# Lab: OOP Basic

This document defines the **exercise assignments** for the "[PHP Fundamentals" Course @ Software University](https://softuni.bg/courses/php-basics/) .

## Define a class Car

Define a class **Car** with fields for **brand**, **model** and **year**. Make a three instances of the class.

## Add a Constructor

1. Add constructor to the **Car** class from the last task
2. It should accept a two arguments - brand and model and set it as properties.

## Add a methods

* + - 1. Add a set method for setting a property **year**
      2. Validate input in new method
      3. Add a get method for all properties

## Make a instances

Using the Car class, write a program that reads from the console **4** lines of car information information. Every line contains brand, model and year, separated by space. Make list of objects of class Car. On finish - prints all cars, **sorted in alphabetical order by brand, model and year**.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| Nissan X-trail 2007  Renault Scenic 2001  Audi A6 2001  Renault Clio 1995 | Audi,A6  Nissan,X-trail,2007  Renault,Clio,1995  Renault,Scenic,2001 |

## Add sub class

Using the previous problem, add a second class, that define car model extra details (engine, number of seats, horsepower,...). Add this information as property of main class and populate it via method. Make one instance, populate all properties and dump the object.

## Rewrite a code

Rewrite procedural/functional code to OOP style

|  |
| --- |
| <?php  function math\_sum($a,$b){  return $a+$b;  }  function math\_div($a,$b){  math\_check\_if\_zero($a);  math\_check\_if\_zero($b);  return $a / $b;  }  function math\_check\_if\_zero($x){  if($x == 0){  echo "division by zero is not possible";  exit;  }  }  echo math\_sum(2,3);  echo math\_div(1,2); |

## 

## Create Anonymous Object

1. Create Anonymous Object with 10 properties by your choice and populate with values
2. Print all properties with foreach like - {name}->{value)

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