# ASSIGNMENT 6 – OOPS

1. Build a program to manage a university's course catalog. You want to define a base class Course that has the following properties:
   - course_code: a string representing the course code (e.g., "CS101")
   - course_name: a string representing the course name (e.g., "Introduction to Computer Science")
   - credit_hours: an integer representing the credit hours for the course (e.g., 3)

   You also want to define two subclasses CoreCourse and ElectiveCourse, which inherit from the Course class. CoreCourse should have an additional property required_for_major which is a boolean representing whether the course is required for a particular major. ElectiveCourse should have an additional property elective_type which is a string representing the type of elective (e.g., "general", "technical", "liberal arts").

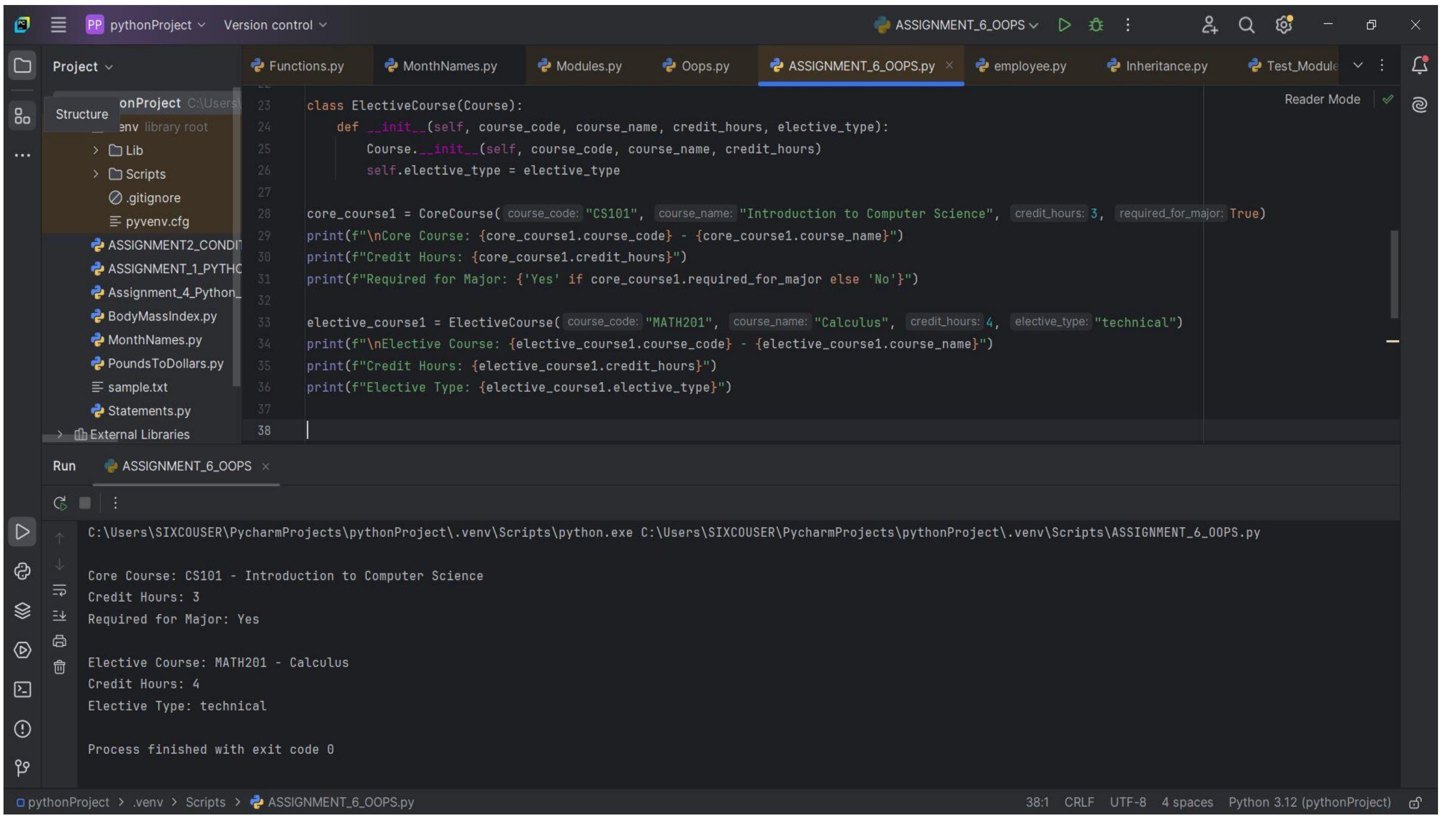
```
class Course:
    def __init__(self, course_code, course_name, credit_hours):
        self.course_code = course_code
        self.course_name = course_name
        self.credit_hours = credit_hours


class CoreCourse(Course):
    def __init__(self, course_code, course_name, credit_hours, required_for_major):
        Course.__init__(self, course_code, course_name, credit_hours)
        self.required_for_major = required_for_major
```

```
class ElectiveCourse(Course):
    def __init__(self, course_code, course_name, credit_hours, elective_type):
        Course.__init__(self, course_code, course_name, credit_hours)
        self.elective_type = elective_type


core_course1 = CoreCourse("CS101", "Introduction to Computer Science", 3, True)
print(f"\nCore Course: {core_course1.course_code} - {core_course1.course_name}")
print(f"Credit Hours: {core_course1.credit_hours}")
print(f"Required for Major: {'Yes' if core_course1.required_for_major else 'No'}")


elective_course1 = ElectiveCourse("MATH201", "Calculus", 4, "technical")
print(f"\nElective Course: {elective_course1.course_code} -
{elective_course1.course_name}")
print(f"Credit Hours: {elective_course1.credit_hours}")
print(f"Elective Type: {elective_course1.elective_type}")
```



```
class ElectiveCourse(Course):
    def __init__(self, course_code, course_name, credit_hours, elective_type):
        Course.__init__(self, course_code, course_name, credit_hours)
        self.elective_type = elective_type

core_course1 = CoreCourse( course_code: "CS101",  course_name: "Introduction to Computer Science",  credit_hours: 3,  required_for_major: True)
print(f"\nCore Course: {core_course1.course_code} - {core_course1.course_name}")
print(f"Credit Hours: {core_course1.credit_hours}")
print(f"Required for Major: {'Yes' if core_course1.required_for_major else 'No'}")

elective_course1 = ElectiveCourse( course_code: "MATH201",  course_name: "Calculus",  credit_hours: 4,  elective_type: "technical")
print(f"\nElective Course: {elective_course1.course_code} - {elective_course1.course_name}")
print(f"Credit Hours: {elective_course1.credit_hours}")
print(f"Elective Type: {elective_course1.elective_type}")
```

```
C:\Users\SIXCOUSER\PycharmProjects\pythonProject\.venv\Scripts\python.exe C:\Users\SIXCOUSER\PycharmProjects\pythonProject\.venv\Scripts\ASSIGNMENT_6_OOPS.py

Core Course: CS101 - Introduction to Computer Science
Credit Hours: 3
Required for Major: Yes

Elective Course: MATH201 - Calculus
Credit Hours: 4
Elective Type: technical

Process finished with exit code 0
```

pythonProject > .venv > Scripts > ASSIGNMENT_6_OOPS.py    38:1  CRLF  UTF-8  4 spaces  Python 3.12 (pythonProject)

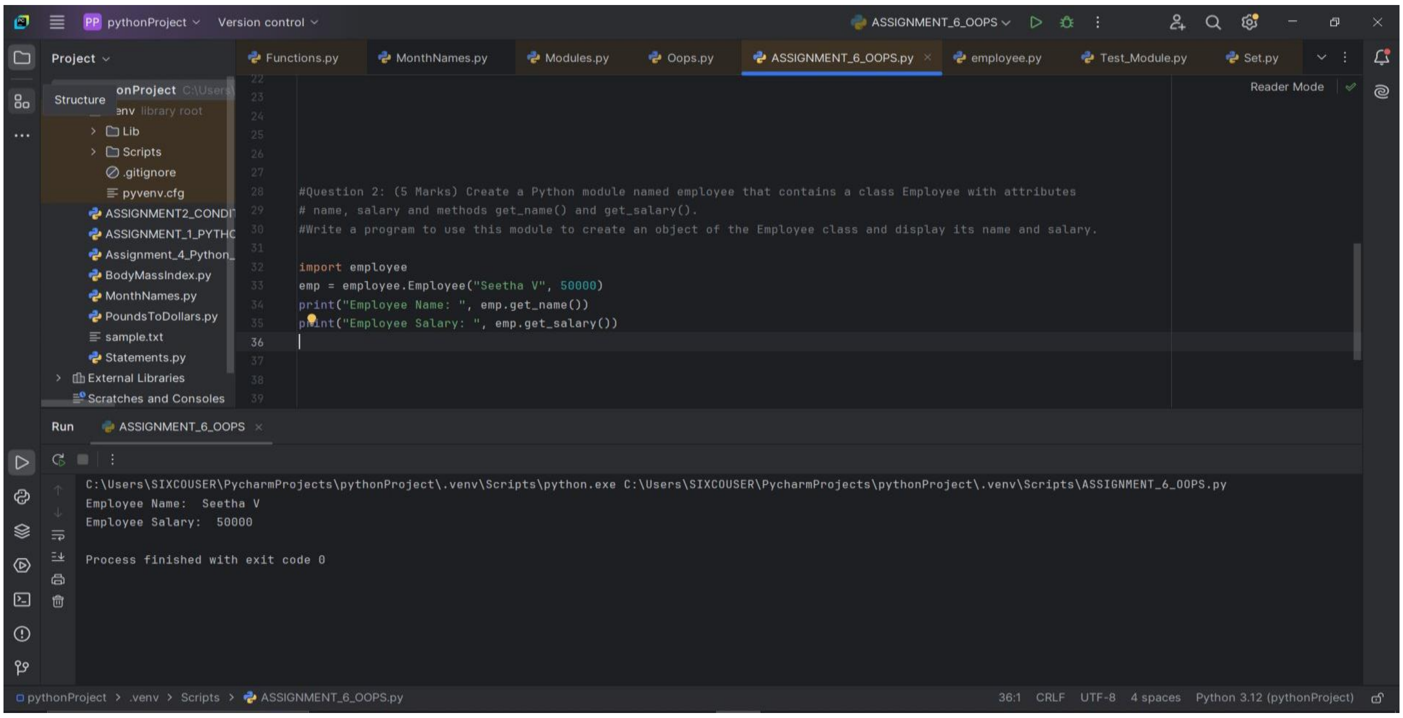
2. Create a Python module named employee that contains a class Employee with attributes name, salary and methods get_name() and get_salary(). Write a program to use this module to create an object of the Employee class and display its name and salary.

## employee.py

```
class Employee:
    def __init__(self, name, salary):
        self.name = name
        self.salary = salary
    def get_name(self):
        return self.name
    def get_salary(self):
        return self.salary
```

## ASSIGNMENT_6_OOPS.py

```
import employee
emp = employee.Employee("Seetha V", 50000)
print("Employee Name: ", emp.get_name())
print("Employee Salary: ", emp.get_salary())
```



```
#Question 2: (5 Marks) Create a Python module named employee that contains a class Employee with attributes
# name, salary and methods get_name() and get_salary().
#Write a program to use this module to create an object of the Employee class and display its name and salary.

import employee
emp = employee.Employee("Seetha V", 50000)
print("Employee Name: ", emp.get_name())
print("Employee Salary: ", emp.get_salary())
```

```
C:\Users\SIXCOUSER\PycharmProjects\pythonProject\.venv\Scripts\python.exe C:\Users\SIXCOUSER\PycharmProjects\pythonProject\.venv\Scripts\ASSIGNMENT_6_OOPS.py
Employee Name:  Seetha V
Employee Salary:  50000

Process finished with exit code 0
```