



# VISUAL PRO TUTORIAL A



## A BEGINNERS GUIDE TO VISUAL SCRIPTING

VISUALPRO: A LIGHTWEIGHT; VISUAL SCRIPTING TOOL

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## Tutorial: Classes and Objects

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# Contents

<b>1</b>	<b>Learning Objectives</b>	<b>3</b>
<b>2</b>	<b>Introduction</b>	<b>4</b>
2.1	What is VisualPro?	4
2.2	What will the tutorial cover?	4
<b>3</b>	<b>VisualPro Environment</b>	<b>4</b>
3.1	Features	4
3.2	Known Bugs	4
3.3	Saving Progress	4
<b>4</b>	<b>Terminology</b>	<b>5</b>
4.1	What terminologies exist within Object-Orientation programming?	5
4.2	What is a class?	5
4.3	What is a method?	5
4.4	What is a object?	6
<b>5</b>	<b>Object-Orientation</b>	<b>6</b>
5.1	Exercise: Understanding the basics	6
5.2	Exercise: Trying out a Class	6
5.3	Exercise: Animal Types	6
5.4	Exercise: Vehicle Components	6
<b>6</b>	<b>Keywords</b>	<b>6</b>

# 1 Learning Objectives

The following learning objectives are as follows:

1. Understanding the VisualPro application.
2. Understanding the terminologies of classes, objects and methods.
3. Writing several classes in a Visual Scripting environment.

## 2 Introduction

### 2.1 What is VisualPro?

VisualPro aims to create a lightweight Visual Scripting tool that encourages individuals to the development field. VisualPro enables users to create code structures to help develop ideas into reality.

**Note:** VisualPro does not have logical programming tools in its current implementation.

### 2.2 What will the tutorial cover?

The tutorial covers VisualPro Environment of how to use the software, found in section 3, page 4 and terminology found in section 4, page 5. The tutorial teaches the basics of Object-Oriented and how to implement the structure within VisualPro, found in section 5, page 6.

#### Example 2.1: Object-Oriented Languages (or) Languages with Object-Oriented Features

C++, C# and Java. To view other object-oriented languages, [WordDisk - Languages with object-oriented features \[1\]](#).

## 3 VisualPro Environment

### 3.1 Features

VisualPro offers a few features such as:

- Classes, Functions and Arguments, and Variables.
- Saving in Multiple Languages.
- Drag and Drop Elements and Text Areas.
- Property Windows to Control Arguments and Relationships.

### 3.2 Known Bugs

A couple of bugs include:-

- Arguments for functions are not currently available.
- Deleting containers does not mathematically reset the following location or move existing containers backwards.

### 3.3 Saving Progress

After completing a tutorial, select the language and press save.

#### Tip 3.1: Compatibility

As mentioned previously, not all languages support object-orientation. If a language is not compatible with a particular keyword, the code generator will ignore the selected syntax object.

**Example Language:** C is not supported.

## 4 Terminology

### 4.1 What terminologies exist within Object-Oriented programming?

### 4.2 What is a class?

A class enables developers to containerise code that is referenced later as objects. Java language enables the demonstration of a typical Class declaration in an Object-Oriented Programming (OOP) environment.

#### Example 4.1: Code Example - C# and Java

An example syntax of declaring a class in C# and Java languages:-

```
public class Name {  
    protected void Method_A() {}  
    public void Method_B() {}  
    private void Method_C() {}  
}
```

Within languages similar to C# and Java, member tags enable scope-protection to classes, methods and variables with different purposes. The code snippet displays that the declaration of members, public, private, and protected members align with the class or method declaration. To understand classes and modifiers within C#, look at [Classes in the C# Language](#) [2].

#### Example 4.2: Code Example - C++

```
class Name {  
    protected:  
        void Method() {}  
    public:  
        void Method() {}  
    private:  
        void Method() {}  
};
```

C++ language uses member colon style with a new line. To understand C++ classes and modifiers, look at [Classes in C++ Language](#) [3]

**Note:** - the modifiers of protected, public and private members mean the same as the previous example.

### 4.3 What is a method?

A method is found within a class that provides functionality to interact with neighbor methods and variables, child class methods and variables or object methods and variables (dependent on the access modifier).

#### 4.4 What is a object?

### 5 Object-Orientation

#### 5.1 Exercise: Understanding the basics

#### 5.2 Exercise: Trying out a Class

#### 5.3 Exercise: Animal Types

#### 5.4 Exercise: Vehicle Components

### 6 Keywords

- OOP - Object-Oriented Programming.

## References

- [1] Word Disk, “List of object-oriented programming languages - Wikipedia @ WordDisk,” Mar. 2018. [Online]. Available: [https://worddisk.com/wiki/List\\_of\\_object-oriented\\_programming\\_languages/](https://worddisk.com/wiki/List_of_object-oriented_programming_languages/)
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