How do you like C++ comparing to C?

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so much better

little more complicated

nice

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Today's plan

- → Review Ex 9-2
- → Recap questions
- → In-class Ex 10-1

Ex 9-2: Compute CDF from PDF

- Given a PDF, compute the CDF
- void make_cumulative(std::vector<double>& val);
- for (size_t i = 1; i < val.size(); ++i) val[i] += val[i-1];

Ex 9-2: naive_find_last_iterator

- Find the last one that is less than or equal to v
- Find the first one that is bigger than v, then get the previous one
- Given a iterators begin and end
- We return end if condition cannot be met
- if (*begin <= v) { // we have an answer }
- else return end;
- for (IteratorType it = begin; it != end; ++it) {
- if (*it > v) return it - 1;
- }

Ex 9-2: **fast_find_last_iterator**

- Binary search
- if (*begin > v) return end;
- int half = (end - begin) / 2;
- if (!half) return begin;
- IteratorType mid = begin + half;
- if (*mid > v) return fast_find_last_iterator(begin, mid, v);
- else return fast_find_last_iterator(mid, end, v);

What is your understanding on these topics?

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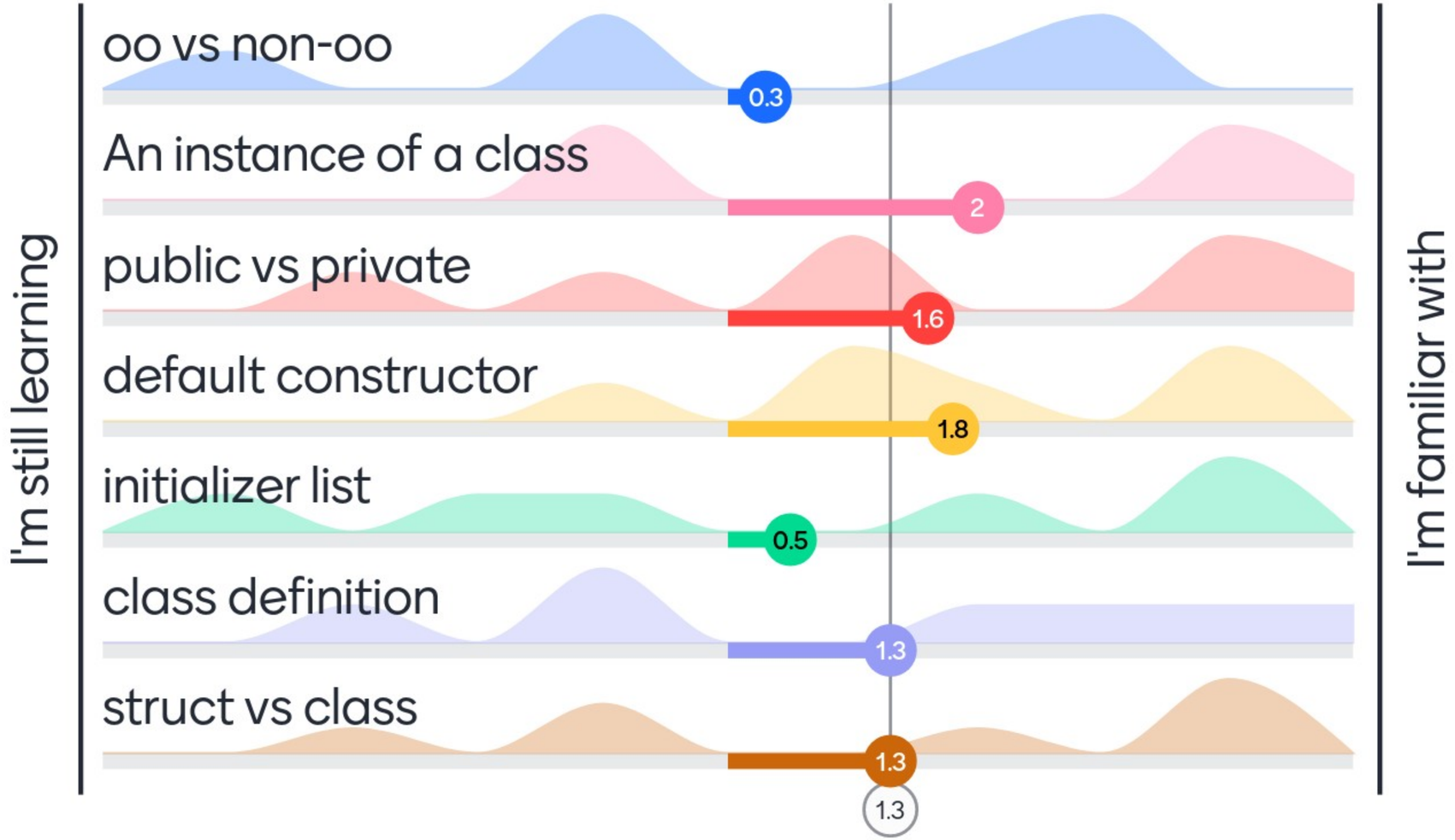

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What is oo programming?

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Structuring programs into simple, reusable pieces of blueprints (classes), that are used to create individual instances of objects. ✗	We have member fields and functions inside one class ✗	objects contains data and the associated functions ✗

The correct answer is: It's all about "objects". In C, we write functions to manipulate "data". In C++, we bundle the data and the related functions as an object (a class).

4

What is the difference between a **public** and a **private** member field/function?

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Public means accessible to code that has access to the class definition. Private means only member functions in the class have access.

We can use public things once we include the definition of class, but we can only access private thing for functions inside the class

private can only be accessed within the class while public can be accessed anywhere

The correct answer is: These keywords define the scope. `public` allow us to access anywhere with access to the class definition. `private` only let us do it in the class.

3

What is a default constructor?

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an initializer for all the instance variables when no parameter is given ✕

When you declare a new variable of a class without initialization, the default constructor is the member function that is called automatically. ✕

The object of class by default ✕

initializes the variables used in the class ✕

The correct answer is: A special member function that C++ calls to instantiate an object (e.g. when declaring a new variable with the class type).

4

What is the main difference between **struct** and **class** in C++?

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- class can have default constructor and functions ✗
- struct fields defaults to public while class defaults to private ✗
- member functions ✗
- struct have public member fields, while class have private member fields ✗
- structs are public by default while classes are private by default ✗

The correct answer is: `class` defaults member's access to `private` while `struct` defaults it to `public`.

5

Why is using an initializer list a better choice?

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More efficient for things like strings. ✕

Can use references and no overhead memory ✕

The correct answer is: Simply to save one operation (the assignment operator). It is preferred, in particular if you want to avoid large data copying.

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Ask me anything

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0 questions

0 upvotes