OBJECT ORIANTED PROGRAMMING

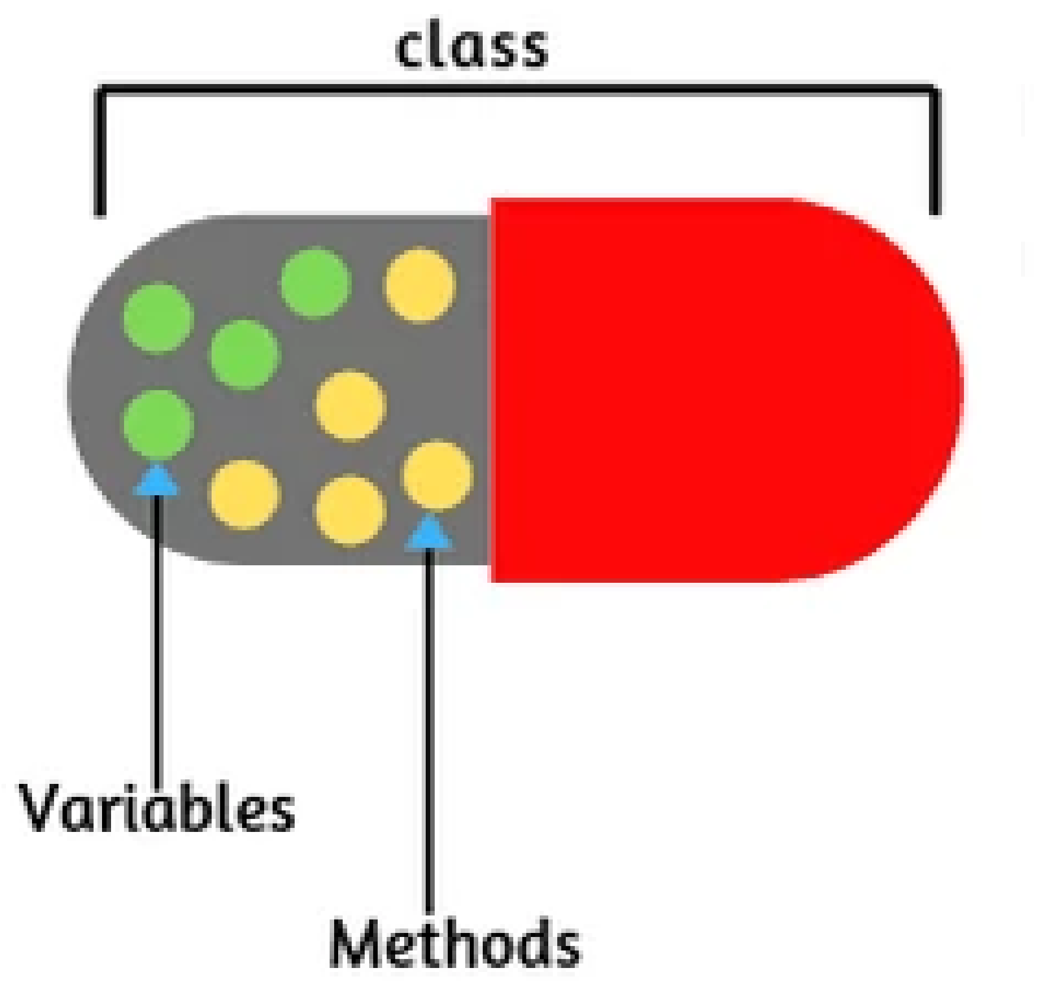
Encapsulation

What is the Encapsulation ?

- It's a Way To **Hide data** From Outside
- **Trying To** Prevent Outsiders From Access The Data . **I'm Trying to Prevent**
- Make Code More Secure
- Enclosing the Internal Details of the object to protect from external sources
- Using Access Modifier Private
- You Can't Access Properties and Method Outside The Class

Example ...

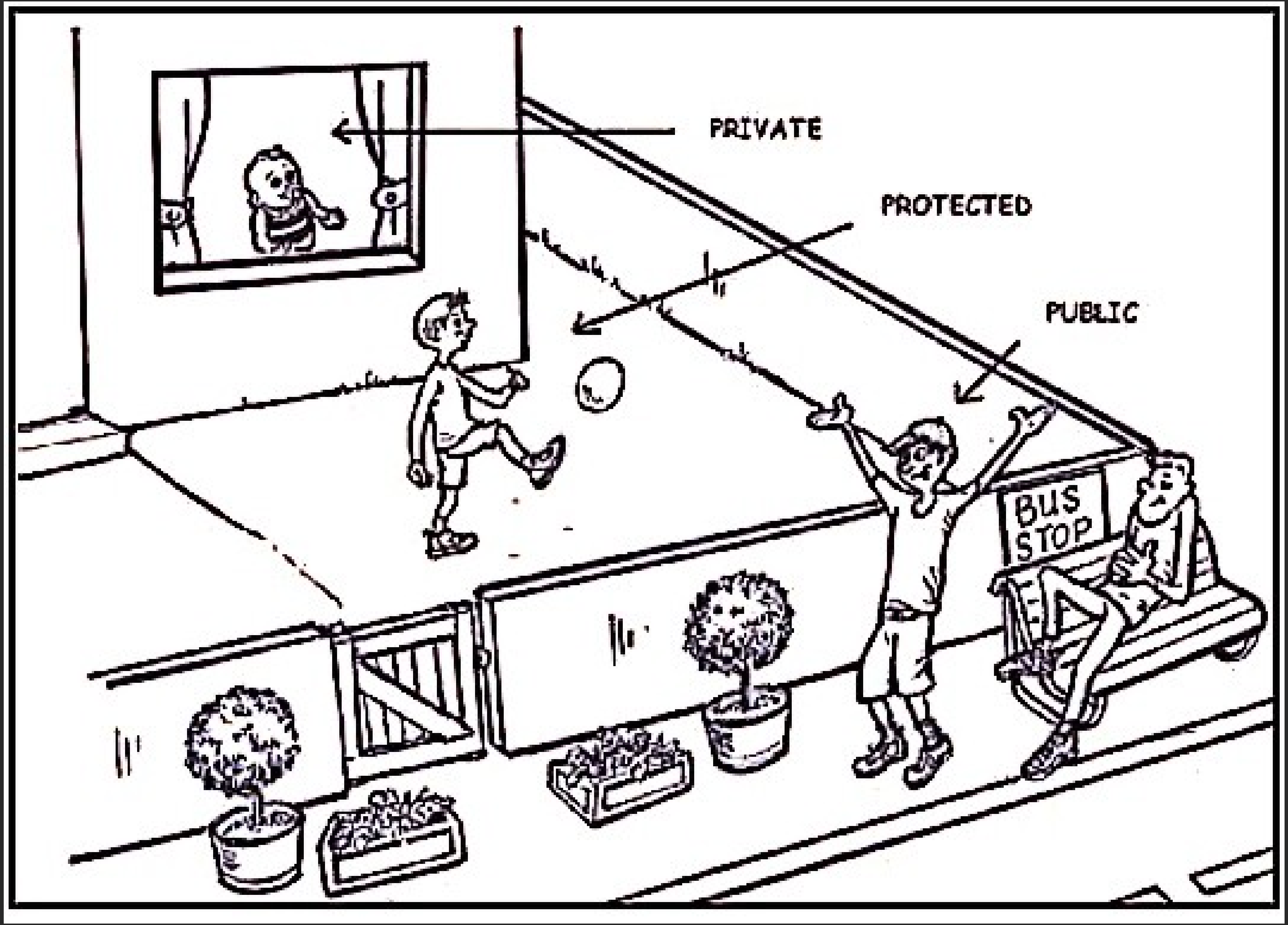
```
class
{

  data members
        +
  methods (behavior)

 }
```



OK But , What Is Access Modifier ?

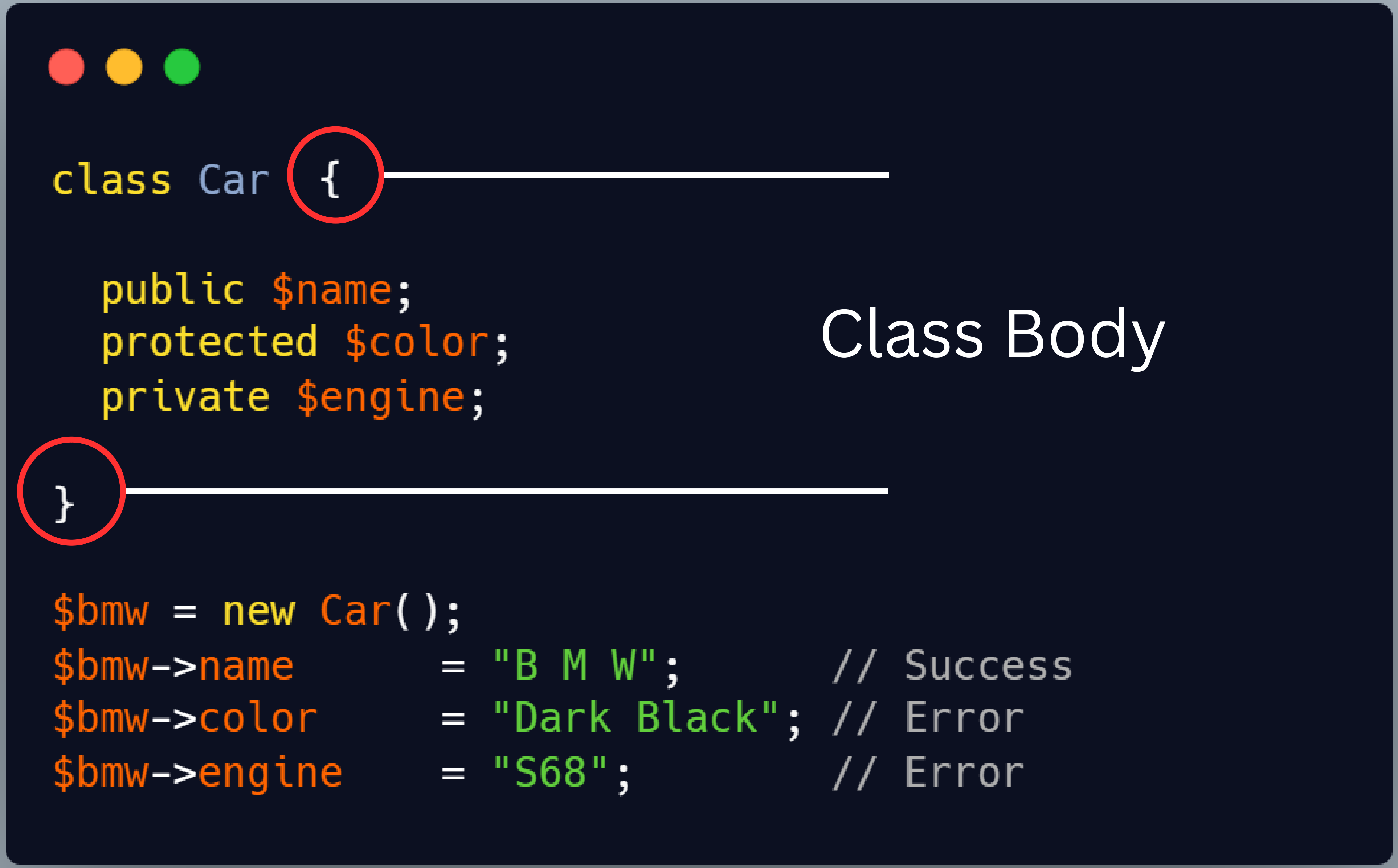
- Keyword Used To Control The Visibility And Where You Can Access The Properties and Method
- There Are 3 Common Access Modifier [Public , Private , Protected]
- **Public** : You Can Access Properties , Method From anywhere in the Project
- **Protected** : the property or method can be accessed within the class and by classes derived from that class
- **Private** : the property or method can ONLY be accessed within the class

Example ...



Coding

hmmm Why Give Me An Error ?

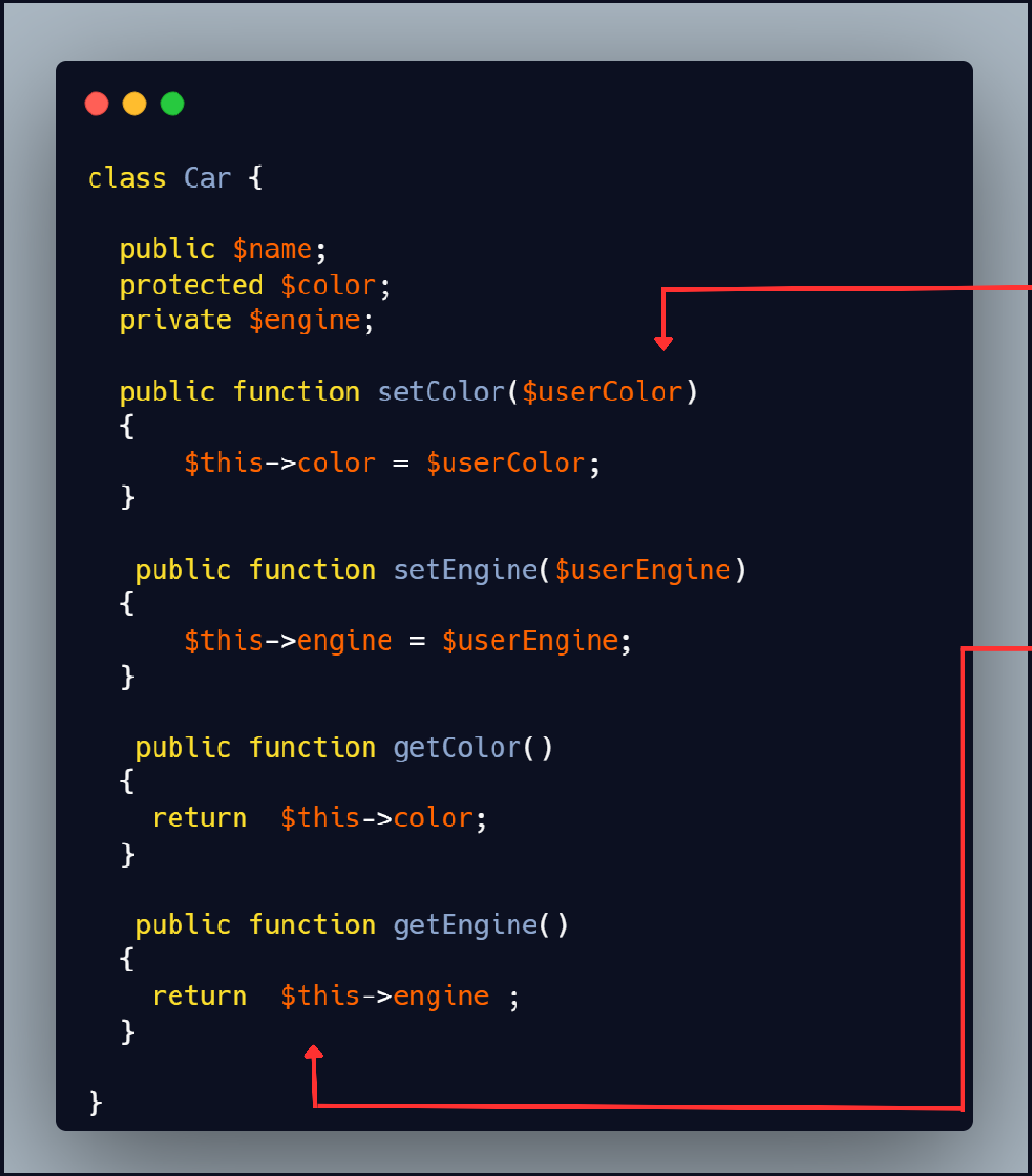


```
class Car {

  public $name;
  protected $color;
  private $engine;

}

$bmw = new Car();
$bmw->name        = "B M W";       // Success
$bmw->color       = "Dark Black"; // Error
$bmw->engine      = "S68";         // Error
```

hmm If It Private || Protected How Can I Access It ?

In This Case We Use Setter & Getter Methods

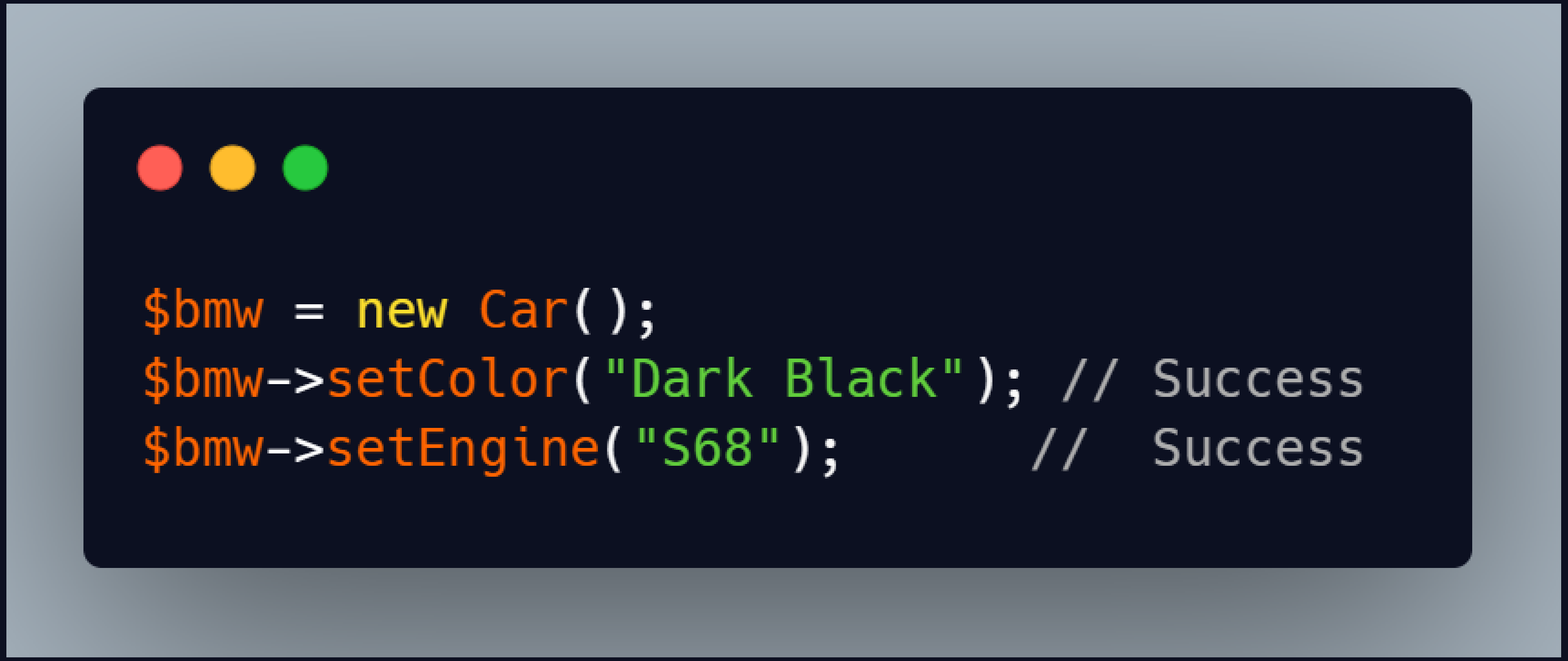
- Getter and Setter are methods used to protect your data and make your code more secure.
- **Setter** : sets or updates the value. It sets the value for any variable used in a class
- **Getter** : returns the value



```
class Car {

  public $name;
  protected $color;
  private $engine;

  public function setColor($userColor)
  {
      $this->color = $userColor;
  }

   public function setEngine($userEngine)
  {
      $this->engine = $userEngine;
  }

   public function getColor()
  {
    return  $this->color;
  }

   public function getEngine()
  {
    return  $this->engine ;
  }

}
```

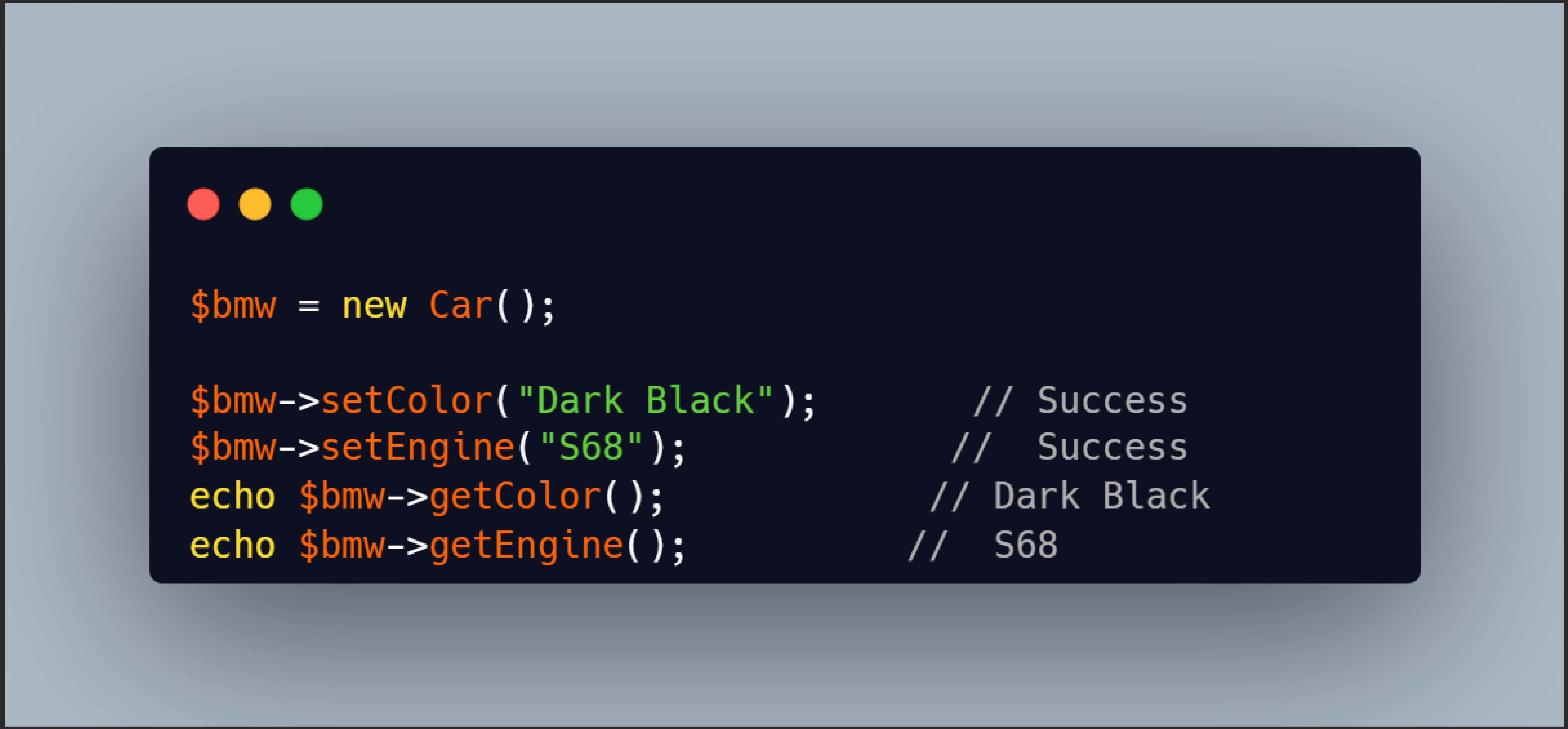
Value From The User

Point To The Current Object => $bmw



```
$bmw = new Car();
$bmw->setColor("Dark Black"); // Success
$bmw->setEngine("S68");      //  Success
```

Result



```
$bmw = new Car();

$bmw->setColor("Dark Black");        // Success
$bmw->setEngine("S68");             //  Success
echo $bmw->getColor();             // Dark Black
echo $bmw->getEngine();           //  S68
```

Quote

" In general, shorter is better. If you can encapsulate your idea into a single captivating sentence, you're halfway home. "

Len Wein

Thank You

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