

# Shared Data Initialization Solutions

# Singleton class

- What is meant by a Singleton class?
  - A Singleton is a class which has only one global instance in the program
- Describe briefly how a Singleton class is implemented
  - The copy and move operators are deleted
  - A global function is called to get the instance of the class
  - If the instance has not been initialized, the function initializes it before returning it
  - Otherwise, the function returns the instance directly

# Singleton class

- Implement a Singleton class, making sure it is threadsafe
- Write a multi-threaded program to test your class