**PROCESS ASSIGNMENT 1**

1. Write a C program to create a child process and allow the parent to display “parent process

with process id” and the child to display “child process with its process id and its Parent

process id ” on the screen.

Solution.

**CODE:**

#include <stdio.h>

#include <stdlib.h>

#include <sys/types.h>

#include <sys/wait.h>

#include <unistd.h>

int main(){

pid\_t c\_id = fork();

if (c\_id == 0) {

printf("This is child process :: Process ID : [%d] Parent Process ID : [%d]\n", getpid(), getppid());

exit(EXIT\_SUCCESS);

}if( c\_id > 0){

printf("This is parent process :: Process ID : [%d] \n", getpid() );

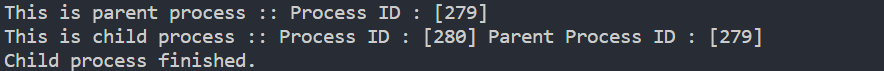
wait(NULL);

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

}

}

**OUTPUT:**



2. Write a C program to do the following: Using fork ( ) create a child process. The child process

prints its own process-id and id of its parent and then exits. The parent process waits for its

child to finish (by executing the wait ()) and prints its own process-id and the id of its child

process and then exits.

**CODE:**

#include <stdio.h>

#include <stdlib.h>

#include <sys/types.h>

#include <sys/wait.h>

#include <unistd.h>

int main(){

pid\_t child\_id;

if(fork() == 0){

printf("---------------- Child Process ----------------\n");

printf("Process ID : [%d]; Parent Process ID : [%d]\n", getpid(), getppid());

exit(EXIT\_SUCCESS);

}else if(fork() > 0){

child\_id = wait(NULL);

printf("----------------- Parent Process --------------\n");

printf("Process ID : [%d]; Child Process ID : [%d]\n", getpid(), child\_id);

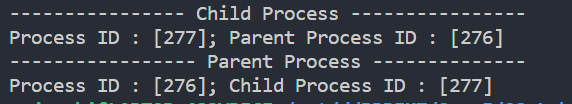
exit(EXIT\_SUCCESS);

}

return 0;

}

**OUTPUT:**



3. Write a “Hello world” greetings program and compile it. Now write another

program to create a child process which executes your hello world program

Solution.

CODE:

* C Program to display Hello world :

*// C program to display Hello World program*

#include <stdio.h>

#include <stdlib.h>

int main(){

printf("Hello World\n");

return 0;

}

* Child process that executes Hello World program :

*// C program to execute Hello World program*

#include <stdio.h>

#include <stdlib.h>

#include <unistd.h>

#include <sys/wait.h>

#include <sys/types.h>

int main(){

if (fork() == 0){

printf("New Child Process with ID : [%d]\n", getpid());

char\* args[] = {"./hw", NULL};

execv(args[0], args);

}

wait(NULL);

return 0;

}

OUTPUT:

