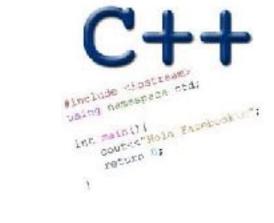
# STRINGS

Problem Solving with Computers-I







# **C-Strings**

Q1: How are ordinary arrays of characters and C-strings similar and how are they dissimilar?

#### Which of the following is not a C string?

```
A. char mystr[5] = "John";
B. char mystr[] = "Mary";
C. const char *mystr = "Jill";
D. char mystr[4] = {'J', 'i', 'l', 'l'};
```

# Q2: Which of the following statements about the given code is FALSE?

```
char s1[5] = "Mark", s2[5] = "Jill";
for (int i = 0; i <= 5; i++)
    s1[i] = s2[i];
if (s1 != s2) cout << "Strings are not equal"
s1 = "Art";</pre>
```

- A. There is an out of bound access in the for loop
- B. The entire for loop can be replaced by s1 = s2;
- C. Cannot compare two C-strings with != or == operators
- D. The last assignment statement is incorrect

# C String Standard Functions #include <cstring>

```
char s1[5] = "Mark", <math>s2[5] = "Jill";
for (int i = 0; i \le 5; i++)
    s1[i] = s2[i];
if (s1 != s2) s1 = "Art";
int strlen(char *string);
```

- Returns the length not counting of string the null terminator
- int strcmp(char \*str1, char \*str2);
  - return 0 if str1 and str2 are identical (how is this different from str1 == str2?)
- int strcpy(char \*dst, char \*src);
  - copy the contents of string src to the memory at dst. The caller must ensure that dst has enough memory to hold the data to be copied.
- char\* strcat(char \*s1, char \*s2);
  - concatenate the contents of string s2 to s2 and returns pointer to resulting string

#### Q3: What is the output of the following code?

```
char s1[4] = "apple";
char s2[4] = "pineapple";
if (strcmp(s1, s2))
    cout << "Strings are not equal";</pre>
```

#### C strings vs. String class: What is the output of the code?

- A. Mark Jill
- B. Mark Mark
- C. Art Mark
- D. Compiler error
- E. Run-time error

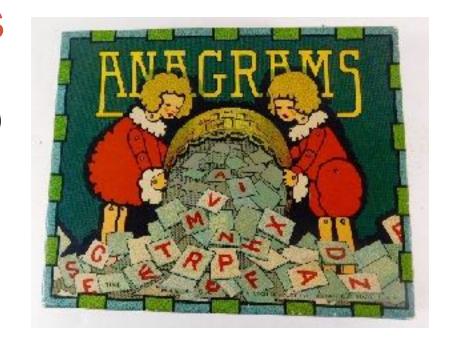
# The C++ string class methods

```
string fruit = "Apple";
int len = fruit.length();
int pos= fruit.find('l');
string part= fruit.substr(1,3);
fruit.erase(2,3);
fruit.insert(2, "ricot");
fruit.replace(2,5,"ple");
Check out ctype for checks and conversions on characters
fruit[0]= tolower(fruit[0]);
isalpha(fruit[0])
```

# Lab 08: anagrams and palindromes

bool isAnagram(string s1, string s2)

Rats and Mice == In cat's dream Waitress == A stew, Sir?



### Next time

Recursion