



OBJECT ORIENTED PROGRAMMING

LECTURES 1 & 2

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INTRODUCTION TO THE STORY



Say for example that we're making a system for an Apple Store in order to keep track of things like:

- Price of each device
- Quantity of the devices in the store so we can restock them in time
- Specs

And many more things in order to answer customer questions.

In this case we use OOP "Object-Oriented Programming" in order to simplify the code.

ELEMENTS OF OBJECT-ORIENTED PROGRAMMING



■ Class

(The Main Theme of our code):

A Class is a group that contains things (or objects) that have something in common — in our case, Apple Products are the objects

اسم الكلاس (اي اسم مش فارقة) بنعرف الكلاس

```
class Apple:
```

ELEMENTS OF OBJECT-ORIENTED PROGRAMMING



■ Attributes "الصفات"

(The things that are linked to our Objects):

An attribute is a property of our objects like the price, quantity , specs and other properties.

الفانكشن اللى بتعرف الصفات (لازم تبقى موجودة و مالهش اسم تاني)
ال Objects بتاعتنا

```
def __init__(self, price, specs , quantity):  
    self.price = price  
    self.specs = specs  
    self.quantity = quantity
```

تعريف الصفات

ELEMENTS OF OBJECT-ORIENTED PROGRAMMING



■ Methods:

A method is a function that modifies attributes of the objects using code

تعريف ان في فانكشن
ال objects اللى هنعزفها بعدين اسم الفانكشن

```
def discount(self):  
    return self.price * 0.5
```

ELEMENTS OF OBJECT-ORIENTED PROGRAMMING



■ Objects (The Products):

An object is the product itself — For example, In our case: iPhone 16 Pro, iPad Pro and MacBook Pro

بنعرف ان ال object ده تابع للكلاس اللي عملناه
اسم ال Object

```
iPadPro = Apple(1000, "M4 Chip", 10)
```

!! ملحوظة هامة: بنكتب الصفات بتاعتنا بالترتيب

يعني مثلا لو كتبنا:

```
Def __init__(self, price, specs , quantity):
```

يبقى التالي نكتب

```
iPadPro = Apple(1000 , "M4 Chip" ,10)
```

SUMMARY



ايه الصفات؟

ايه الشيم اللى انت هتكمّل بيه؟

```
class Apple:
```

```
def __init__(self, price, specs, quantity):  
    self.price = price  
    self.specs = specs  
    self.quantity = quantity
```

تحب تعمل ايه للصفات؟

الصفات بتاعت ايه؟

```
iPadPro = Apple(1000, "M4 Chip", 10)  
macbookpro = Apple(1000, "M4 Max Chip", 50)
```

```
def discount(self):  
    return self.price * 0.5
```

TABLE



Thank

you