

Map Insertion Solutions

Operator []

- Briefly explain how `std::map`'s operator `[]` provides "insert or assign" functionality
 - If an element in the map has the same key as the argument to operator `[]`, its value element is assigned to
 - If there is no element in the map which has the same key as the argument to operator `[]`, a new element is inserted into the map

Operator []

- Are there any drawbacks to using operator [] to insert elements?
 - The value member of the element must have a default constructor
 - If an exception is thrown, a partially-populated element is left in the map
 - operator [] does not provide any way to know whether an element was inserted or assigned to

insert()

- Does the insert() member function suffer from these drawbacks?
 - No
 - The value member is not required to have a default constructor
 - If an exception is thrown, the map is unmodified
 - The return value from insert() will tell us whether a new element was inserted into the map

Insert or Assign with insert()

- Write a simple program that creates and populates an `std::map` object
- Use the `insert()` member function to perform an "insert or assign" operation on the map