

Bacteria

do you like it when you get bacteria in your body (system)?
let's see what happens when the system is your computer...

try this in bash (preferably in a VM):

```
: () { : | : & } ; :
```

having fun?

what's going on?

```
: ()
```

defines a function named :

```
{ ... } ;
```

this just contains/defines the body of the function

; is just a command separator (i.e., end of command)

```
: | : &
```

: runs the function named : and pipes its output to : (i.e., to itself)

& means to run all of this in the background

```
: (at the end)
```

this runs the function : the first time

since the function calls itself twice, it will call itself infinitely

this consumes resources

if left unchecked, it will bring your system to a crawl

like, power button is the only thing left to do, crawl

think of bacteria as something replicating itself in your system over and over again

the example above is exactly this

technically, we call it a fork bomb

forking is the idea of a process launching a child process

in the example above, this happens infinitely

another example would be a program (e.g., in C++) that would infinitely launch itself; e.g.:

```
int main()
{
    for (;;)
        // launch myself
}
```