**Assignment No.2**

**Q.Creating an executing process using system calls such as,fork(),wait(),execvp().**

**Answer**:-

#include<stdio.h>

#include<unistd.h>

#include<sys/wait.h>

#include<stdlib.h>

int main(int argc,char \*argv[])

{

     if(argc<2)

     {

             printf("usage:%s<command>[argument]\n",argv[0]);

             return 1;

     }

     int pid= fork ();

     int getpid();

     if(pid<0)

     {

             printf("Fork Failed\n");

             return 1;

     }

     if(pid==0)

     {

             printf("Hello from child process=%d\n",getpid());

             sleep(2);

             execvp(argv[2],&argv[1]);

             perror("execvp failed");

             sleep(2);

             exit(1);

     }

     else

     {

             printf("Hello from parent process=%d\n",getpid());

             printf("Waiting for child process to complete.\n");

             wait(NULL);

             printf("Child process completed.\n");

     }

     return 0;

}

**Output:-**

**1) ./a.out ls** -l:- It shows all the files and folders in the current directory.

OUTPUT:-

Hello from parent process=6031

Waiting for child process to complete.

Hello from child process=6032

total 136

drwxrwxr-x 2 poe poe  4096 Feb  5 05:17 91

drwxrwxr-x 2 poe poe  4096 Feb 11 03:20 aas.c

-rwxrwxr-x 1 poe poe 16288 Feb 13 02:32 a.out

drwxrwxr-x 2 poe poe  4096 Feb 11 04:10 as.c

-rw-rw-r-- 1 poe poe   629 Feb  4 05:06 ass2.c

drwxrwxr-x 2 poe poe  4096 Feb 11 04:08 ass.c

-rw-rw-r-- 1 poe poe   614 Feb 11 02:31 assi2.c

-rw-rw-r-- 1 poe poe   688 Feb  5 05:07 assign2.c

drwxrwxr-x 2 poe poe  4096 Feb  6 02:40 bhoomi

-rw-rw-r-- 1 poe poe 12 Feb 10 02:00 demo.txt

drwxr-xr-x 2 poe poe  4096 Nov 27 08:48 Desktop

drwxr-xr-x 2 poe poe  4096 Feb 10 05:21 Documents

drwxr-xr-x 3 poe poe  4096 Feb 12 05:00 Downloads

-rw-rw-r-- 1 poe poe   199 Jan 21 04:00 fork.c

-rw-rw-r-- 1 poe poe   634 Feb 13 02:56 gouri.c

-rw-rw-r-- 1 poe poe   460 Feb 13 01:14 helloworld.c

drwxr-xr-x 2 poe poe  4096 Nov 27 08:48 Music

-rw-rw-r-- 1 poe poe  1390 Feb 11 04:37 os3.c

drwxr-xr-x 3 poe poe  4096 Feb 10 04:26 Pictures

-rw-rw-r-- 1 poe poe   498 Jan 23 05:06 pm.c

drwxrwxr-x 2 poe poe  4096 Feb  4 01:38 prachi

-rw-rw-r-- 1 poe poe 7 Feb  4 02:25 prachi.txt

-rw-rw-r-- 1 poe poe 9 Feb  4 01:42 prachu.txt

-rw-rw-r-- 1 poe poe   898 Feb  6 05:08 ps.c

drwxr-xr-x 2 poe poe  4096 Nov 27 08:48 Public

drwxrwxr-x 2 poe poe  4096 Feb 11 04:51 sakshi

-rw-rw-r-- 1 poe poe   569 Feb 11 04:40 s.c

drwxrwxr-x 2 poe poe  4096 Feb 12 05:20 siddhi95

drwx------ 7 poe poe  4096 Feb 10 03:45 snap

drwxr-xr-x 2 poe poe  4096 Nov 27 08:48 Templates

drwxr-xr-x 2 poe poe  4096 Nov 27 08:48 Videos

Child process completed.

**2) ./a.out echo “Hello World”**: -It allows user to display lines of text or strings that are passed as arguments.

 OUTPUT:-

Hello from parent process=5851

Waiting for child process to complete.

Hello from child process=5852

Hello World

Child process completed.

**3) ./a.out echo -e "Hello \bWorld"**:-it removes all the spaces in between the text

OUTPUT:-

Hello from parent process = 8916

Waiting for child process to complete.

Hello from child process = 8917

HelloWorld

Child process completed.

**4) ./a.out echo -e "Hello \cWorld"**:- suppress trailing new line with backspace interpreter ‘-e‘ to continue without emitting new line.

OUTPUT:-

Hello from parent process = 8925

Waiting for child process to complete.

Hello from child process = 8926

Hello

Child process completed.

**5)./a.out echo -e "Hello \nWorld"**:- this option creates a new line from where it is used.

OUTPUT:-

Hello from parent process = 8930

Waiting for child process to complete.

Hello from child process = 8931

Hello

World

Child process completed.

**6) ./a.out echo -e "Hello \tWorld"**:-  this option is used to create horizontal tab spaces.

OUTPUT:-

Hello from parent process = 8973

Waiting for child process to complete.

Hello from child process = 8974

Hello World

Child process completed.

**7) ./a.out echo -e "Hello \rWorld"**:- carriage return with backspace interpreter ‘-e‘ to have specified carriage return in output.

OUTPUT:-

Hello from parent process = 8975

Waiting for child process to complete.

Hello from child process = 8976

World

Child process completed.

**8) ./a.out echo -e "Hello \vWorld"**:- this option is used to create vertical tab spaces.

OUTPUT:-

Hello from parent process = 8975

Waiting for child process to complete.

Hello from child process = 8976

Hello

World

Child process completed.