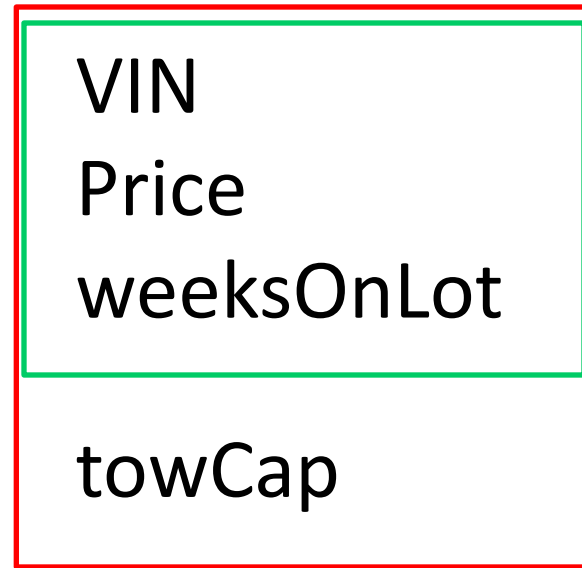


# With redefined member functions

At compile time, the compiler generates code for each defined version of `display1()` function. The ***type*** of a pointer then lets compiler know which version of `display1()` to link.

```
Vehicle * vPtr = &Truck;  
vPtr->display1();
```

Since `vPtr` is a pointer to `Vehicles`, the `Vehicle` version of `display1()` is called, even though pointed at truck...



Code: `Vehicle display1()`

Code: `Truck display1()`

# With Virtual member functions

At compile time, the compiler builds extra info. into each Truck object. That info is then used at *runtime* if that *object is pointed at*.

```
Vehicle * vPtr = &Truck;  
vPtr->display1();
```

Since vPtr is pointing at a Truck object, the **Truck version of display1()** is called, making use of the extra info.

Address of **display1()**

VIN

Price

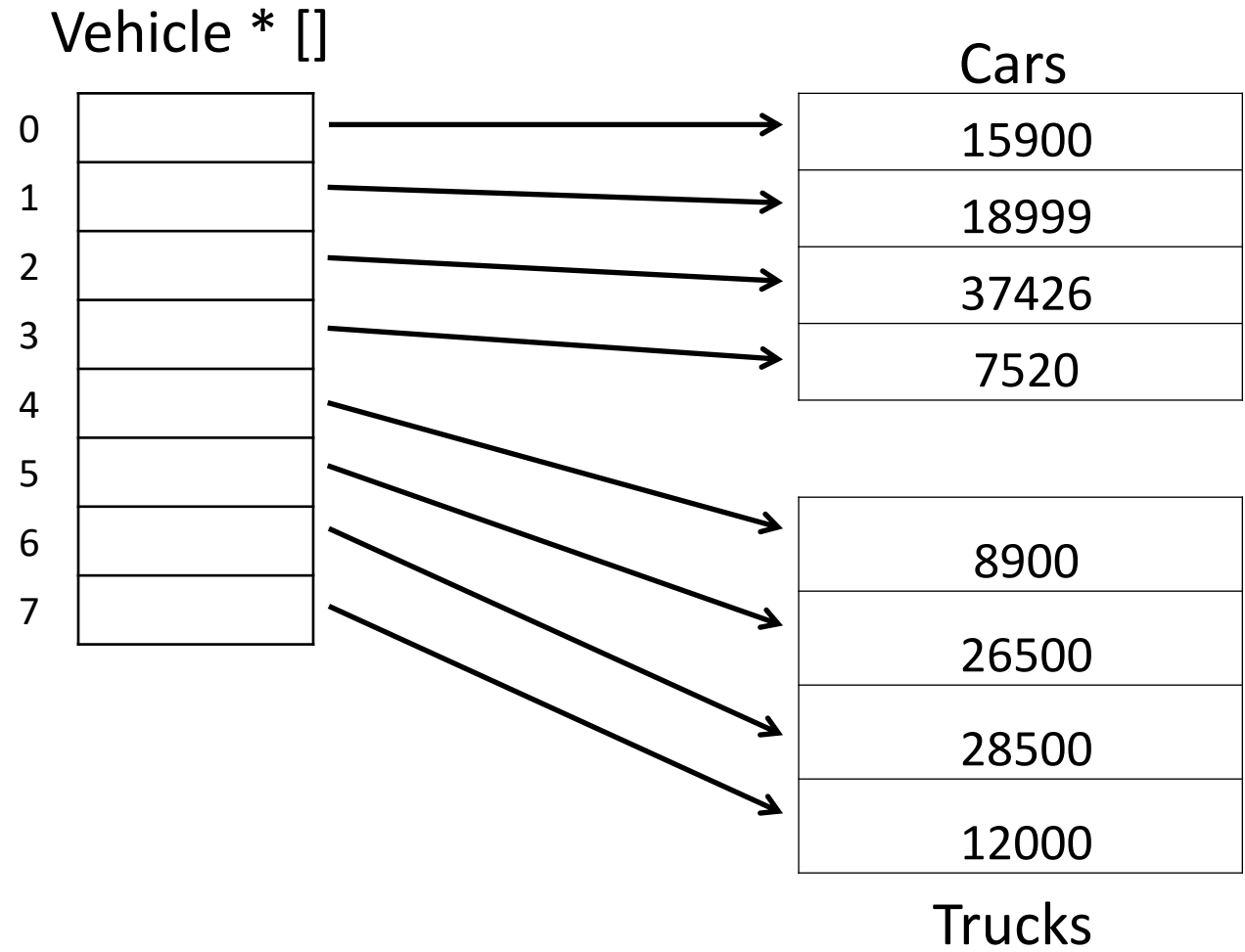
weeksOnLot

towCap

Code: Vehicle display1()

Code: Truck display1()

Using array of POINTERS to objects, to support “polymorphism”

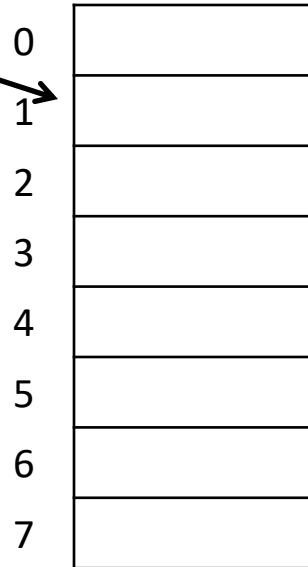


## Sorting the POINTERS, rather than sorting the objects

Vehicle \* \* vPP



Vehicle \* V[]



Cars

15900
18999
37426
7520

8900

26500

28500

17000

Trucks

(**\*vPP**)->getPrice() is example of syntax.

What's pointed to by vPP is a **pointer** to an object, and the object has a member function getPrice()