

# abstraction

September 21, 2025

```
[20]: import abc

class Course:
    #abstract
    #
    @abc.abstractclassmethod
    def course_details(self):
        pass

    @abc.abstractclassmethod
    def course_assignment(self):
        pass

    @abc.abstractclassmethod
    def course_marks(self):
        pass
```

```
[12]: class Python(Course):

    def course_details(self):
        return "This is python course"

    def course_assignment(self):
        return "This assignment for python course"
```

```
[13]: class Java(Course):

    def course_details(self):
        return "This is Java course"

    def course_marks(self):
        return "This is Java course marks"
```

```
[17]: python = Python()
      java = Java()
```

```
[18]: python.course_details()
```

```
[18]: 'This is python course'
```

```
[19]: java.course_marks()
```

```
[19]: 'This is Java course marks'
```

Summary: 1. abstract 2.  
abstract 3. child  
child abstract parent

```
[ ]:
```