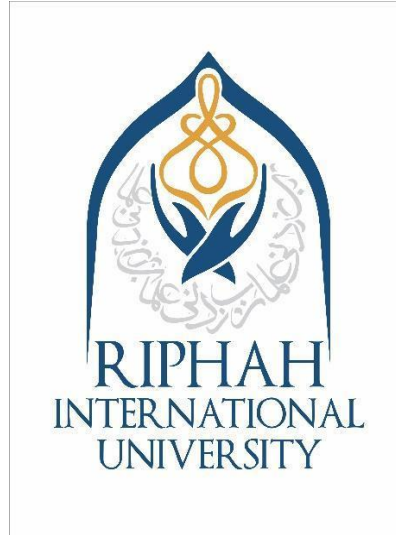


LAB # 03

Artificial Intelligence



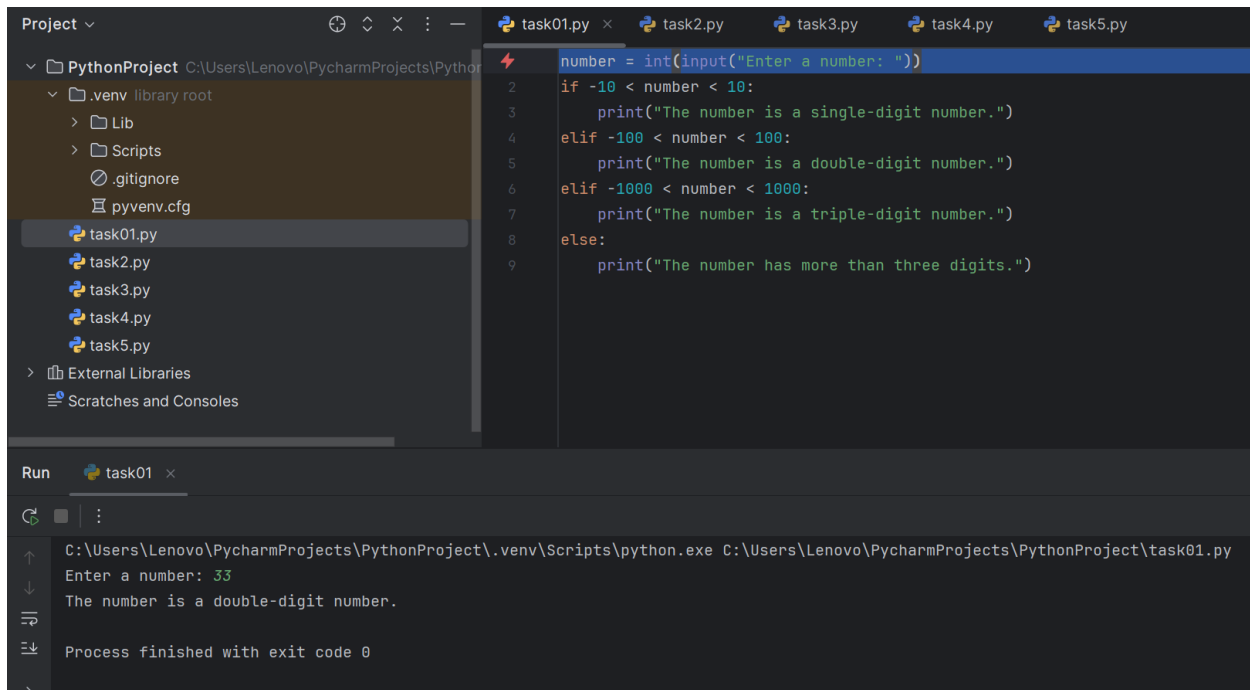
Name : Maryum Malik

Sap Id : 45369

Submitted to : mam Ayesha

Task 01:

1. Program to check whether the number is single digit, double digit or triple digit?



The screenshot shows the PyCharm IDE with a project named 'PythonProject'. The file explorer on the left lists files: .venv, Lib, Scripts, .gitignore, pyvenv.cfg, task01.py, task2.py, task3.py, task4.py, and task5.py. The main editor window displays the code for task01.py:

```
1 number = int(input("Enter a number: "))
2
3 if -10 < number < 10:
4     print("The number is a single-digit number.")
5 elif -100 < number < 100:
6     print("The number is a double-digit number.")
7 elif -1000 < number < 1000:
8     print("The number is a triple-digit number.")
9 else:
10    print("The number has more than three digits.")
```

The Run window at the bottom shows the execution of task01.py. The command prompt displays the following output:

```
C:\Users\Lenovo\PycharmProjects\PythonProject\.venv\Scripts\python.exe C:\Users\Lenovo\PycharmProjects\PythonProject\task01.py
Enter a number: 33
The number is a double-digit number.
Process finished with exit code 0
```

Task 02:

The screenshot shows the PyCharm IDE interface. The left sidebar displays the project structure for 'PythonProject' located at 'C:\Users\Lenovo\PycharmProjects\PythonProject'. The structure includes a '.venv' directory (library root) with subfolders 'Lib' and 'Scripts', and files '.gitignore' and 'pyenvn.cfg'. Below these are five Python files: 'task01.py', 'task2.py', 'task3.py', 'task4.py', and 'task5.py'. The 'Run' tab at the bottom shows the execution of 'task2.py'. The command executed is 'C:\Users\Lenovo\PycharmProjects\PythonProject\.venv\Scripts\python.exe C:\Users\Lenovo\PycharmProjects\PythonProject\task2.py'. The output shows the user entering '5' and the program printing 'number is odd'. The process finished with exit code 0.

```
number = int(input("Enter a number: "))
if number%2==0:
    print("number is even")
else:
    print("number is odd")
```

Run task2 ×

C:\Users\Lenovo\PycharmProjects\PythonProject\.venv\Scripts\python.exe C:\Users\Lenovo\PycharmProjects\PythonProject\task2.py

Enter a number: 5

number is odd

Process finished with exit code 0

Task 03:

The screenshot shows the PyCharm IDE interface with 'task3.py' selected. The code in the editor checks if a given length and breadth are equal to determine if a shape is a square. The 'Run' tab shows the execution of 'task3.py'. The command is 'C:\Users\Lenovo\PycharmProjects\PythonProject\.venv\Scripts\python.exe C:\Users\Lenovo\PycharmProjects\PythonProject\task3.py'. The output shows the user entering '4' for length and '5' for breadth, resulting in the message 'It is not a square.'. The process finished with exit code 0.

```
length = int(input("Enter the length : "))
breadth = int(input("Enter the breadth : "))

if length == breadth:
    print("It is a square.")
else:
    print("It is not a square.")
```

Run task3 ×

C:\Users\Lenovo\PycharmProjects\PythonProject\.venv\Scripts\python.exe C:\Users\Lenovo\PycharmProjects\PythonProject\task3.py

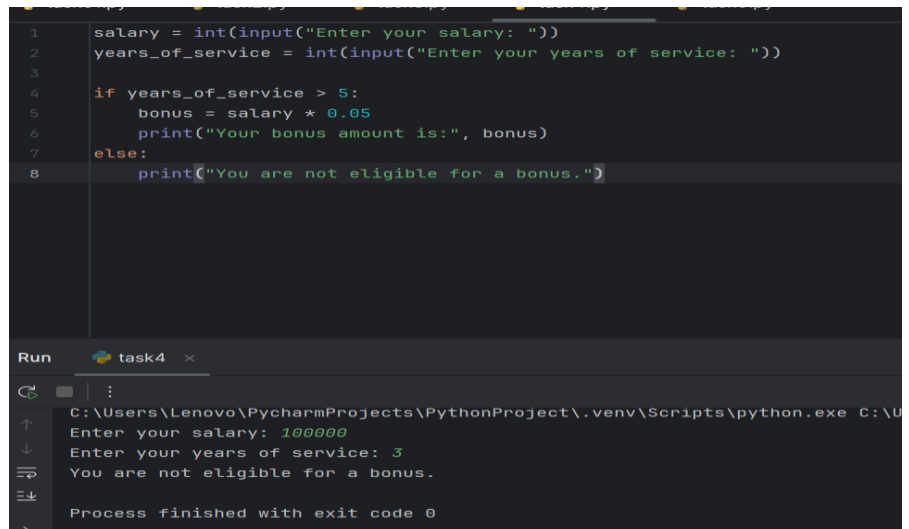
Enter the length : 4

Enter the breadth : 5

It is not a square.

Process finished with exit code 0

Task 04:



```
1 salary = int(input("Enter your salary: "))
2 years_of_service = int(input("Enter your years of service: "))
3
4 if years_of_service > 5:
5     bonus = salary * 0.05
6     print("Your bonus amount is:", bonus)
7 else:
8     print("You are not eligible for a bonus.")
```

Run task4 x

C:\Users\Lenovo\PycharmProjects\PythonProject\.venv\Scripts\python.exe C:\U
Enter your salary: 100000
Enter your years of service: 3
You are not eligible for a bonus.
Process finished with exit code 0

Task 05:

```
1 year = int(input("Enter a year: "))
2
3 if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
4     print("Leap Year")
5 else:
6     print("Not a leap year.")
```

Run task5 ×



C:\Users\Lenovo\PycharmProjects\PythonProject\.venv\Scripts\python.exe C:\Users\Lenovo\Py
Enter a year: 2024
Leap Year
Process finished with exit code 0