

Value Categories Solutions

Characteristics of lvalues

- Give some characteristics of lvalues
 - lvalues represent persistent objects, either the heap or the stack
 - These occupy memory which is accessible by the programmer
 - They remain valid until they go out of scope or are deleted
 - lvalues can represent
 - Local variables
 - Global variables
 - Static variables
 - Function arguments

Characteristics of rvalues

- Give some characteristics of rvalues
 - rvalues are stored in locations which are not accessible to the programmer, such as processor registers
 - rvalues can represent literals like 2 or 'c'
 - rvalues can represent temporary objects

Value Categories

- Explain what is meant by the terms "prvalue", "xvalue", "lvalue" and "glvalue" in modern C++
 - A prvalue is a "pure rvalue" or a literal
 - An xvalue is an "expiring value" or temporary object
 - A glvalue is a "generalized lvalue" (either an lvalue or an xvalue)