

# Attributes Solutions

# Attributes

- What is an attribute?
  - An attribute is a compiler directive
  - It is used to give instructions to the compiler, or provide it with extra information

# C++11 Attributes

- What is the purpose of the "noreturn" attribute?
  - It tells the compiler that a function does not return
- Write a simple program that uses the noreturn attribute

# C++14 Attributes

- What is the purpose of the "deprecated" attribute?
  - It tells the compiler to give a warning whenever the deprecated function is called
  - Optionally, it takes an argument string which explains why the function is deprecated
- Why is the "deprecated" attribute useful?
  - It indicates to callers that they should not use the function, but without breaking their build
- Write a simple program that uses the deprecated attribute

# fallthrough Attribute

- What is the purpose of the "fallthrough" attribute?
  - It tells the compiler not to give a warning when a case label in a switch statement does not have a break statement
- Why is the fallthrough attribute useful?
  - As well as suppressing potential compiler warnings, it indicates that the programmer intended to fall through to the next case
- Write a simple program that uses the fallthrough attribute

# nodiscard Attribute

- What is the purpose of the "nodiscard" attribute?
  - It tells the compiler to give a warning when the return value from the function is discarded
- Write a simple program that uses the nodiscard attribute
- What does it mean if a struct is declared as nodiscard?
  - All functions that return objects of this type are automatically nodiscard
- Write a simple program that declares a struct as nodiscard

# maybe\_unused Attribute

- What is the purpose of the " maybe\_unused " attribute?
  - It tells the compiler not to give a warning if the variable is not used
- Write a simple program that uses the maybe\_unused attribute