

Computer Science I

CMPE/CSCI 1370 - 01

Today

Time	Topic
9:30 - 9:45	Big picture checkpoint
9:45 - 10:00	C++ program structure
10:00 - 10:10	Functions
10:10 - 10:30	In-class exercises

What have we learned so far?

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Coding concepts:

- Expressions and types
- Naming values (constants), naming expressions (functions)
- Conditional evaluation
- Compound data

Programming concepts:

- Design recipe (systematic problem solving)
- Testing
- Templates
- Problem decomposition / function composition
- Composing templates

What's coming up?

- Transition to C++ (expressions, types, functions, conds)
- Collections (arrays)
- Repetition (loops)
- File I/O
- Compound data (classes)

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C++ vs BSL

- closer to the machine
- explicit types
- compiled vs interpreted

C++ vs BSL

INTERPRETERS

Translate to machine code instructions then execute

COMPILERS

Translate to machine code instructions, produce an executable

(Both: programs that take source code as inputs)

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f-to-c vs **f_to_c**

FUNCTION DEFINITIONS

Function definitions

HEADER

- return type
- function name
- parameter list (explicit types)

BODY

- { return expression }

C++ basic types

- `int`
- `double` "double-precision floating point"
- `char`
- `string`
- `bool`
- `image`

Give the C++ type for each of these C++ literals:

`true` `"true"` `'t'` `1` `1.0`

- A. `boolean`, `string`, `string`, `number`, `number`
- B. `bool`, `char*`, `char`, `int`, `double`
- C. `boolean`, `boolean`, `character`, `number`, `number`
- D. `identifier`, `char*`, `char`, `integer`, `float`
- E. `boolean`, `string`, `character`, `integer`, `double-precision floating point`

What is the C++ type of this expression?

```
((4 + 7) < 8) or ((8 * 6) == 48)
```

- A. `int`
- B. `integer`
- C. `boolean`
- D. `bool`
- E. `double`

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theater.cpp

Attendance!

<http://bit.ly/1370-1rollcall>