

OPMS 2018 - Exercise 3

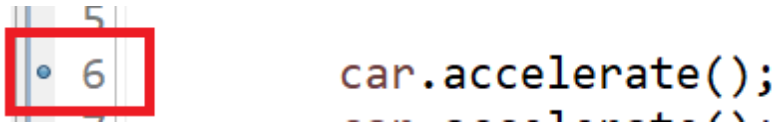
Task 1

1. Create a class `Car`
2. In this class, add a variable `private int speed = 100`
3. Add the method `public int getSpeed()` which returns the speed.
4. Add the method `public void accelerate ()` which reduces the speed by 15.
5. Add the method `public void decelerate()` which increases the speed by 20.
6. Create a class `CarTest` with a main method.
7. In this main method, create a `Car` using `Car car = new Car()`
8. Call `car.accelerate()` 2 times
9. Call `car.break()` 3 times
10. Call `System.out.println(car.getSpeed())`

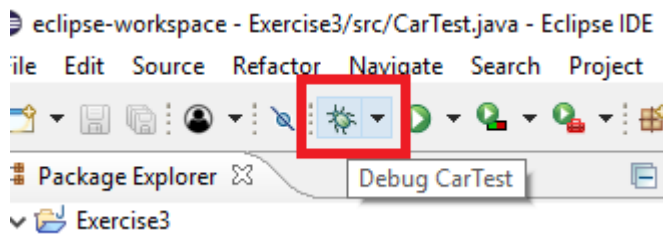
What is the result?

Answer:

11. Add a breakpoint at the first `car.accelerate()`
Hint: Double-click the line number to do so.



12. Start the debugger



13. Step over both `accelerate()` commands and inspect your Car object in the debugger.



What is the car's current speed in the debugger?
Answer: _____

Task 3

1. Create a class `Bottle`
2. Create a class `PlasticBottle` which extends `Bottle`
3. Create a class `GlassBottle` which extends `Bottle`
4. Create a class `Recycler` and
 - a. Add a method `public void insert(GlassBottle bottle)` which prints to the console “I don’t accept glass bottles”
 - b. Add a second method exactly like the first one, but add `PlasticBottle` instead of `GlassBottle`. This method prints “Thank you!”
5. Create a class `TestRecycler` and do the following
 - a. Create a new `Recycler` `recycler = new Recycler()`
 - b. Create a new `GlassBottle` and name it `bottle1`
 - c. Create another new `GlassBottle` and name it `bottle2`
 - d. Create a new `PlasticBottle` and name it `bottle3`
 - e. Call
`recycler.insert(bottle1);`
`recycler.insert(bottle2);`
`recycler.insert(bottle3);`

What is the result?
