

Mini Quiz 13

Name: _____

Kerberos: _____

Consider the following class hierarchy:

<pre>class x { int a; int b; void g() { ... } void h() { ... } }</pre>	<pre>class y extends x { int c; int d; void h() { ... } }</pre>	<pre>class z extends x { int e; int f; void h() { ... } }</pre>
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Assume that fields are laid out sequentially starting from `a` at index 0.

Q1: What index will be accessed for each of the following?

<code>x.a</code>	<code>x.b</code>	<code>y.a</code>	<code>y.c</code>	<code>z.b</code>	<code>z.f</code>
0	1	0	2	1	3

Consider an instance of class `z` at runtime in a language with dynamic dispatch in the style of C++:

Q2: What data might you store for class `z` itself (shared between all instances of `z`)?

The method symbol table (potentially with a pointer to `x`'s method table, or with `x`'s methods inlined)

Q3: What data might you store for each instance of class `z`?

[`a`, `b`, `e`, `f`] and a pointer to `z`'s method symbol table.