

Lambda Expressions in C++14 Solutions

Generic Lambda Expressions

- What is meant by a generic lambda?
 - In a generic lambda, the function arguments have type "auto"
 - The argument type is deduced by the compiler, depending on how the lambda is called
 - Similar to a template function

Generic Lambda Example

- Write generic lambda which adds its arguments and returns the result
- Write a program which calls your lambda function with arguments of type
 - int
 - double
 - std::string

Local Variables in Lambda

- How can we create a variable which is local to a lambda?
 - Put the variable, with an initializer, in the capture block
- Does the variable need to be declared auto?
 - No, the type is auto by implication
- Does the variable need to be initialized?
 - Yes, so the compiler can deduce the type
- Write a program which uses a lambda with a local variable

Generalized capture with initialization

- Can we initialize a lambda-local variable from a captured variable?
 - Yes, just use the captured variable as the initializer
- What syntax do we use to capture the variable?
 - None. The variable is captured by implication
- Write a program which uses a lambda with a local variable which is initialized from a captured variable