Intro to Computing—CSCI-1310

Mon, Mar 2, 2015 · Lab

Lab 8—Classes

Objectives

Write a program:

Use class, subclasses, and objects
Use methods and method overriding

Part 1

Write a program to perform the following:

Create a parent class named `Car`.

Car class should have a method named `drive()`. It takes in `distance` as a parameter and returns the `time`. You should calculate `time` using the equation:

```
Time = Distance / Velocity
```

Note: Take `distance` as a command line argument and pass it to method `drive`.

Now, create two subclasses/child classes of `Car` class named `Ferrari` and `Kia`. Each subclass has a `velocity` instance variable that's used in the `drive()` calculation.

```
Velocity of Ferrari: 350mph
Velocity of Kia: 60mph
```

`Ferrari` and `Kia` should override the `drive()` method of their parent class. The `Ferrari`'s `drive` method should add a 30 minute time penalty for stopping at a car wash along the way.

Find out whether `Ferrari` takes lesser time to reach the distance taken as an input or `Kia` takes lesser time; then print it out.

Input

```
Distance = 100 miles
```

Output

```
Time taken by Ferrari is 0.79 hours.
Time of taken by Kia is 1.67 hours.
Ferrari is faster than Kia.
```

Name your program Lab8.py

Zip and submit

To get credit for this lab exercise:

Submit your code to Moodle as a zip file named Firstname_Lastname_Lab8.zip
Show the TA your code and run your program.

Python odds and ends Midterm 2 review