

Implement System Calls

In Calculate Linux (which is Gentoo-based), like other Linux distributions, system calls such as `setgid()` are implemented at the kernel level and can be accessed in user-space programs written in C or similar low-level languages.

What is `setgid()`? AND How `setgid()` Works in Calculate Linux?

`setgid()` is a system call in Linux used to set the group ID (GID) of the current process. The GID determines the group permissions the process has when accessing files and resources. Since Calculate Linux uses the standard Linux kernel, `setgid()` behaves the same as in any Linux-based system:

```
#include <iostream>
#include <unistd.h>
#include <sys/types.h>
#include <errno.h>
#include <cstring>

int main() {
    gid_t new_gid = 1001; // Replace with a valid group ID on your system
    // Attempt to change the group ID
    if (setgid(new_gid) == 0) {
        std::cout << "Group ID successfully changed to " << new_gid << std::endl;
    } else {
        std::cerr << "Failed to change Group ID: " << std::strerror(errno) << std::endl;
    }
    return 0;
}
```