Just random notes

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Runtime
Runtime describes software/instructions that are executed while your program is running, especially those instructions that you did not write explicitly, but are necessary for the proper execution of your code.

KISS *Keep It simple, stupid*
The KISS principle states that most systems work best if they are kept simple rather than made complicated.

Container
Group of namespaces and control groups applied to a process.

Linux kernel namespace
Limit what the process sees, here some namespaces

- item
- pid
- net
- mnt
- uts
- ipc
- user

C functions to manage them

- clone()
- unshare()

Linux kernel cgroup *Control group*
Limit what the process can use, here some cgroups

- memomry
- CPU
- network
- devices
- pids

C++ inheritance class
Single inheritance

```
class Rectangle: public Shape {
    public:
        int getArea() { return (width * height); }
};
```

Multiple inheritance

```
class Rectangle: public Shape1, Shape2, Shape3 {
    public:
        int getArea() { return (width * height); }
};
```

C++ namespace
Namespaces allow to group entities like classes, objects and functions under a name. Example of declaration

```
namespace myNamespace
{
  int a = 0;
}
```

Usage

```
std::cout << myNamespace::a << std::endl
```

or

```
using namespace myNamespace;
std::cout << a << std::endl
```

C++ cout *character out*

C++ endl *end line*

Makefile special variables

```
all: library.cpp main.cpp
```

```
$@ evaluates to all
$< evaluates to library.cpp
$^ evaluates to library.cpp main.cpp
```