# Static Data Members Solutions

# Static Data Members

- Write a program with a header file and two source files
  - The header file defines a class which has a static data member
  - The two source files include this header file
  - One source file defines and initializes the static member
  - The other source file has a main function which displays the static member's value

# Static Data Members in C++11

- Write a similar program to your earlier solution, but this time using constexpr static data members

- What are the advantages of making static data members constexpr?
  - Static data members can be initialized in-place in the class definition
  - Does not require separate definition and initialization in a source file

- Are there any disadvantages to making static data members constexpr?
  - The initial value must be a constant expression
  - The member's value cannot change

# Static Data Members in C++17

- Write a similar program, but this time using inline static data members

- What are the advantages of making static data members inline?
  - Does not require an initializer
  - If there is an initializer, it does not have to be a constant expression
  - The member's value can change
  - Does not require separate definition and initialization in a source file