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//
//  main.swift
//  Rally
//
//  Created by Megha Mahna on 2019-10-22.
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//

// part 1
print("Test part 1 : ")
print("-----")
let v0 = Vehicle()
print(v0)

let v1 = Vehicle(name: "Ferrari", speedMax: 300.0, weight: 800, fuel: 30)
let v2 = Vehicle(name: "Renault Clio", speedMax: 180.0, weight: 1000, fuel: 20)
print(v1, v2, separator: "\n")
if v1.better(otherVehicle: v2) {
    print("The first car is better than the second")
} else {
    print("The second car is better than the first")
}
// end of part 1

// part 2
print("")
print("Test part 2 : ")
print("-----")

let m1 = Moto(name: "Honda", speedMax: 200.0, weight: 250, fuel: 15, sidecar:
    true)
let m2 = Moto(name: "Kawasaki", speedMax: 280.0, weight: 180, fuel: 10)
print(m1, m2, separator: "\n")

var vt1 = SportCar(name: "Lamborghini", speedMax: 320, weight: 1200, gas: 40)
var vt2 = SportCar(name: "BMW", speedMax: 190, weight: 2000, gas: 35, isTurbo:
    true)
var vt3 = ElectricCar(name: "BMW", speedMax: 190, weight: 1800, charge: 45)
var vt4 = ElectricCar(name: "Tesla", speedMax: 180, weight: 1850, charge: 50)
var vt5 = Hybrid(name: "Peugeot", speedMax: 200, weight: 2000, gas: 60,
    charge: 40)
print(vt1, vt2, vt3, vt4, vt5, separator: "\n")
// end of part 2
//
//// part 3
print("")
print("Test part 3 : ")
print("-----")

let gp1 = GrandPrix()
gp1.add(vehicle: v1)

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gp1.add(vehicle: v2)
print(gp1.check())

let gp2 = GrandPrix()
gp2.add(vehicle: vt1)
gp2.add(vehicle: vt2)
gp2.add(vehicle: m2)
print(gp2.check())

let gp3 = GrandPrix()
gp3.add(vehicle: vt1)
gp3.add(vehicle: vt2)
gp3.add(vehicle: m1)
print(gp3.check())

let gp4 = GrandPrix()
gp4.add(vehicle: m1)
gp4.add(vehicle: m2)
print(gp4.check())
//end of part 3

// part 4
print("")
print("Test part 4 : ")
print("-----")

let gp5 = GrandPrix()
gp5.add(vehicle: vt1)
gp5.add(vehicle: vt2)

print("First round:")
gp5.run(turn: 11)
print("")

print("Second round:")
gp3.run(turn: 40)
print("")

print("Third round:")
gp2.run(turn: 11)
// end of part 4

// part 5

print("")
print("Test part 5 : ")
print("-----")

let gp6 = GrandPrix()
gp6.add(vehicle: vt1)
gp6.add(vehicle: vt2)

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gp6.add(vehicle: vt3)
gp6.add(vehicle: vt4)
gp6.add(vehicle: vt5)

print("First round:")
gp6.run(turn: 30)
print("")
print("Second round:")
gp6.run(turn: 40)
print("")
print("Third round:")
gp6.run(turn: 100)
```