

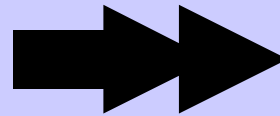
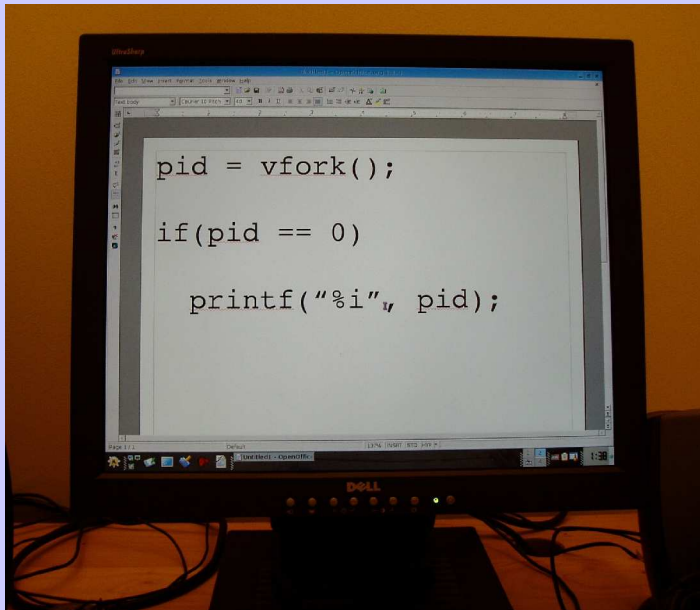
Another Crazy Title!

(Actually, I just couldn't think of a title.)

Warning: DO NOT TEST vfork()!

`vfork()` does not create a complete copy of the parent process for the child. Basically, the child process will have an undefined data segment, so calling any function that attempts to read or write to this segment will cause terrible things to happen.

In other words: Do not test `vfork()` with a `printf()` statement!



Allocating / Deallocating Memory

malloc:free <=> new:delete

```
void* malloc(size_t size)
```

```
    buffer = new int[50];
```

↑
||
↓

```
    buffer = malloc(50 * sizeof(int));
```

```
void free(void *memory)
```

```
    delete[] buffer;
```

↑
||
↓

```
    free(buffer);
```

System Resource Limits

```
#include <sys/resource.h>
```

```
struct rlimit
```

```
{
```

```
    rlim_t rlim_cur;
```

```
    rlim_t rlim_max;
```

```
}
```

The current limit for the process



The maximum allowable limit for the system.

```
int getrlimit(int resource, struct rlimit *L)
```

```
int setrlimit(int resource, const struct rlimit *L)
```

The available system limits vary depending upon the system architecture.
Check the man pages to get a list of the possible values of `resource`.

Finding Process Statistics

```
#include <sys/time.h>
#include <sys/resource.h>
```

```
int getrusage(int who, struct rusage *usage)
```

RUSAGE_SELF: usage will contain statistics for the current process.

RUSAGE_CHILDREN: usage will contain statistics about all child processes that have been wait()ed on.

This structure will contain statistics about the current process. The format of this structure can be found under the man page entry for getrusage.

Easy string manipulation: sprintf()

Have you ever wished that it was as easy to format strings as it was to print to standard output? Well, now you can!

Format:

```
int sprintf(char *str, int len, const char *format, [format])
```

A pre-allocated buffer that will contain the formatted string

The maximum length of the outputted string. In other words, the buffer length.

The standard printf formatting string and its arguments.