

COP 3502 8/23/23

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- ✓① Prog Team Tryout
- ✓② ~~DE~~ Dyn Mem basic array
- ✓③ PO cover fgets, freq array
- ✓④ Timing issue via strlen
- ⑤ ~~ts~~ time SLMP finish

Dynamic Memory

(2)

Intro to C - variables statically allocated:

- 1) memory requirements are known at compile.

```
int value;  
int freq [26];  
char name [100];
```



- 2) isn't available after the function within which its declared finishes running.

- 3) allocated from program stack (somewhat limited)

3 Situations where dynamically allocated memory is required

- 1) while program runs we find out amt of space needed.
- 2) want memory available after the function in which it is allocated finishes
- 3) we want lots of memory

PO stuff

(4)

let's say S is a string
 $S[i]$ is a char in string \rightarrow lowercase letter

then $S[i] - 'a'$ is the 0-25 equivalent of the lowercase letter $S[i]$.

$freq[S[i] - 'a']++$; for upper
 $freq[S[i] - 'A']++$;

fgets - show example

fgets (ptrstr, maxlen, stdin)
100,001 Standard input