Defining Classes

In this lesson, we will be learning about classes and how to define them.

We'll cover the following

Syntax for Defining Classes

We define our own class by starting with the keyword `class` followed by the *name* you want to give to your new class.

Here's the general syntax:

```
class className{
  //properties and methods defined
}
```

Example Snippet

Here's an example snippet of a class named `Shape`.

```
<?php
class Shape{
  public $sides = 0; // first property
  public $name= " "; // second property

  public function description(){ //first method
    echo "A $this->name with $this->sides sides.";
  }
}
?>
```

Explanation

The class `Shape` has the properties:

The class `Shape` has the *properties*:

- `sides`
- `name`

and the *method*:

- `description`

You might have noticed the use of the *keyword* `public` before defining both the *method* and the *properties*. We will be discussing this in detail in an upcoming lesson so for now, you can just focus on the general way of defining a class.

You can also ignore the body of the *method* `description` for now as all of this will be discussed in the next lesson.

Creating The Object

Once the class `Shape` is defined, you can create an *object* of the `Shape` class. So, for example, an instance of a *shape*, say, a **Square**, would be an **object**. So would other shapes like **Circles** or **Triangles** etc. Hence, you can have *multiple* instances of a *class*, just like you can have *multiple* shapes.

Here's the basic syntax of creating an *object* of a class:

```
$objectName = new ClassName;
```

Here we use the `new` keyword in order to create a new *instance* of a class.

In the case of our `Shape` class example, this is how we'd make an object:

```
$myShape = new Shape;
```

Accessing Class Member Variables

Properties and *methods* of the object created are accessed in the following manner:

```
<?php
class Shape
{

    public $side = 0;
    public $name = " ";
```

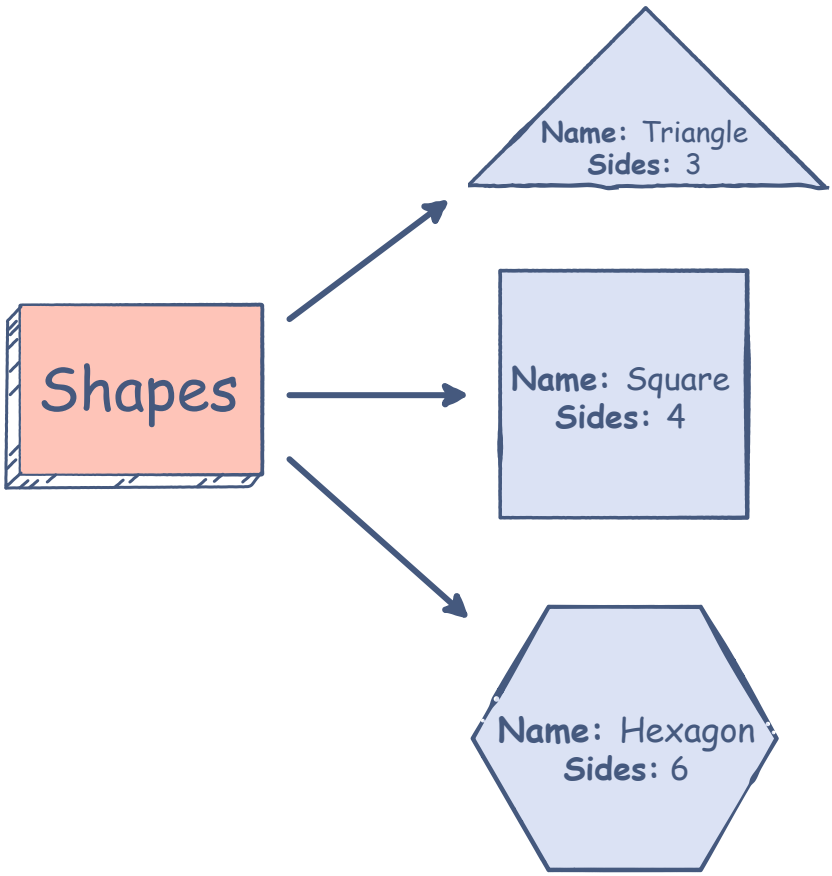
```
    public function description()
    {
        echo "A $this->name with $this->sides sides.";
    }
}

$myShape1 = new Shape; //creating an object called myShape1
$myShape1->sides = 3; //setting the "sides" property to 3
$myShape1->name = "triangle"; //setting the "name" property to triangle
$myShape1->description(); //"A triangle with 3 sides"
echo "\n";

$myShape1->sides = 4; //setting the "sides" property to 4
$myShape1->name = "square"; //setting the "name" property to square
$myShape1->description(); //"A square with 4 sides"
echo "\n";

$myShape1->sides = 6; //setting the "sides" property to 6
$myShape1->name = "hexagon"; //setting the "name" property to hexagon
$myShape1->description(); //"A hexagon with 6 sides"

?>
```



Now that we have learned how to define classes let's delve into some more details in the next lesson.