

BINDING

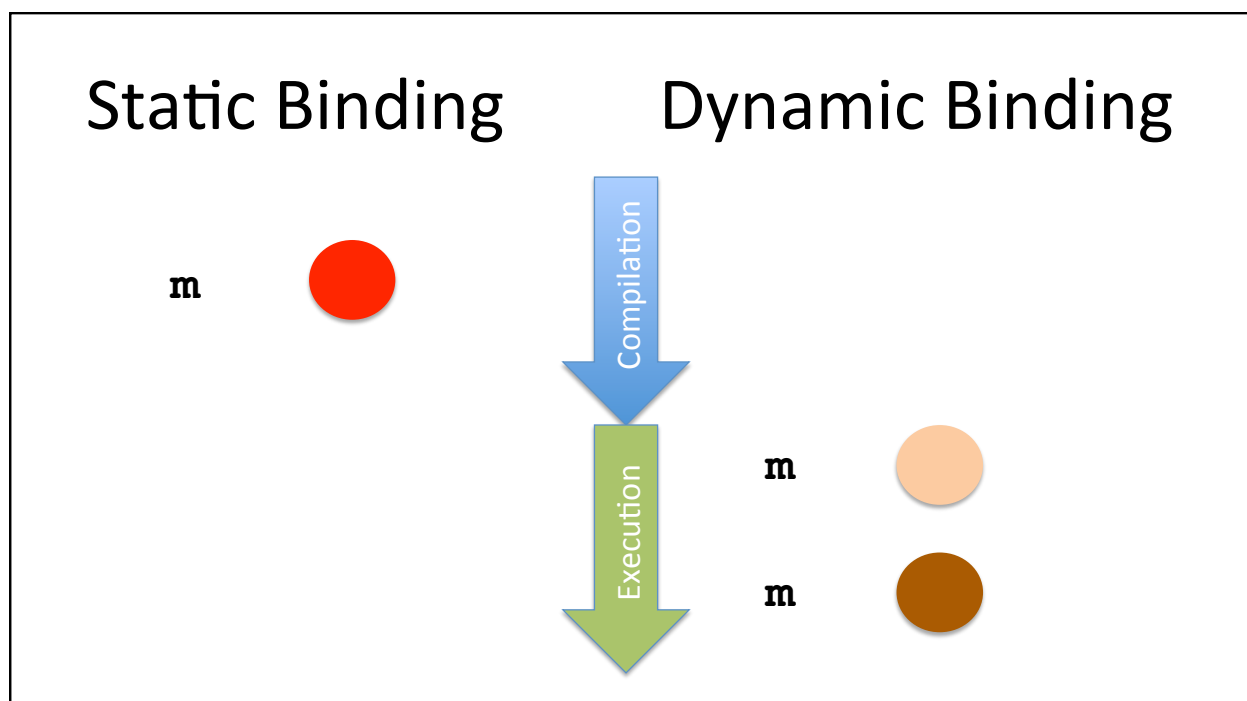
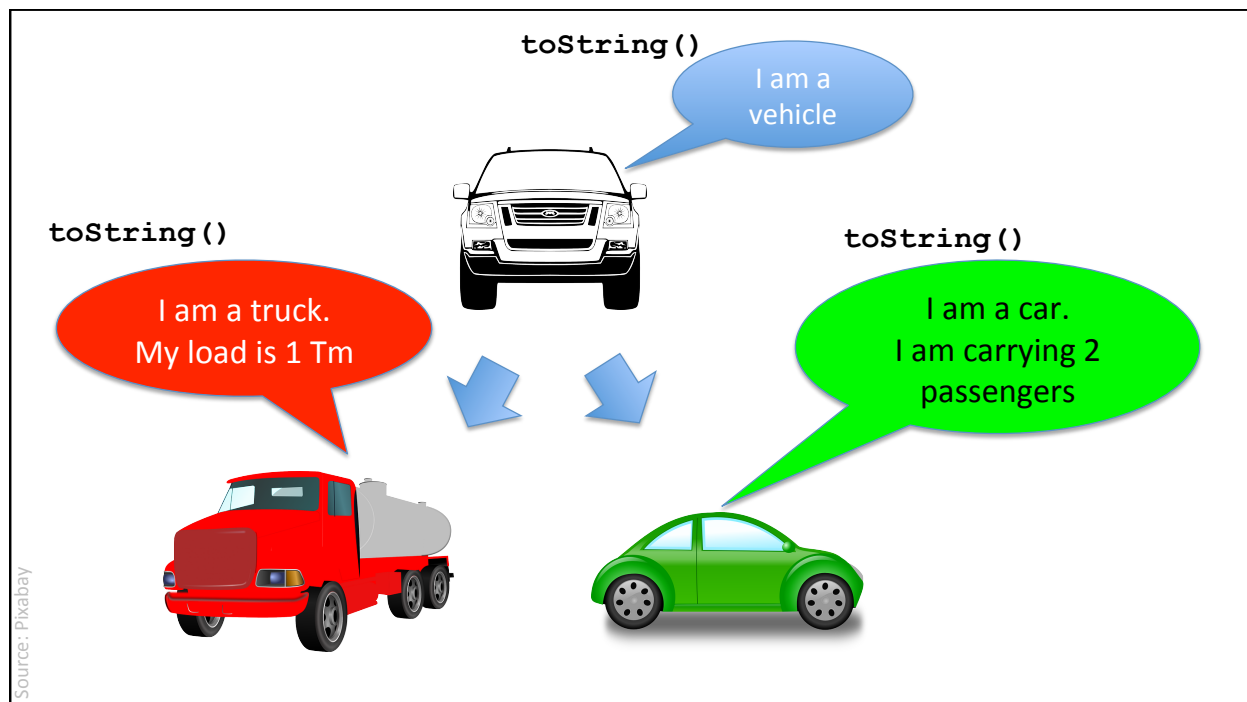
```
public int sq(int x) {  
    return x*x;  
}
```

sq

$int \rightarrow int$
 $x \rightarrow x*x$

```
sq(3) ;
```

```
sq(4) ;
```



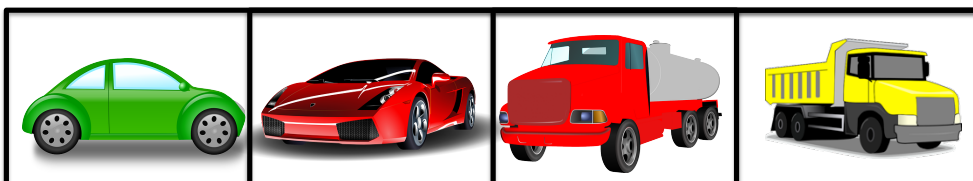
Binding

- Overloading
 - Resolved at **compile** time
 - **Static** binding
- Overriding
 - Resolved at **run** time
 - **Dynamic** binding



Example

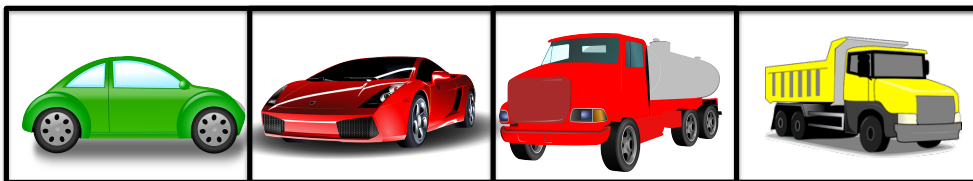
```
Vehicle[] garage = new Vehicle[4];  
garage[0] = new Car(...);  
garage[1] = new Car(...);  
garage[2] = new Truck(...);  
garage[3] = new Truck(...);
```



Source: Pixabay

Overriding

```
for (int i=0; i<4; i=i+1){  
    System.out.println(garage[i].toString());  
}
```



Source: Pixabay

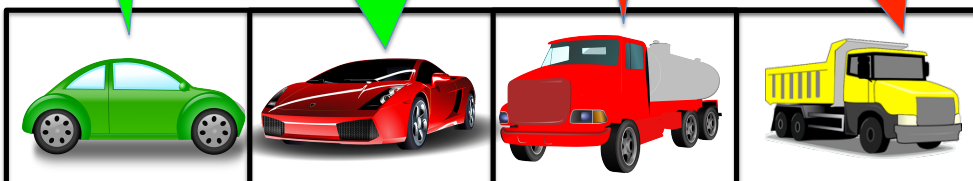
Overriding

I am a car.
I am carrying 2
passengers

I am a car.
I am carrying 3
passengers

I am a truck.
My load is 1 Tm

I am a truck.
My load is 2 Tm



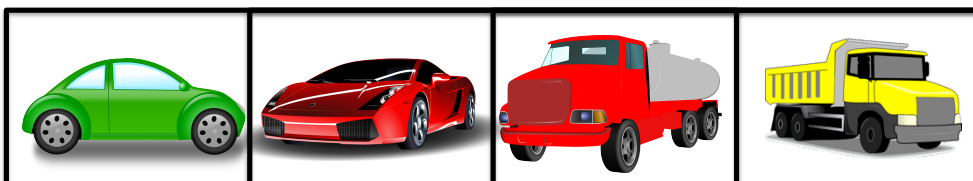
Source: Pixabay

Overloading

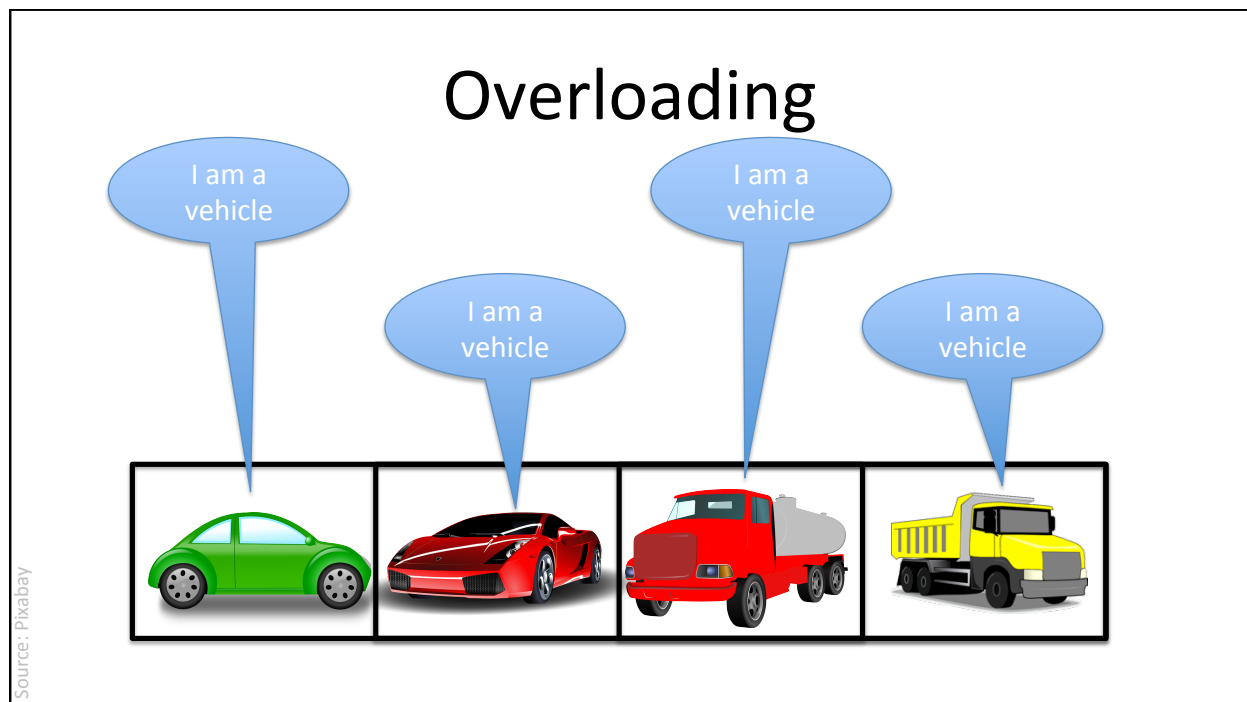
```
public void p(Vehicle v){  
    System.out.println("I am a vehicle");  
}  
public void p(Car c){  
    System.out.println("I am a car");  
}  
public void p(Truck t){  
    System.out.println("I am a truck");  
}
```

Overloading

```
for (int i=0; i<4; i=i+1){  
    p(garage[i]);  
}
```



Source: Pixabay



Static Binding

- Methods
 - Overloaded
 - Private
 - Final
 - Static
- Attributes

