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task 11

* What is singleton design pattern?

- Answer -

the Singleton Design pattern ensures that a class has only one instance & provides a global point of access to it. this is useful for scenarios where exactly one instance of a class is required, such as manging a database connection or a configuration object

- Code -

```
Class Singleton{
private static $instance = null;
private function __construct(){
    // prevent instantiation
}
public static function getInstance(){
    if(self::$instance == null) self::$instance = new Singleton();
    return self::$instance;
}
```

the variable is static

cast state of attributes

static Attribute يرجع من الاف

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```
public function someMethod() {
    echo "singleton method Called!";
}
```

```
$singleton = Singleton::getInstance();
$singleton -> someMethod()
```

كأن عملت object
من هو واحد بس

output:

singleton Method Called!

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How Can apply Multiple inheritance?

My Method:

I will make Class named "A", "B", "C", then will make B inherit from A & C inherit from B then we have Multiple inheritance (indirect as shown)

- Code -

```
Class A {
    public function Method A {
        echo " Class named A"
    }
}

class B extends A{
    public Function Method B{
        echo " class named B".
    }
}

class C extends B{
    public function Method C (){
        echo " class named C";
    }
}
```

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what is destructor?

is a special Methods of a class that is automatically invoked when an object of the class is destroyed. It primarily used to clean up resources, such as closing file handles

Notes:

1. Automatic invocation: called auto. when the object
بيتم الغاؤها عليه تلقائيا
goes out of scope or the script execution ends.

2. name & synatx: __ destruct()

3. one per class

" In files, u will see DestructorTest.php
, there is an example on destructor in it"