Lambda Expressions and Capture Exercises

Lambda Expressions and Variables

- What access to other variables does a lambda expression have by default?

- Write a simple program to demonstrate this access

Lambda capture

- What is meant by "variable capture" for a lambda expression?

- What syntax is used for variable capture?

- How is variable capture implemented?

Variable capture example

- Write a program which creates a vector and calls find_if() to search for an element with a given property

- For the predicate function, use a lambda expression with hard-coded data

- Rewrite your program to use a local variable which is captured by the lambda expression

- Write an equivalent program which uses a functor instead of a lambda expression

Mutable lambda

- The following code attempts to find the index of the first match
- Why does it not produce the desired results?

```
int n{5}, idx{-1};
auto res2 = find_if(words.begin(), words.end(),
        [n, idx] (const string& str) { ++idx; return str.size() > n; }
    );
```