Name :Sujal Santosh Porte

PRN No. : 122B1B227

Assignment No. 03

Problem Statement : Write a program to simulate inter process communication mechanism using pipes and redirection.

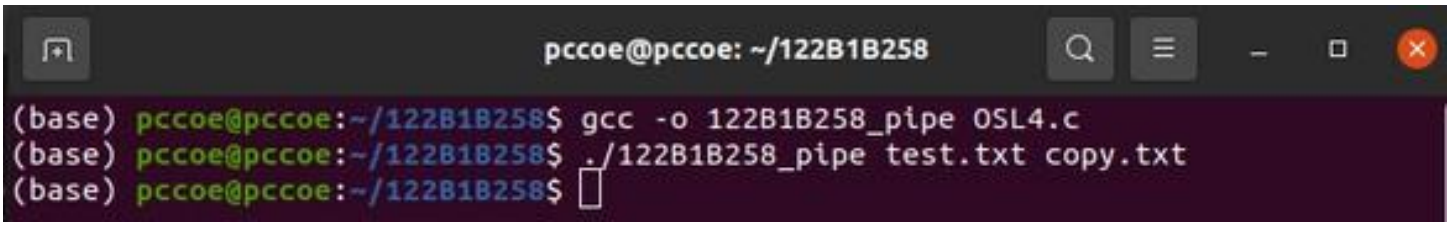
Code :

```
#include<stdio.h>

#include<unistd.h>

#include<sys/types.h>

#include<sys/stat.h>

#include<fcntl.h>


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

   if(argc != 3) {

      printf("You can not enter more or less than 3 arguments.\n");

      return 0;

   }


   int fd[2];

   int fork_val;

   char* file_1 = argv[1];

   char* file_2 = argv[2];

   int src_file;

   int dest_file;


   src_file = open(file_1, O_RDONLY);

   if(src_file == -1) {

      printf("Unable to open source file!!!\n");

      return 1;
```

```
} else {
    dup2(src_file, STDIN_FILENO);
    close(src_file);
}

pipe(fd);
fork_val = fork();

if(fork_val > 0) {
    dup2(fd[1], STDOUT_FILENO);
    close(fd[0]);
    close(fd[1]);
    execl("/usr/bin/sort", "sort", NULL);
    perror("execl failed for sort");
}
else if(fork_val == 0) {
    dup2(fd[0], STDIN_FILENO);
    dest_file = open(file_2, O_WRONLY | O_CREAT | O_TRUNC, 0644);
    if(dest_file == -1) {
        printf("Unable to open destination file!!!\n");
        return 1;
    } else {
        dup2(dest_file, STDOUT_FILENO);
        close(dest_file);
        close(fd[0]);
        close(fd[1]);
        execl("/usr/bin/uniq", "uniq", NULL);
        perror("execl failed for uniq");
    }
} else {
```

```
        perror("Fork failed!!!");
        return 1;
    }

    return 0;
}
```

Complilation :



Output :