

CS 111

calling functions, sqrt, rand

Library functions

- C++ comes with lots of predefined functions that we can use when we need them
- These functions are stored in libraries

Calling functions

- Before we call a function, we need to know what (if any) data we have to give to the function
- Input data we provide to functions are called arguments

Return values

- A function might also return a single piece of data as a result
- The type of data returned by the data is specified in the function title line

Examples

- `double squareRoot = sqrt(5.0);`
- `srand(time(0));`
- `int score = rand();`

Using srand, rand and sqrt

- To use sqrt:
 - add `#include<cmath>` below `#include<iostream>`
- To use rand:
 - add `#include<ctime>` below `#include<iostream>`
 - before calling rand, add this line to your code before the function call:
`srand(time(0));`

Notes regarding rand() and srand(time(0))

- rand() returns a pseudo-random integer
- use srand(time(0)) if you need a distinct random number sequence from the last time time you called the rand() function

Practice instructions to call sqrt, rand, srand, time

- Print the square root of 7
- Print an integer whose square root begins with 1.4
- Print a random number between 100 and 200 inclusive

12.1 Pseudocode

// Simulate die rolls and track number of ones rolled

Declare integer variables to store number of die rolls, count of ones, and simulated die toss value

Prompt user for desired number of die rolls

Read in value from user

Set up loop for user-specified number of simulated die rolls

 Simulate random die roll

 If die roll is a one, increment counter

 Print roll count and current die value

Print total number of ones rolled