

Princeton University
COS 217: Introduction to Programming Systems
Trace of testforkexit

```
% gcc217 testforkexit.c -o testforkexit
```

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Trace of testforkexit

```
% ./testforkexit
```

```
29595
```

```
int main(void)
{
    pid_t iPid;
    printf("%d parent\n",
        (int)getPid());
    fflush(NULL);
    iPid = fork();
    if (iPid == 0)
    {
        printf("%d child\n",
            (int)getPid());
        exit(0);
    }
    printf("%d parent\n",
        (int)getPid());
    return 0;
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Writes:

```
29595 parent
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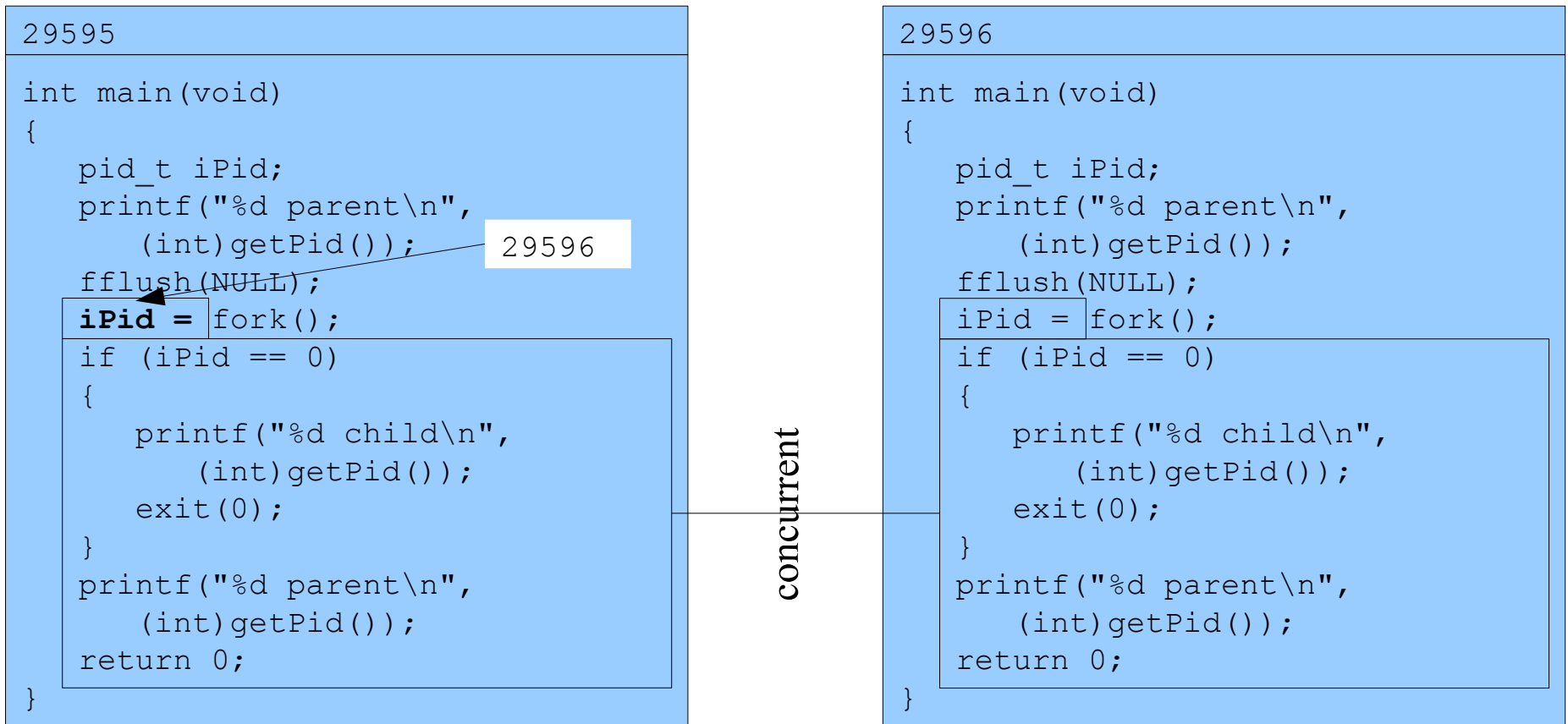
concurrent

```
29296
int main(void)
{
    pid_t iPid;
    printf("%d parent\n",
           (int)getPid());
    fflush(NULL);
    iPid = fork();
    if (iPid == 0)
    {
        printf("%d child\n",
               (int)getPid());
        exit(0);
    }
    printf("%d parent\n",
           (int)getPid());
    return 0;
}
```

Assume OS gives CPU to parent

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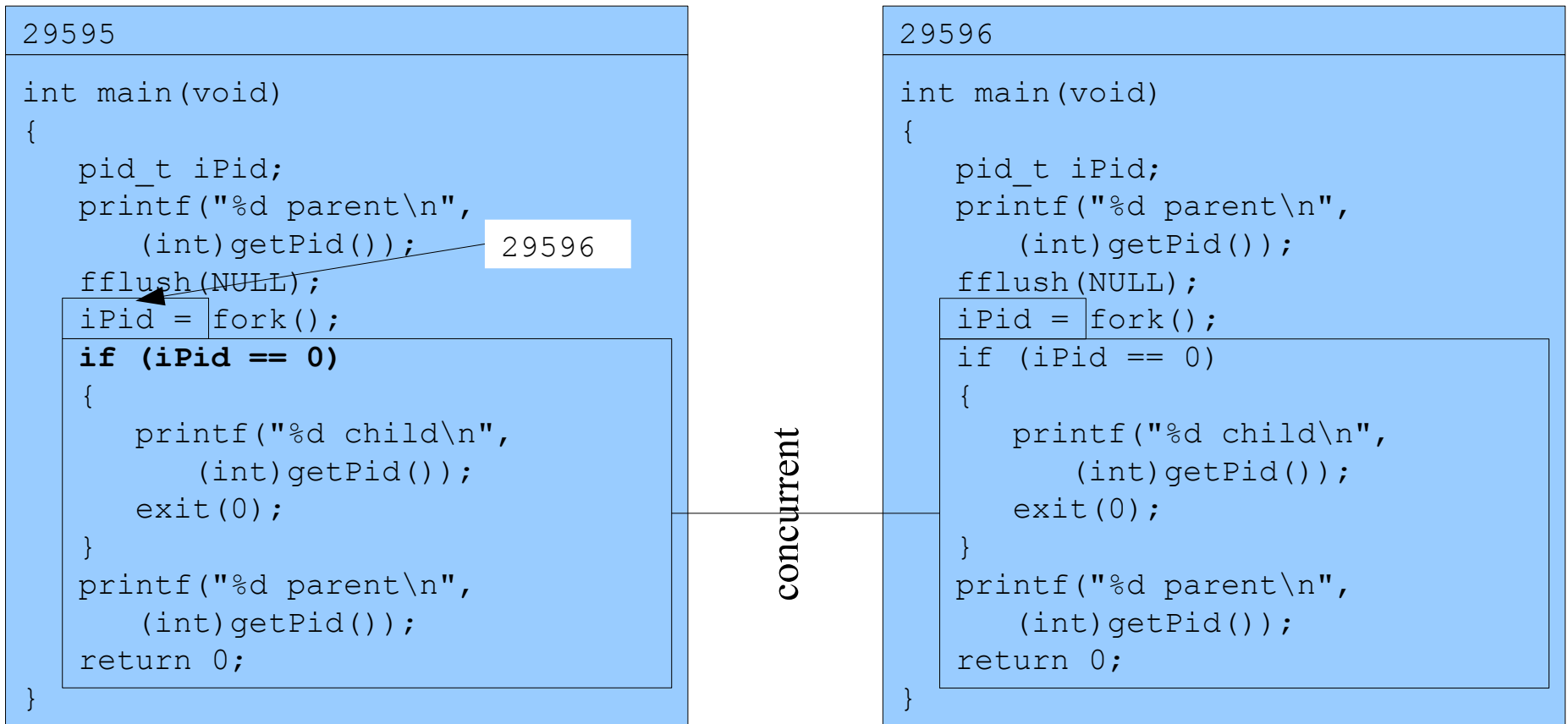
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Assume OS gives CPU to parent

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        exit(0);
    }
    printf("%d parent\n",
           (int)getPid());
    return 0;
}
```

```
29596
int main(void)
{
    pid_t iPid;
    printf("%d parent\n",
           (int)getPid());
    fflush(NULL);
    iPid = fork();
    if (iPid == 0)
    {
        printf("%d child\n",
               (int)getPid());
        exit(0);
    }
    printf("%d parent\n",
           (int)getPid());
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concurrent

Writes:
29595 parent

Assume OS gives CPU to parent

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29596

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    printf("%d parent\n",  
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    iPid = fork();  
    if (iPid == 0)  
    {  
        printf("%d child\n",  
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        exit(0);  
    }  
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concurrent

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29596
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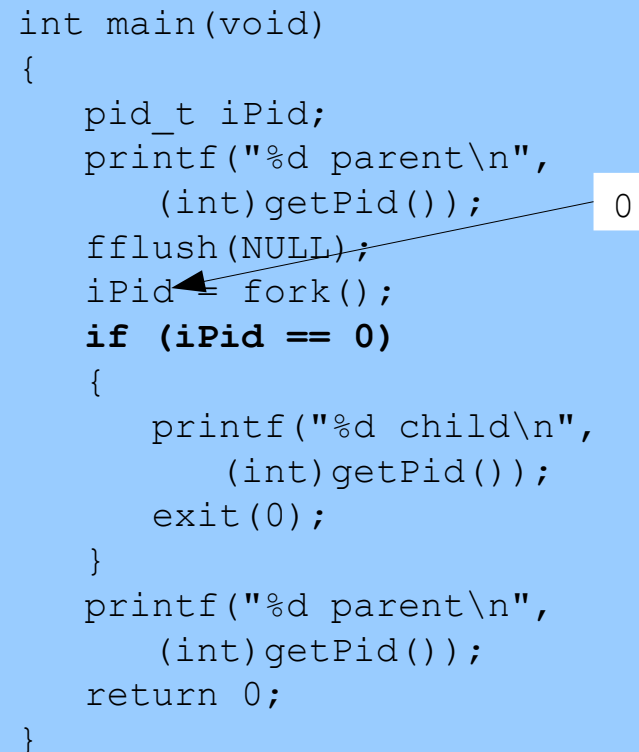
```
int main(void)
{
    pid_t iPid;
    printf("%d parent\n",
           (int)getPid());
    fflush(NULL);
    iPid ← fork();
    if (iPid == 0)
    {
        printf("%d child\n",
               (int)getPid());
        exit(0);
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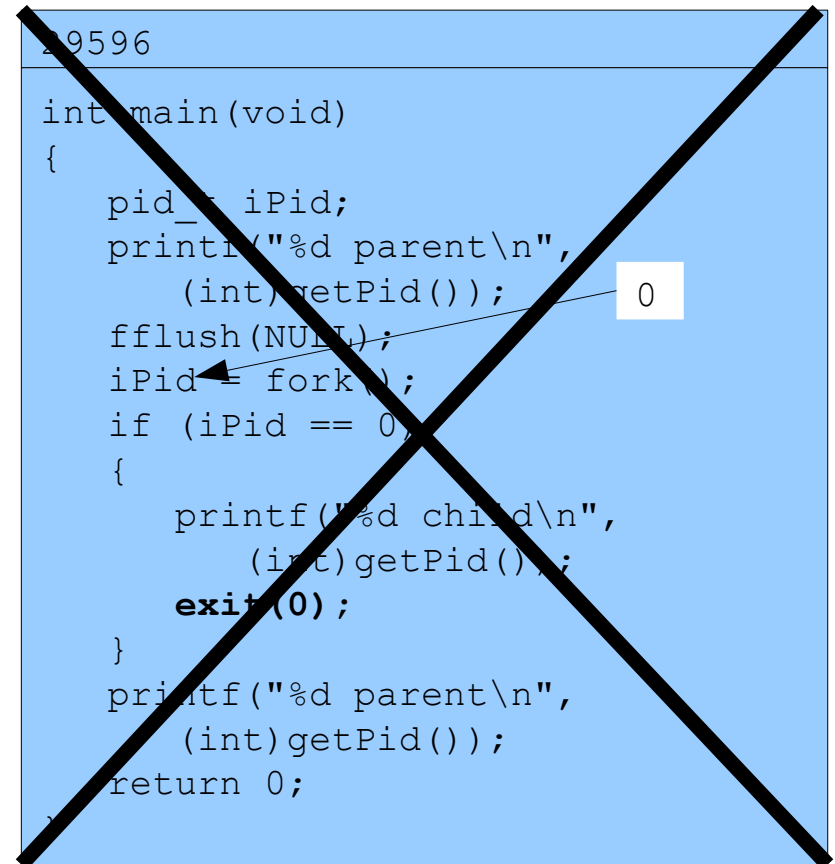
```
int main(void)
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    pid_t iPid;
    printf("%d parent\n",
           (int) getpid());
    fflush(NULL);
    iPid ← fork();
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        printf("%d child\n",
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        exit(0);
    }
    printf("%d parent\n",
           (int) getpid());
    return 0;
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Writes:
29596 child

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