

Debugging with gdb

CS143A: Principles of operating systems - Fall'17

UC Irvine, California

Typecasting (recap)

- Change the type of the object for a single operation

```
var = (dest_type) source;
```

- Pass generic objects

```
struct cmd { int type; };
struct execcmd {
    int type;
    char *argv[MAXARGS];
};
void runcmd(struct cmd *cmd) {
    ...
    ecmd = (struct execcmd*)cmd;
}
struct cmd* execcmd(void) {
    struct execcmd *cmd;
    ...
    return (struct cmd*)cmd;
}
```

- gdbinit - <https://raw.githubusercontent.com/gdbinit/Gdbinit/master/gdbinit>
- cheatsheet - <http://darkdust.net/files/GDB%20Cheat%20Sheet.pdf>

- Breakpoints
- Print variables
- Inspect memory
- Single stepping
- Registers
- Disassembly