

365 DataScience Methods in Python - functions inside classes

Step 1 Create and design a class

```
# Create a class called Patient.
# 'object' is the class from which all other classes inherit.
class Patient(object):

    # In a docstring, describe what the purpose of the class is.
    ''' Register a patient in a medical centre '''

    # Define a shared variable across the whole class that is the same
    for each instance of the class.
    # This is what we call a class variable.
    status = 'patient'

    # Create a constructor which controls the variables that each object
    can have.
    # The 'self' keyword serves as a placeholder for each instance of t
    he Patient class.
    def __init__(self, name, age):
        self.name = name
        self.age = age
        self.note = []

    # Functions inside classes are called methods.
    # Methods help the user interact with the instance of a certain cla
    ss.
    # In Python, methods are accessible through the dot-notation.
    # Below, we define a method that would allow the user to add a note
    to each patient.
    # Every time the user creates a new note, it will be appended to th
    e old one, so that a record is kept.
    def add_note(self, note):
        ''' Add a note to keep track of the health of a patient. '''

        self.note.append(note)

    # Below, we define a method that returns the information for a pati
    ent.
    def get_details(self):
        ''' Retrieve the current information available for the patient.
        ...
```

```
        print(f'Patient record \nName: {self.name} \nAge: {self.age} \n\nNote: {self.note}')
```

Step 2 Create an object - an instance of the Patient class

Create two instances of the Patient class and provide two arguments for each of them -

the name and the age of the patient.

```
alice = Patient('Alice', 42)
```

```
bob = Patient('Bob', 18)
```

Step 3 Get the details for each patient

Access the get_details() method through the dot-notation.

```
alice.get_details()
```

```
bob.get_details()
```

Step 4 Add a note for each patient

```
alice.add_note('The patient had a slight stomach discomfort.')
```

```
alice.add_note('The discomfort had disappeared in two days time.')
```

```
bob.add_note('The patient felt a pain in the neck.')
```

```
bob.add_note('The patient reported he is feeling much better.')
```

Step 5 Get the updated details for both patients

```
alice.get_details()
```

```
bob.get_details()
```

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