HW 9

1. Instance member variable belongs to a single instance of the class, while static member variable is shared by all instances of the class.
2. Numbers::showTotal();
3. It is declared outside the class definition.
4. A friend function is a function that isn’t part of a class, but that has access to the class’s private members.
5. Because then every function of the friended class has access to the private member of the current class, lowering the security, and losing protection of accidently change of data by the friended class.
6. Memberwise assignment is an instance is assigned values of another instance of the same object, member-by-member.
7. A copy constructor is claaed whenever a new object is created and initialized with another object’s data.
8. It knows by the fact that copy constructor has a single parameter that is reference to the same class.
9. Members that includes pointers. Memberwise assignment will only copy the address the pointer is pointing at. Thus, when a modification is made, the original copy that stores in the address will be influenced.
10. Because if it isn’t passed by reference, the copy constructor will call itself repeatedly.
11. The default copy performs member wise assignment.
12. The overloaded operators offer a way that is closer to the way primitive datatypes are manipulated.
13. A constant reference object.
14. Because using void makes it hard to append statements together, such as x=y=z.
15. The prefix mode has a parameter, while the postfix mode doesn't.
16. A pointer to the current instance
17. bool
18. 1. Copy constructor
    2. Overloaded =
    3. Overloaded =
    4. Copy constructor
    5. Place the keyword “static” before the member variable declaration.
    6. After that place a separate definition of the variable outside the class.
19. 1. Place the keyword static before the member function’s prototype
    2. Calling the function is performed by connecting the function name to the class name with the scope-resolution operator.
20. 1. 3 instances of x member
    2. 3 instances of y member
    3. 1 instance of z member
    4. 0 will be stored in x and y members of each object.
    5. Thing::putThing(2);
21. Making a class a member of another class makes a class a part of another class. Making a class as a friend of another class will give permission to the friended class to access its private members, but both the class and the friended class are still two individual classes.
22. Forward declaration tells the compiler that a class with that name will be declared later in the programme.
23. Memberwise assignment will only copy the address the pointer is pointing at. Thus, when a modification is made, the original copy that stores in the address will be influenced.
24. Because parameter variable is created in memory when the function executes, and is initialized with the argument object.
25. If a member variable is declared static, all objects of that class have access to the same variable.
26. Static member variables are defined outside the class.
27. A static member function cannot access any non-static member variables in its

own class.

1. A static member function may be called before any instances of its class are defined.
2. A friend function is not a member of a class, but has access to the private members of the class.
3. A forward declaration tells the compiler that a specific class will be declared later in the program.
4. Memberwise assignment is the default behaviour when an object is assigned the value of another object of the same class.
5. A(n) copy constructor is a special constructor, called whenever a new object is initialized with another object’s data.
6. “this” is a special built-in pointer that is automatically passed as a hidden argument to all non-static member functions.
7. An operator may be overloaded to work with a specific class.
8. When overloading the postfix increment operator, its function must have a dummy parameter.
9. Making an instance of one class a member of another class is called aggregation.
10. Object aggregation is useful for creating a(n) has a relationship between two classes
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