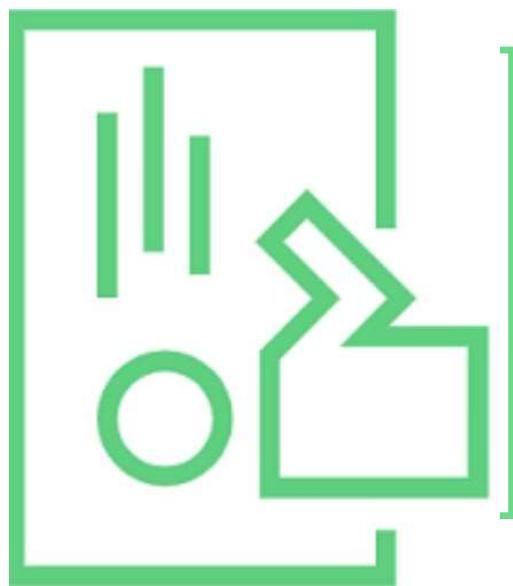


# Strängar i C, del 2

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# Sprintf

Att bygga+formattera en sträng (på samma sätt som printf)

Why? Vi kanske ska spara en text till en fil eller så

<https://systemmentor.se/article/c-printf-referens>

```
void main(){
    char result[100];

    int age = 50;
    float pi = 3.1415927;
    char name[] = "Stefan";

    sprintf(result, "Hej %s du är %d år och pi är %.2f ungefärl",
    printf("%s\n", result);

}
```

# indexing into string

En sträng i C är en array (SEKvens) av tecken (char[])

De ligger på minnesadresser EFTER varandra

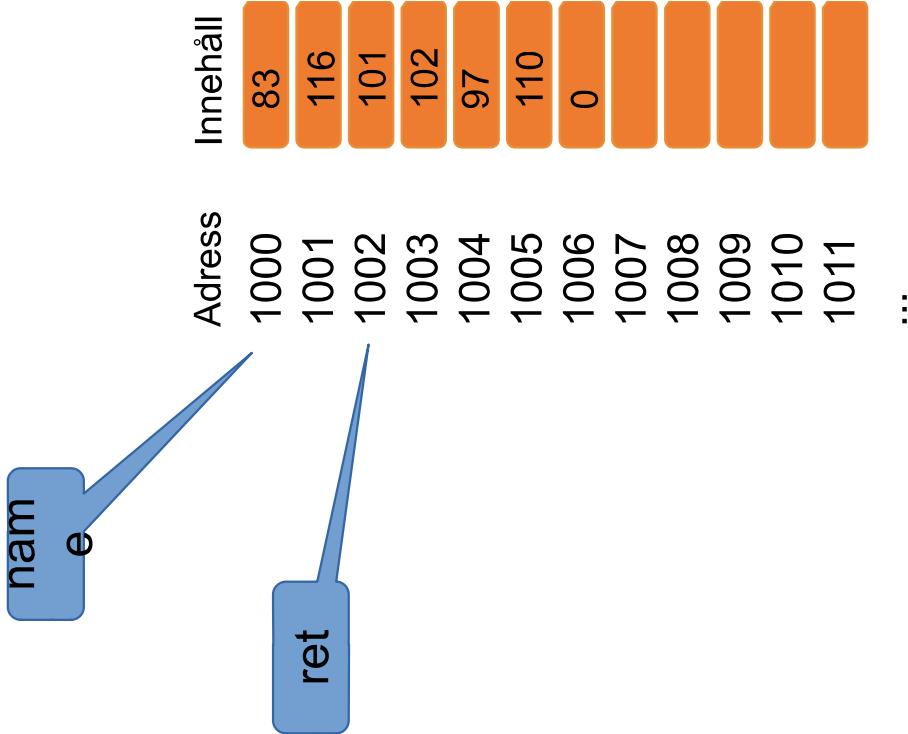
```
char name[100]
strcpy(name, "Stefan") // name = "Stefan"
ret = strstr(name, "ef")
```

```
printf("%c\n", name[0]); // => 83;
printf("%c\n", name[1]); // => 116;
...

```

Osv osv

Ta reda på vad som  
<https://www.ascii-code.com/>



# Strstr

```
char *strstr(const char *haystack, const char *needle)
```

```
const char haystack[20] = "StefanHolmberg";
const char needle[10] = "Holm";
char *ret;

ret = strstr(haystack, needle);

if(ret == NULL){
    printf("FINNS INTE\n");
} else {
    printf("FINNS\n");
}
```

This function returns a pointer to the first occurrence in haystack of any of the entire sequence of characters specified in needle, or a null pointer if the sequence is not present in haystack.

# Strchr, strrchr

```
char *strchr(const char *str, int c)
```

This returns a pointer to the first occurrence of the character c in the string str, or NULL if the character is not found.

```
const char str[] = "http://www.systemator.se";
const char ch = '.';
char *ret;
ret = strchr(str, ch);
printf("String after %c | is - %s|\n", ch, ret);
```

POSITIONEN?

```
int pos = ret - str;
```

!!!! pekare är addresser...

# Replacing substring

ENKLA VARIANTEN = replace with same number of chars!

Vi skriver en "censur"-funktion och byter ut "fula" ord, tex

vegetables → \*\*\*\*  
homework → \*\*\*

SVÅRA = replace with NOT same number of chars

<https://courses.aspcode.net/code/rotten-zebra>

# Strtok – splitta en sträng på ett visst tecken

```
char *strtok(char *str, const char *delim)
```

```
char str[] = "Stefan,50,Systemator";
const char s[2] = ",";
char *token;

/* get the first token */
token = strtok(str, s);

/* walk through other tokens */
while( token != NULL ) {
    printf( "%s\n", token );

    token = strtok(NULL, s);
}
```

# To upper och to lower

```
#include <stdio.h>
#include <ctype.h>
int main() {
    char c;

    c = 'm';
    printf("%c -> %c", c, toupper(c));

    c = 'D';
    printf("\n%c -> %c", c, toupper(c));

    c = 'g';
    printf("\n%c -> %c", c, toupper(c));
    return 0;
}
```

# Input an int without crashing

```
#include <stdbool.h>

typedef enum
{
    INPUT_RESULT_OK,
    INPUT_RESULT_TOO_LONG,
    INPUT_RESULT_NO_INPUT
} INPUT_RESULT;

INPUT_RESULT GetInput(char* prompt, char* buff, int maxSize);
bool GetInputInt(char* prompt, int* value);
bool GetInputFloat(char* prompt, float* value);
bool GetInputChar(char* prompt, char* value);
```

<https://github.com/aspcodenet/iotcStringDemo/blob/master/CStringDemo/SafeInput.h>

Example:

<https://github.com/aspcodenet/iotcStringDemo/blob/master/CStringDemo/main.c>



= Vår första egna funktion

SafeInput