

Turn in Homework 4

Grace Hopper and C-Strings

CSCI 10 - Santa Clara University - Fall 2016
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Announcements

- Homework 5 is up! Due next Friday
- Challenge problems will be included with assignments, but not graded.
- Next Thursday's CS event will discuss emphasizes

Example 26

- Finding the *argmax* of an array, that is the index of the maximum element.

Grace Hopper (1906-1992)

- BS Math/Physics; PhD Math
- Enlisted in the Navy during WW2, rising to Rear Admiral
- Created the first compiler
- Popularized machine-independent PL
- Helped create COBOL: 1st high level PL



ASCII

USASCII code chart

| Bits | | | | | | | | Column | | | | | | | |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------|-----|----|---|---|---|---|-----|
| b ₇ | b ₆ | b ₅ | b ₄ | b ₃ | b ₂ | b ₁ | b ₀ | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NUL | DLE | SP | 0 | @ | P | \ | p |
| 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | SOH | DC1 | ! | 1 | A | Q | a | q |
| 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | STX | DC2 | " | 2 | B | R | b | r |
| 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | ETX | DC3 | # | 3 | C | S | c | s |
| 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | EOT | DC4 | \$ | 4 | D | T | d | t |
| 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | ENQ | NAK | % | 5 | E | U | e | u |
| 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | ACK | SYN | & | 6 | F | V | f | v |
| 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | BEL | ETB | ' | 7 | G | W | g | w |
| 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | BS | CAN | (| 8 | H | X | h | x |
| 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | HT | EM |) | 9 | I | Y | i | y |
| 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | LF | SUB | * | : | J | Z | j | z |
| 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | VT | ESC | + | ; | K | [| k | { |
| 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | FF | FS | , | < | L | \ | l | |
| 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | CR | GS | - | = | M |] | m | } |
| 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | SO | RS | . | > | N | ^ | n | ~ |
| 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | SI | US | / | ? | O | _ | o | DEL |

ASCII chart from a 1972 printer manual.

C-Strings

C-Strings are null terminated arrays of ASCII characters.

Example 27

- C-String experimentation.