

Contiguous Containers Should Contain `.data()`

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Introduction

All the contiguous containers could contain a `.data()` member. All the standard contiguous containers do contain a `.data()` member. This proposes that all the contiguous containers should contain a `.data()` member, so that all future contiguous containers would contain a `.data()` member.

Motivation and Scope

During recent discussions on other proposals, it was observed that while all the existing contiguous containers (`basic_string`, `array` and `vector`) and contiguous views (`basic_string_view`, and `span`) contain `.data()` member functions to access the underlying contiguous range, it wasn't a requirement which could be counted upon.

This proposal wishes to remedy that by requiring contiguous containers contain `.data()` member functions, as it would help with generic code.

Impact On the Standard

This is additive to the standard. However, it would break contiguous containers in the wild which do not as of yet have `.data()` member functions or use `.data()` member functions for other purposes.

Design Decisions

While `ranges::data(...)` can synthesize the behavior from `begin` and `end`, users are far more likely to either call the member `.data()` or `std::data(E)`, even in generic code.

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References

N4810 Working Draft, Standard for Programming Language C