

# Flash Quiz 7 Questions

## CSE 232 (Introduction to Programming II)

1. Which of the following is true about a friend function?
  - (a) It can access private data members of a class
  - (b) It can access public data members of a class
  - (c) It needs to be declared as a friend function during function declaration
  - (d) (1) and (3)
  - (e) **All of the choices**
2. Why are comparison operators commonly declared as friend functions?
  - (a) **They usually require access to private values for comparing purposes, and declaring them as friend functions allows this**
  - (b) They are frequently used, and declaring them as friend functions makes it easier to call them
  - (c) They are used by users, and declaring them as friend functions indicates that they are user-friendly
  - (d) They usually do bit-wise operations, and declaring them as friend functions optimizes these operations
3. If the class `MyClass` is declared as a friend class in the class `YourClass`, which of the following is true?
  - (a) `MyClass` is allowed to access some private attributes of `YourClass`
  - (b) `YourClass` is allowed to access some private attributes of `MyClass`
  - (c) **`MyClass` is allowed to access all private attributes of `YourClass`**
  - (d) `YourClass` is allowed to access all private attributes of `MyClass`
  - (e) (a) and (d)
4. Given a vector `v`, what does `v.begin()` return?
  - (a) The first index of `v`
  - (b) The first element of `v`
  - (c) **An iterator that points to the first element of `v`**
  - (d) An iterator that points to one before the first element of `v`
5. Given a vector `v`, what does `v.end()` return?
  - (a) The last index of `v`
  - (b) The last element of `v`
  - (c) An iterator that points to the last element of `v`
  - (d) **An iterator that points to one past the last element of `v`**
6. What can we say about a vector `v` if the following holds true?  
`v.begin() == v.end()`
  - (a) The first element of `v` is the same as the last element of `v`
  - (b) The first and last elements of `v` have the same value, but they are not the same element
  - (c) `v` has exactly one element in it
  - (d) **`v` has no elements in it**
  - (e) (a) and (c)
7. You have a vector with the capacity of 10. What would happen if you were to call `reserve(20)` on the vector?
  - (a) The vector's index 20 will be reserved for an element
  - (b) An element of value 20 will be reserved for the vector
  - (c) **The vector's capacity will be increased to 20**
  - (d) The vector's capacity will be increased to 30

8. You have a vector with the size of 20; meaning, there are 20 elements in the vector. What would happen if you were to call `resize(5)` on the vector?

- (a) The vector's size will be increased to 25
- (b) The vector's size will be reduced to 15
- (c) The vector's size will be reduced to 5
- (d) This is an invalid operation

9. Given a map `m`, what is the type of `result` in the code below?

```
auto result = m.insert("Hi", 5);
```

- (a) `map <string, int>`
- (b) `pair <string, int> :: iterator, bool`
- (c) `map <string, int> :: iterator, bool`
- (d) `pair <map <string, int> :: iterator, bool>`
- (e) `map <pair <string, int> :: iterator, bool>`

10. Which of the following operations cannot be performed on a map in C++?

- (a) `begin`
- (b) `insert`
- (c) `push.back`
- (d) `size`
- (e) All are valid operations