

Protected Members

The member functions and data members which are not declared **private** in the base class are called **inherited** members. An object may use its inherited members without any further qualification, exactly as if they were defined inside the object's own class.

A base class **may allow** a derived class access to a data member by using the keyword **protected** instead of **private**. Protected members are half-way between **public** and **private**; the derived (child) classes can directly access them, but the general public cannot.

These access specifiers work the same way most of us manage our own households. My grandchildren are free to open my refrigerator, getting a glass of orange juice **without asking me**; you, on the other hand, would have to knock at the front door, and ask first. **My refrigerator has something similar to protected access.**



On the other hand, even my grandchildren **aren't permitted to grab my credit card** and charge up a storm on the Internet; my credit card is **private**.

*In general, avoid using **protected** access to grant derived classes access to data members. This unnecessarily exposes the implementation of the base class and prevents easy modification. Add some **protected** member functions instead.*



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