employee-module-project

Exercise: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.

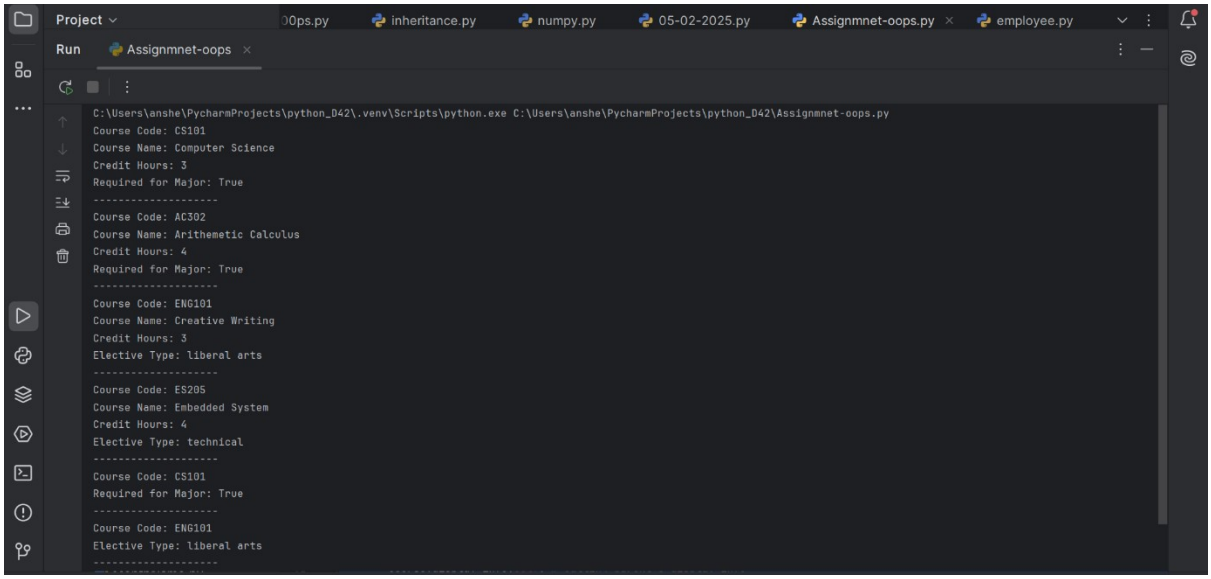
Code:

```
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


def display_info(self):  # Method to display course info

    print(f"Course Code: {self.course_code}")

    print(f"Course Name: {self.course_name}")

    print(f"Credit Hours: {self.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)  # Calling parent's __init__
    self.required_for_major = required_for_major

def display_info(self):  # Overriding display_info
    Course.display_info(self) # Calling parent's display_info
    print(f"Required for Major: {self.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)  # Calling parent's __init__
    self.elective_type = elective_type

def display_info(self):  # Overriding display_info
    Course.display_info(self) # Calling parent's display_info
    print(f"Elective Type: {self.elective_type}")


cs101 = CoreCourse("CS101", "Computer Science", 3, True)
ac302 = CoreCourse("AC302", "Arithemetic Calculus ", 4, True)
eng101 = ElectiveCourse("ENG101", "Creative Writing", 3, "liberal arts")
```

```
es205 = ElectiveCourse("ES205", "Embedded System", 4, "technical")

courses = [cs101, ac302, eng101, es205]

for course in courses:
course.display_info() # call display_info() method
print("-" * 20)  # Separator between courses


catalog = []
catalog.append(cs101)
catalog.append(eng101)

for course in catalog:
print(f"Course Code: {course.course_code}")
if isinstance(course, CoreCourse):
    print(f"Required for Major: {course.required_for_major}")
elif isinstance(course, ElectiveCourse):
    print(f"Elective Type: {course.elective_type}")
print("-" * 20)
```

Result:



Exercise :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.

Code:

Employee module:

```
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
```

module accessing:

```
import employee as em
emp1=em.Employee("ANU",30000)

emp1.get_name()
emp1.get_salary()
print(f"Name of employee={emp1.get_name()}")
print(f"Salary of employee={emp1.get_salary()}")
```

Result: