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Semester 4 Section J

Programming Exercise - 2

Using pipes,reverse a string.

- One process takes in the string as input and writes it to a pipe
- The other process reads from the pipe and reverses the string.

Code:

```c
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <string.h>
#define MAX 100

int main(){
    char str[MAX];
    int pipefd[2];
    pid_t pid;
    if (pipe(pipefd)== -1){
        perror("pipe");
        exit(EXIT_FAILURE);
    }

    pid = fork();
    if (pid == -1){
        perror("fork");
        exit(EXIT_FAILURE);
    }

    if(pid==0){
        close(pipefd[1]);
        char reversed_str[MAX];
        int n = read(pipefd[0],str,MAX);
        for(int i=n-1,j=0;i>=0;i--,j++){
            reversed_str[j]=str[i];
        }
        reversed_str[n]='\0';
        printf("Reversed string : %s\n",reversed_str);
        close(pipefd[0]);
    }
```

```
33
34      else{
35          close(pipefd[0]);
36          printf("Enter string: ");
37          fgets(str,MAX,stdin);
38          int n = strlen(str);
39          if(n>0 && str[n-1]=='\n'){
40              str[n-1]='\0'; n--;
41          }
42
43          write(pipefd[1],str,n);
44          close(pipefd[1]);
45      }
46
47      return 0;
48  }
```

Output:

```
siri@DESKTOP-F9UMPJU:~$ gcc Lab2.c
siri@DESKTOP-F9UMPJU:~$ ./a.out
Enter string: Siri is a cutie
Reversed string : eituc a si iriS
```