

Fork

Process 1 (Parent)

```
1 void main() {  
2     int a = 1;  
3     // ...  
4     int pid = fork();  
5     // pid > 0  
6     if (pid == 0) {  
7         a = 7;  
8     } else {  
9         a = 3;  
10    }  
11 }
```

Process 2 (Child)

```
1 void main() {  
2     int a = 1;  
3     // ...  
4     int pid = fork();  
5     // pid == 0  
6     if (pid == 0) {  
7         a = 7;  
8     } else {  
9         a = 3;  
10    }  
11 }
```

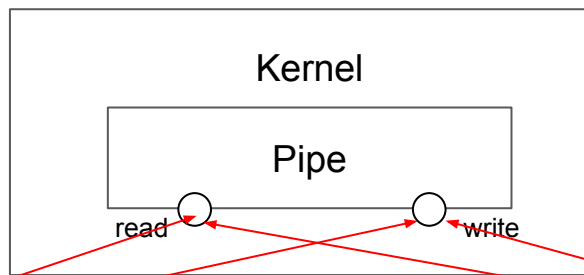
Create new process



Different variables

Parent process address space is copied

Pipes



Process 1 (Parent)

```
1 void main() {  
2     int fd[2];  
3     pipe(fd);  
4     // ...  
5     int pid = fork();  
6     // pid > 0  
7     if (pid == 0) {  
8         write(fd[1], ...);  
9     } else {  
10        read(fd[0], ...);  
11    }  
12 }
```

Create new process

Process 2 (Child)

```
1 void main() {  
2     int fd[2];  
3     pipe(fd);  
4     // ...  
5     int pid = fork();  
6     // pid == 0  
7     if (pid == 0) {  
8         write(fd[1], ...);  
9     } else {  
10        read(fd[0], ...);  
11    }  
12 }
```

Child process copies parent pipe descriptors