Introduction to C – Part 1

Announcements

- Be mindful of our resources: Wiki and Piazza
- Assignment was released
- Changes in the schedule

C Language

- High level language
- Compiled
- Portable code (Hardware, OS)

C Language

- High level language
- Compiled
- Portable code (Hardware, OS)
  - Binaries are platform dependents
- Extensive use of pointers (memory reference)
- Loose typing
Simple Data Types

- Integers:
  - char (1 byte)
  - short and long int (2 and 4 bytes)
  - unsigned
- float (4 bytes)
- double (8 bytes)

NOTE: There is no “Boolean”!!!
Operators

- Arithmetic: + - * / =
- Conditional: < <= == != >= >
- Boolean: && || !
- Bitwise: ~ & | ^ << >>

DISCLAIMER: THIS IS NOT A COMPLETE LIST!!!

Make

- Automation
- Makefile
  - Rules:
    - target: prerequisites
    - Default rule: all
    - Example:
      ```
      all: example1
      example1: example1.c
      gcc -o example1 example1.c
      ```

Some conventions

- CONSTANTS are in capital letters
- variables_are_in_lower_case
  - Use of "_" is optional, but keep consistency
- Use TAB for indentation (8 spaces)
- Use of braces and parenthesis:

```c
int fooBar()
{
    if (a == 42) {
        return 42;
    } else {
        ... ...
    }
}
```

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LET'S PRACTICE!!!