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Practical-3

Aim: - Write a program using loops.

a) Python Program to Print numbers in word format in an Interval
b) Python Program to Print whether a student result for a course is Pass or Fail based on attendance and marks in that course

Python Program to Print numbers in word format in an Interval

Program:

```python
words=["ZERO", "ONE", "TWO", "THREE", "FOUR", "FIVE", "SIX", "SEVEN", "EIGHT", "NINE"]
n=int(input("Enter a number : "))
arr=[]
while n>0:
        arr.append(n%10)
        n=n//10
print("\nThe given number represented in words format: ", end="")
for num in range(len(arr)-1, -1, -1) :
    print (words[arr[num]] , end=" ")
```

Output:

```
Enter a number : 2002

The given number represented in words format:
TWO ZERO ZERO TWO
```

Screenshot:

Number_In_Words.py   +

```python
#!/usr/bin/env python3
words=["ZERO", "ONE", "TWO", "THREE", "FOUR", "FIVE", "SIX", "SEVEN", "EIGHT",
    "NINE"]
n=int(input("Enter a number : "))
arr=[]
while n>0:
    arr.append(n%10)
    n=n//10
print("\nThe given number represented in words format: ")
for num in range(len(arr)-1, -1, -1) :
    print (words[arr[num]] , end=" ")
```

```
Enter a number : 2002

The given number represented in words format:
TWO ZERO ZERO TWO
```

Python Program to Print whether a student result for a course is Pass or Fail based on attendance and marks in that course

Program :

```python
marks=[]
attendance=[]
for i in range(0, 4):
            print("Enter marks of Subject", i+1, "out of 100 marks : ", end="")
            marks.append(int(input()))
            print("Enter attendance of Subject", i+1, "out of 100 lectures : ", end="")
            attendance.append(int(input()))
            print("\n")
count=0
flag=0
for i in range(0, 4):
            if attendance[i]>70 and marks[i]>40:
                    continue
            else:
                    count=count+1
                    flag=1
if flag==1:
            print("You failed in", count, "subject/s")
else :
        print("You pass this course by passing all subjects.")
```

Output:

```
--Data--
Enter marks of Subject 1 out of 100 marks : 90
Enter attendance of Subject 1 out of 100 lectures : 80


Enter marks of Subject 2 out of 100 marks : 89
Enter attendance of Subject 2 out of 100 lectures : 83


Enter marks of Subject 3 out of 100 marks : 68
Enter attendance of Subject 3 out of 100 lectures : 60


Enter marks of Subject 4 out of 100 marks : 45
Enter attendance of Subject 4 out of 100 lectures : 80


----Result---
You failed in 1 subject/s
```

Screenshot :

Result: I have studied looping statements in python and completed practical-3.

Class Assignment:

Write a python program to print following pattern with given row number.
1
1 2
1 2 3
1 2 3 4
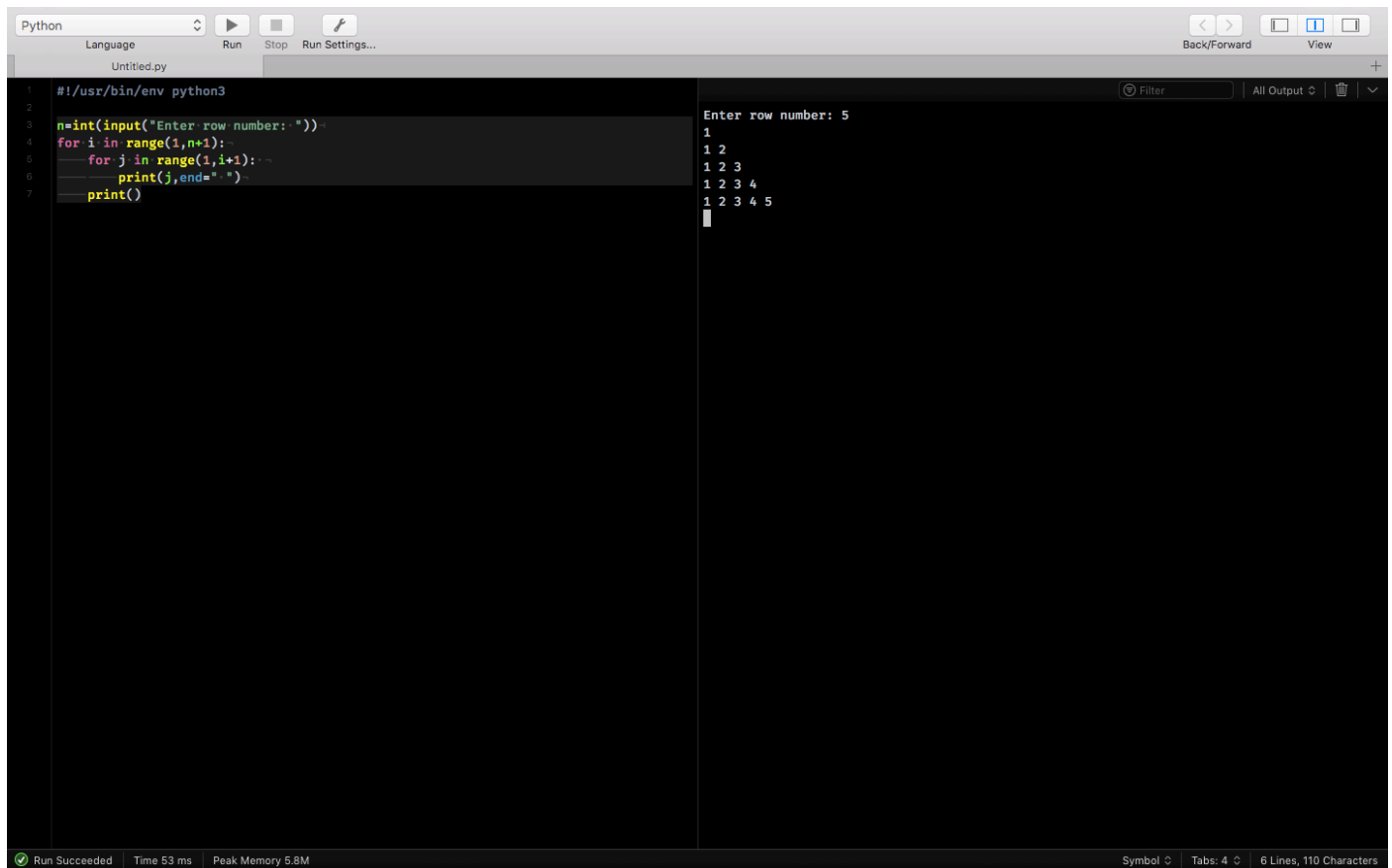**1 2 3 4 5**

Program:

```python
n=int(input("Enter row number: "))
for i in range(1,n+1):
        for j in range(1,i+1):
                print(j,end=" ")
        print()
```

Output:

```
Enter row number: 5
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

Screenshot:

ASSIGNMENT

Write a Python program to assign grades to students at the end of the year. The program must do the following:
1. Ask for a student number.
2. Ask for the student's tutorial mark.
3. Ask for the student's test mark.
4. Calculate whether the student's average so far is high enough for the student to be permitted to write the examination. If the average (mean) of the tutorial and test marks is lower than 40%, the student should automatically get an F grade, and the program should print the grade and exit without performing the following steps.
5. Ask for the student's examination mark.
6. Calculate the student's final mark. The tutorial and test marks should count for 25% of the final mark each, and the final examination should count for the remaining 50%.

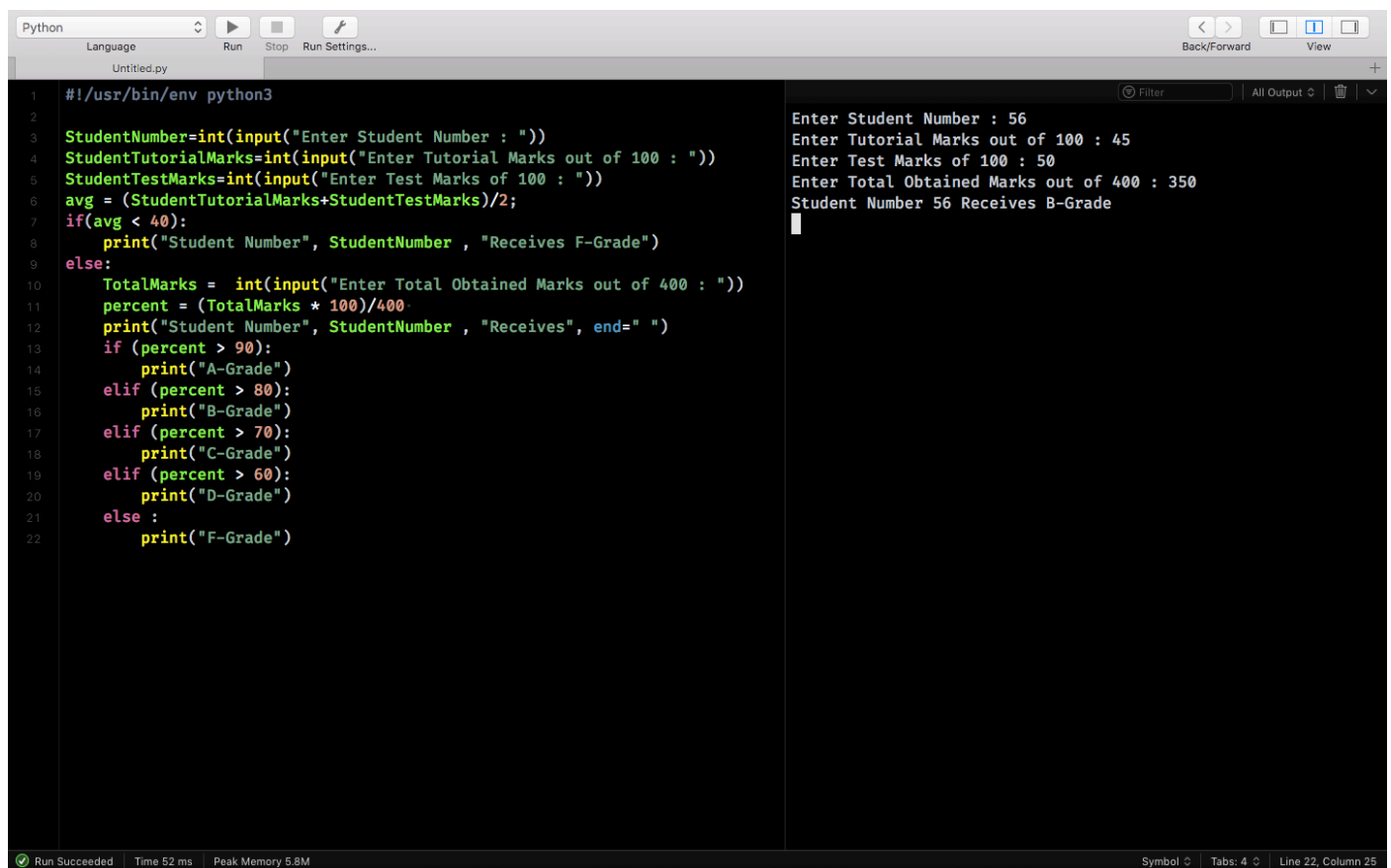   Calculate and print the student's grade, according to the following table.

Program:

```python
StudentNumber=int(input("Enter Student Number : "))
StudentTutorialMarks=int(input("Enter Tutorial Marks out of 100 : "))
StudentTestMarks=int(input("Enter Test Marks of 100 : "))
avg = (StudentTutorialMarks+StudentTestMarks)/2;
if(avg < 40):
          print("Student Number", StudentNumber , "Receives F-Grade")
else:
          TotalMarks =  int(input("Enter Total Obtained Marks out of 400 : "))
          percent = (TotalMarks * 100)/400
          print("Student Number", StudentNumber , "Receives", end=" ")
          if (percent > 90):
                   print("A-Grade")
          elif (percent > 80):
                   print("B-Grade")
          elif (percent > 70):
                   print("C-Grade")
          elif (percent > 60):
                   print("D-Grade")
          else :
               print("F-Grade")
```

Output:

```
Enter Student Number : 56
Enter Tutorial Marks out of 100 : 45
Enter Test Marks of 100 : 50
Enter Total Obtained Marks out of 400 : 350
Student Number 56 Receives B-Grade
```

Screenshot :


```python
#!/usr/bin/env python3

StudentNumber=int(input("Enter Student Number : "))
StudentTutorialMarks=int(input("Enter Tutorial Marks out of 100 : "))
StudentTestMarks=int(input("Enter Test Marks of 100 : "))
avg = (StudentTutorialMarks+StudentTestMarks)/2;
if(avg < 40):
    print("Student Number", StudentNumber , "Receives F-Grade")
else:
    TotalMarks =  int(input("Enter Total Obtained Marks out of 400 : "))
    percent = (TotalMarks * 100)/400
    print("Student Number", StudentNumber , "Receives", end=" ")
    if (percent > 90):
        print("A-Grade")
    elif (percent > 80):
        print("B-Grade")
    elif (percent > 70):
        print("C-Grade")
    elif (percent > 60):
        print("D-Grade")
    else :
        print("F-Grade")
```

Result: I have successfully completed assignment.