

Write program to implement unidirectional pipe under IPC using C programming.

**1. Title-** Write program to implement unidirectional pipe under IPC using C programming.

## **2. Description**

pipe () function creates a unidirectional pipe for IPC. On success it return two file descriptors pipefd[0] and pipefd[1]. pipefd[0] is the reading end of the pipe. So, the process which will receive the data should use this file descriptor. pipefd[1] is the writing end of the pipe. So, the process that wants to send the data should use this file descriptor.

## **3. Code**

```
#include<stdio.h>

#include<unistd.h>

#include<sys/types.h>

#include<sys/wait.h>

int main()

{

int fd[2],n;

char buffer[100];

pid_t p;

pipe(fd); //creates a unidirectional pipe with two end fd[0] and fd[1]

p=fork();

if(p>0) //parent

{

printf("Parent Passing value to child\n");

write(fd[1],"hello\n",6); //fd[1] is the write end of the pipe

wait();
```

```
}  
else // child  
{  
printf("Child printing received value\n");  
n=read(fd[0],buffer,100); //fd[0] is the read end of the pipe  
write(1,buffer,n);  
}  
}
```

#### **4. Output**

```
$ ./a.out
```

Parent passing value to child

Child printing received value

#### **5. Result**

We have successfully executed pipe () system call.