

# dup()

The `dup()` function creates a new file descriptor pointing to the same file/pipe/socket as the original. It's defined in the "unistd.h" system header.

```
#include <unistd.h>

// "oldfd" is the existing file descriptor to duplicate
int dup(int oldfd);
```

Returns the new file descriptor on success. In case of failure, returns -1 and sets "errno".

- The new file descriptor is the lowest available number
  - E.g. if "oldfd" is 3, and 0, 1, 2 are open, it returns 4
- Shares the same file offset and flags as "oldfd"

## Example Usage

```
#include <unistd.h>
#include <fcntl.h>
#include <stdio.h>

int main(void)
{
    int fd;
    int newfd;

    fd = open("output.txt", O_WRONLY | O_CREAT, 0644);
    if (fd == -1)
    {
        perror("open");
        return (1);
    }
    newfd = dup(fd);
    write(newfd, "Hello, dup!\n", 12);
    close(fd);
    close(newfd);
    return (0);
}
```