

# Lvalues and rvalues Solutions

# Ivalue reference

- Explain briefly what is meant by "Ivalue reference"
  - An Ivalue reference is another name for the traditional C++ reference
- Can an Ivalue reference be bound to an rvalue?
  - Generally, an Ivalue reference must be bound to an Ivalue
  - However, a const Ivalue reference can be bound to an rvalue

# Rvalue Reference

- Explain briefly what is meant by "rvalue reference"
  - An rvalue reference is a syntactic device
  - It is used for function arguments, to indicate that data must be moved into the argument
  - If the passed object cannot be moved, the code will not compile

# std::move

- How can we pass an lvalue as an rvalue reference?
  - We can cast the lvalue by calling std::move()
  - This returns its argument as an rvalue
- Is it safe to use a variable after passing it to std::move()?
  - After calling std::move(), the variable's data may not be in a usable state
  - However, it is safe to reset the variable by assigning it to some other data
  - The variable can then be used again