

**COMP 333**  
**Fall 2019**

**Virtual Tables (vtables)**

For each one of the code snippets below, write out pseudo-assembly corresponding to the code, including the methods themselves, each class' vtable, and the call itself.

1.) Map `base` to index 0 in the table.

```
class Base {
    void base() { print("base"); }
}
class Sub extends Base {}

Base b = new Sub();
b.base();
```

2.) Map `base` to index 0 in the table, and `sub` to index 1.

```
class Base {
    void base() { print("base"); }
}
class Sub extends Base {
    void sub() { print("sub"); }
}

Sub b = new Sub();
b.sub();
```

3.) Map `foo`, `bar`, and `baz` to indices 0, 1, and 2, respectively.

```
class Base {
    void foo() { print("foo"); }
    void bar() { print("bar"); }
}
class Sub extends Base {
    void foo() { print("sub_foo"); }
    void baz() { print("bar"); }
}
```

```
Base b = new Sub();
b.foo();
b.baz();
```