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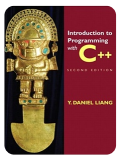

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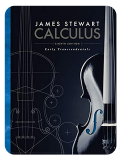

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Terms in this set (52)

The following definition: vector<double> data;	creates a vector of size 0
The following definition: vector<double> v{3, 5};	creates a vector of [3.0, 5.0]
The following definition: vector<double> v(3, 5);	creates a vector of [5.0, 5.0, 5.0]
What prints? vector<int> v{1, 2, 3, 4, 5}; cout << v.pop_back() << endl;	Nothing; compile-time error

What prints?
 	
vector<int> v{1, 2, 3, 4, 5};
v.pop_back();
cout << v.front() << endl;
	1

What prints?
 	
vector<int> v{1, 2, 3, 4, 5};
v.pop_back();
cout << v.back() << endl;
	4

What prints?
 	
void f(vector<int> v)
{
v.at(0) = 42;
}
int main()
{
vector<int> x{1, 2, 3};
f(x);
cout << x.at(0) << endl;
}
	1

What prints?
void f(vector<int>& v)
{
v.at(0) = 42;
}
int main()
{
vector<int> x{1, 2, 3};
f(x);
cout << x.at(0) << endl;
}
	42

What prints?
 	
void f(const vector<int>& v)
{
v.at(0) = 42;
}
int main()
{
	Nothing; compile-time error.

int x = 0;
vector<int> v{1, 3, 2};
for (auto e : v) e += x;
cout << x << endl;	

What does this code do?
 	
int x = 0;
vector<int> v{1, 3, 2};
for (auto e : v) x = e;
cout << x << endl;
	Finds the last element in v
	Prints 2

What does this code do?
 	
int x = 0;
vector<int> v{1, 3, 2};
for (auto e : v) x += e;
cout << x << endl;
	Sums the elements in v
	Prints 6

What is stored in data after this runs? vector<int> data{1, 2, 3}; data.pop_back();	None of these
What is the size of data, after this runs? vector<int> data; data.push_back(3);	1
What is stored in data after this runs? vector<int> data{1, 2, 3}; data.erase(v.begin());	[2, 3]
What is stored in data after this runs? vector<int> data{1, 2, 3}; data.front();	[1, 2, 3]
What is stored in data after this runs? vector<int> data{1, 2, 3}; data.back();	[1, 2, 3]
What is stored in data after this runs? vector<int> data{1, 2, 3}; data.clear();	[]
What is stored in data after this runs? vector<int> data{1, 2, 3}; data.push_back(0);	[1, 2, 3, 0]
What is stored in data after this runs? vector<int> data{1, 2, 3}; data.pop_back(0);	None of these

Which of these are true?
 	
int main()
{
vector<int> v{1, 2, 3};
for (const auto& e : v) e = 0;
cout << v.at(0) << endl;
}
	Code will not compile

Which of these are true?
 	
int main()
{
vector<int> v{1, 2, 3};
for (auto i = v.size() - 1; i >= 0; i--) // out of range for >=
cout << v.at(i) << " ";
cout << endl;
}
	Crashes when run
	
	Prints 3 2 1
	
	Issues a compiler warning, but no error

int main()
{
vector<int> v{1, 2, 3};
for (auto& e : v) e = 0;
cout << v.at(0) << endl;
}	

Which of these are true?
 	
int main()
{
vector<int> v{1, 2, 3};
for (auto e : v) e = 0;
cout << v.at(0) << endl;
}
	Prints 1
	
	Code runs but has no effect on v

Which of these are true?
 	
int main()
{
vector<int> v{1, 2, 3};
for (auto i = v.size() - 1; i >= 0; i--)
cout << v[i] << " ";
cout << endl;
}
	Endless loop (will likely crash, but not necessarily)
	
	Issues a compiler warning, but no error
	
	Prints 3 2 1

Which of these are true?
 	
int main()
{
vector<int> v{1, 2, 3};
for (auto i = v.size(); i > 0; i--)
cout << v.at(i) << " ";
cout << endl;
}
	crashes when runs

Which line of code can be added to print the value 4?
 	
int main()
{
struct S {int a, b; };
vector<S> v;
S s{3, 4};
v.push_back(s);
// Add code here
}
	cout << v.at(0).b << endl;

Assume vector<double> speed(5); Which line throws a run-time error?	ANSWER --> None of these
	
	cout << speed[speed.size()];
	speed[0] = speed.back()
	speed.front() = 12;
	speed.erase(speed.begin());

Which defines a vector to store the salaries of ten employees?	vector<double> salaries(10);
The following code is logically correct. What is the semantically correct prototype for mystery()? vector<double> v; mystery(v);	void mystery(vector<int>&);
The following code is logically correct. What is the semantically correct prototype for mystery()? vector<double> v{1, 2, 3}; mystery(v);	Either mystery(const vector<int>&); or mystery(vector<int>&); could be correct.

Which line will not compile?
 	
int main()
{
vector<int> v{1, 2, 3};
auto size = v.size();
 	
cout << v.back() << endl; // 1.
cout << v.front() << endl; // 2.
cout << v.at(0) << endl; // 3.
cout << v.at(size) << endl; // 4.
cout << v.pop_back() << endl; // 5.
}
	5

int main()
{
vector<int> v{1, 2, 3};
auto size = v.size();
 	
cout << v.back() << endl; // 1.
cout << v.front() << endl; // 2.
cout << v.at(0) << endl; // 3.
cout << v.at(size) << endl; // 4.
cout << v.pop_back() << endl; // 5.
}	

Which statement is false? The elements in a vector:	ANSWER → None of these Are accessed by using an index or subscript Each use the same amount of memory Are are all of the same type Are homogeneous

Which line compiles, but crashes when run?
 	
int main()
{
vector<int> v{1, 2, 3};
auto size = v.size();
 	
cout << v.back() << endl; // 1.
cout << v.front() << endl; // 2.
cout << v.at(0) << endl; // 3.
cout << v.at(size) << endl; // 4.
cout << v.pop_back() << endl; // 5.
}
	4

Which lines have an identical effect?
 	
int main()
{
vector<int> v{1, 2, 3};
auto size = v.size();
 	
cout << v.back() << endl; // 1.
cout << v.front() << endl; // 2.
cout << v.at(0) << endl; // 3.
cout << v.at(size) << endl; // 4.
cout << v.pop_back() << endl; // 5.
}
	2 and 3

In C++ the parameterized collection classes are called _____?	templates
Classes that contain objects as elements are called?	collections

Assume vector<double> speed(5); Which line throws a runtime error?	None of these
	speed.erase(speed.begin());
	speed.front() = 12;
	speed[0] = speed.back()
	
	ANSWER → cout << speed.at(speed.size());

vector<int> v;	Creates the empty vector []
vector<int> v(1);	Creates the vector [0]
v.begin()	Points to the first element in v
v.back();	Returns a reference to the last element in v
v.erase(v.begin());	Removes the first element in v and shifts the rest to the left
v.pop_back()	Removes the last element in v
v[3];	Returns a reference to the fourth element in v with no range checking
vector<int>v(2,3);	Creates the vector [3,3]
vector<int>v[2, 3];	Creates the vector [2, 3]
v.push_back(3);	Adds a new element to the end of v
v.at(3);	Safely returns a reference to the fourth element in v

Assume vector<int> v; Writing cout << v.front(); throws a runtime exception.

Assume the vector v contains [1, 2, 3]. v.erase(v.begin() + 2); changes v to [1, 2].

The declaration: vector<string> v(5, "bob"); creates a vector containing five string objects, each containing "bob".

In the declaration: vector<int> v; the word int represents the object's base type.

The elements of a vector are allocated contiguously.

vector subscripts begin at 0 and go up to the vector size - 1

The clear() member function removes all the elements from a vector.

The statement v.insert(v.end() + 1, 3) is undefined because end() + 1 points past the last element in the vector.

The statement v.insert(v.end(), 3) appends the element 3 to the end of the vector v.

Contiguous allocation means that the elements are stored next to each other in memory.

The push_back member function adds elements to the end of a vector.

Assume the vector v contains [1, 2, 3]. v.erase(v.begin()); changes v to [2, 3].

The declaration: vector<int> v(10); creates a vector object containing ten elements initialized to 0.

Assume the vector v contains [1, 2, 3]. v.pop_back(); changes v to [1, 2].

The term for classes with a base-type specification are parameterized classes.

Assume that v contains [1, 2, 3]. The result of writing cout << v[4]; is undefined.

The C++ term for classes like vector are template classes.

A vector subscript represents the element's offset from the beginning of the vector.

The declaration: vector<string> v{"bill", "bob", "sally"}; creates a vector containing three string objects.

The declaration: vector<int> v(10, 5); creates a vector object containing ten integers.

Assuming that Star is a structure, the declaration: vector<Star> stars(3); creates three default initialized Star objects.

The declaration: vector<string> v(5); creates a vector containing five empty string objects.

Assume the vector v contains [1, 2, 3]. v.erase(0); is a syntax error.

The declaration: vector<int> v; creates a vector object with no elements.

A vector represents a linear homogeneous collection of data.

Assume vector<double> v; Writing cout << v.back(); is undefined.

Elements in a vector are accessed using a subscript.

Assume that v contains [1, 2, 3]. The result of writing cout << v.at(4); throws a runtime exception.

The statement v.insert(v.begin(), 3) inserts the element 3 into the vector v, shifting the existing elements to the right.

Vector subscripts begin at 1 and go up to the vector size.

The statement v.insert(v.end(), 3) is undefined because end() points past the last element in the vector.

Assume that v contains [1, 2, 3]. The result of writing cout << v.at(4); is undefined.

The C++ term for classes like vector are generic classes.

The statement v.insert(v.begin(), 3) inserts the element 3 into the vector v, overwriting the exiting element at index 0.

The push_back member function adds elements to the end of a vector as long as there is room for the elements.

The declaration: vector<int> v(10); creates a vector object containing uninitialized elements.

The declaration: vector<int> v(10, 5); creates a vector object containing five integers.

The declaration: vector<string> v(5); creates a vector containing five null pointers.

In the declaration: vector<int> v; the word vector represents the object's base type.

The declaration: vector<int> v; creates a vector variable but no vector object.

Assume that v contains [1, 2, 3]. The result of writing cout << v.at(4); is a compiler error.

Vector subscripts begin at 1 and go up to the vector size.

A vector consists of named members.

The declaration: vector<int> v(10, 5); is illegal.

Assume vector<double> v; Writing cout << v.back(); throws a runtime exception.

Assume that v contains [1, 2, 3]. The result of writing cout << v[4]; is a compiler error.

The declaration: vector<int> v = new vector<>(); creates a vector object with no elements.

The pop_back member function adds elements to the end of a vector.