Welcome to CS 368-1
Learning a New Programming Language

C++ for Java Programmers

Take a copy of the blue course information handout.

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Course website: `http://pages.cs.wisc.edu/~cs368-1/`

Course content
- lecture
- textbook
- course website
- piazza

Today
- handout – course info
- course intro/logistics
- historical overview
- *simpleProg.cpp*
- edit-compile-run cycle in C++
- booleans
- constants
- enumerations

Next Time
- *cardExample.cpp*
- structures
- arrays
- vectors

Course work

To receive 1 credit (a grade of CR)
- attend at least 12 of the 15 lectures (must sign attendance sheet)
- achieve a cumulative score of 70% on the assignments
- for each missed lecture beyond 12
  add 5% on to the cumulative score requirement

Lecture Attendance
- make sure to sign the attendance sheet for each lecture

Asssignments
- 5 programs, 1 homework
  - p1, p2, p3, p4 = 20% each
  - p5, hw = 10% each

- collaboration policies:
  - homework must be done individually
  - pair programming is allowed on programs

Historical Overview

C

C++

Java

Different philosophies & goals:

- C++:

- Java:

Simple C++ program

```cpp
#include <iostream>

using namespace std;



int main( ) {



   cout << "Please enter a number and a letter: " << flush;



   int a;
   char b;


   cin >> a >> b;
   cout << endl;



   cout << "The number you entered was: " << a << endl;
   cout << "The letter you entered was: " << b << endl;



   return 0;
}
```

Simple C++ program (cont.)

To compile:

To run:

Try running the program with the following user inputs:

```
87b

-12h

9 b

43.2a

9    b    abc

y76
```

- What do you think will happen?
- What would happen in the equivalent Java program?
- What actually happens?

Booleans / Constants / Enumerations

Booleans

- **C++ has a boolean data type, named `bool`, C does not**
- **integers can be used where a boolean value is expected**

Constants

```
const int MAXSIXE = 100;
const double PI = 3.14159;
const char BEE = 'b';
```

Enumerations

General form

```
enum type-name { list-of-values };
```

Examples

```
enum Suits { clubs, diamonds, hearts, spades };

enum FaceCardRanks { jack = 11, queen = 12,
                     king = 13, ace = 1 };
```