46 PRACTICAL2.docx
-rw-r--r-- 1 hp 197610 48772 Sep 25 13:55 PRACTICAL3.docx
-rw-r--r-- 1 hp 197610 79647 Sep 25 14:06 PRACTICAL4.docx
-rwxr-xr-x 1 hp 197610 2388 Sep 16 22:17 'Piyush (Main) - Chrome.lnk'
drwxr-xr-x 1 hp 197610 0 May 5 22:09 'Piyush Documents'
-rwxr-xr-x 1 hp 197610 2432 Sep 19 12:20 'Random - Chrome.lnk'
-rw-r--r-- 1 hp 197610 5291 Sep 15 23:57 SLL.cpp
-rwxr-xr-x 1 hp 197610 51600 Sep 15 23:57 SLL.exe
-rw-r--r-- 1 hp 197610 8433 Sep 15 23:57 SLL.o
-rw-r--r-- 1 hp 197610 282 Mar 16 2022 desktop.ini
-rw-r--r-- 1 hp 197610 2438 Sep 25 14:30 p.PNG
-rw-r--r-- 1 hp 197610 739970 Sep 25 13:54 'practical1(18043).pdf'
```

```
C:\Users\hp\Desktop>ls
BitTorrent.lnk  Grammarly.lnk  PRACTICAL4.docx  SLL.cpp  p.PNG
Books           'Microsoft Edge.lnk'  'Piyush (Main) - Chrome.lnk'  SLL.exe  'practical1(18043).pdf'
CodeBlocks.lnk  PRACTICAL2.docx  'Piyush Documents'  SLL.o
FeeSlip.pdf     PRACTICAL3.docx  'Random - Chrome.lnk'  desktop.ini
```

```
C:\Users\hp\Desktop>date
The current date is: Sun 09/25/2022
Enter the new date: (mm-dd-yy)
```

