

RACING CARS

2 digital cars will race.

Cars are represented by digital objects.

Each car has a **name** and a **distance** traveled.

Both start the race with a **distance** of 0.

While both cars *have a distance that is less than 100*, the race continues. The car to cross the hundred line furthest is the winner eg the car with a final distance of 105 will beat a car with a final distance of 101.

To increase a car's distance, the game program generates a random number and adds to the car object's current distance.

Here is the game code:

```
1  import random
2
3  car1 = Car("Toyota")
4
5  car2 = Car("Volvo")
6
7  while car1.getDistance() < 100 && car2.getDistance()<100:
8
9      rand = random.randint(1,10)
10     car1.updateDistance(rand)
11
12     rand = random.randint(1,10)
13     car2.updateDistance(rand)
14
15 #end of game
16
17 if car1.getDistance() > car2.getDistance():
18     print(car1.getName(),"is the winner!")
19 elif car2.getDistance() > car1.getDistance():
20     print(car2.getName(),"is the winner!")
21 else:
22     print("It's a draw! Congrats",car1.getName(),"and",car2.getName())
23
```

Answer these questions about the code above:

1. Which line numbers show the Car class constructor method being called?
2. How many parameters does the constructor method require?
3. How many Car class methods are used in the game?
4. Give an example of an accessor method used in the game.
5. Give an example of a mutator method used in the game.

NOW - Design the Car class.