

## Strings and Things

C++ strings and  
other related stuff...

## Strings

- Strings are collections of characters. Many of the labels that you have output in your programs are strings – the groups of characters in ""s are strings.
- To use the string type fully you need to  
`#include <string>`

## What can you do with strings?

- Declaration:  
`string name;`
- Input:  
`cin >> name;`
- Output:  
`cout << name;`

## Other functions

- `getline(cin, stringVariable)`
- Paste together strings:  
`string a, b, c;`  
`a = "University";`  
`b = "Toledo";`  
`c = a + " of " + b;`
- Compare strings

## Looking inside strings

- `stringVar.find(str1)`  
returns the index of the first occurrence of `str1` in `stringVar`.
- `stringVar.insert(pos, str2)`  
inserts `str2` at position `pos` in `stringVar`.
- `str.remove(pos, len)`  
removes `len` characters from `str` starting at position `pos`.

## Looking inside strings – continued

- `strvar.empty()`  
returns true if the string is empty, false otherwise.
- `strvar.substr(pos, len)`  
returns the substring that starts at position `pos` and goes for `len` characters.

## Reminders for the project

- /'s go forward in filenames!
- Arrays start at index 0
- Setw only affects the next item output

## Two last structures

- do { } while (); loop
- Also known as a test at bottom loop.
- The body of the loop is done and then the test in the while section is evaluated to determine whether or not to continue.

## Do-while Example

```
i = 0;
do {
    cout << i;
    i ++;
} while (i < 100);
```

## The switch statement

- The switch statement is a multiway branch. It is used to select from a number of cases.
- It uses an integer or a character to determine which case.
- It may have a default case done if none of the given cases apply.

## Format

```
■ switch ( variable) {
    case 1:
        statement;
        statement;
        break;
    case 2:
        statement;
        statement;
        break;
    default:
}
```