

Name: Badal Prabhakar Wanjari
Branch: Computer Technology
Section: B
Semester: 3rd
Roll No. 140
Reg. No. 20011045

Practical-3

Aim: - Write a program using loops.

- Python Program to Print numbers in word format in an Interval
- 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:

```
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:

Python

Language

Run

Stop

Run Settings...

Back/Forward

View

Number_In_Words.py

1

2

3

4

5

6

7

8

9

10

```
#!/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=" ")
```

Filter

All Output

Enter a number : 2002

The given number represented in words format:

TWO ZERO ZERO TWO

Run Succeeded

Time 48 ms

Peak Memory 5.8M

Symbol

Tabs: 4

Line 8, Column 57

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

Program :

```
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 :

The screenshot shows a Python IDE with a file named 'assignmentPython3.py'. The code is as follows:

```
1 #!/usr/bin/env python3
2
3 marks=[]
4 attendance=[]
5 print("--Data--")
6 for i in range(0, 4):
7     print("Enter marks of Subject", i+1, "out of 100 marks : ", end="")
8     marks.append(int(input()))
9     print("Enter attendance of Subject", i+1, "out of 100 lectures : ", end="")
10    attendance.append(int(input()))
11    print("\n")
12 count=0
13 flag=0
14 for i in range(0, 4):
15     if attendance[i]>=70 and marks[i]>=40:
16         continue
17     else:
18         count=count+1
19         flag=1
20 print("----Result---")
21 if flag==1:
22     print("You failed in", count, "subject/s")
23 else:
24     print("You pass this course by passing all subjects.")
```

The output on the right shows the program's execution with user input:

```
--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
```

The status bar at the bottom indicates 'Run Succeeded', 'Time 54 ms', and 'Peak Memory 5.9M'.

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
```

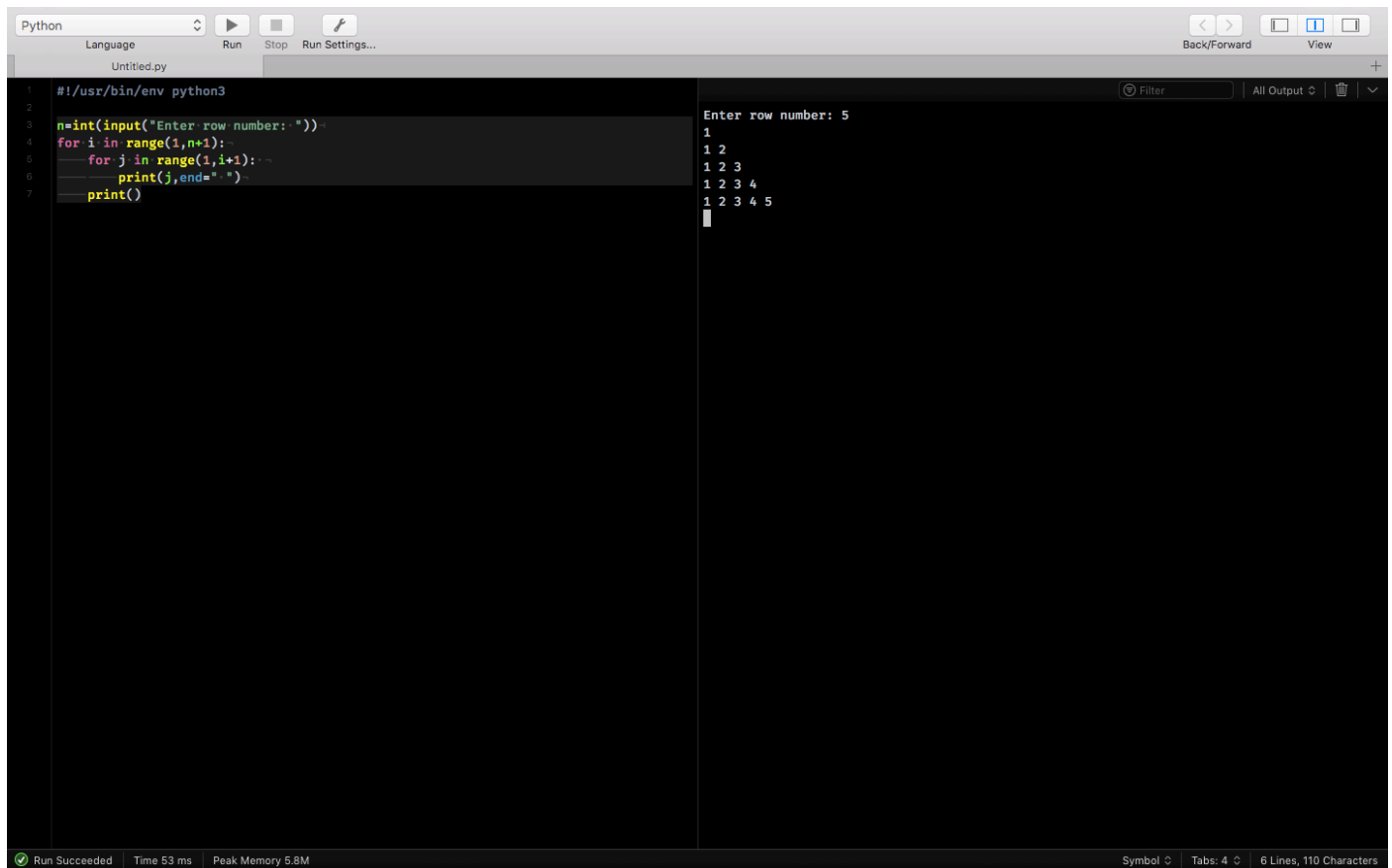
Program:

```
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:



The screenshot shows a Python IDE with a file named 'Untitled.py'. The code in the editor is as follows:

```
1 #!/usr/bin/env python3
2
3 n=int(input("Enter row number: "))
4 for i in range(1,n+1):
5     for j in range(1,i+1):
6         print(j,end=" ")
7     print()
```

The output window on the right displays the result of running the code:

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

The status bar at the bottom indicates 'Run Succeeded', 'Time 53 ms', and 'Peak Memory 5.8M'. It also shows 'Symbol', 'Tabs: 4', and '6 Lines, 110 Characters'.

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.

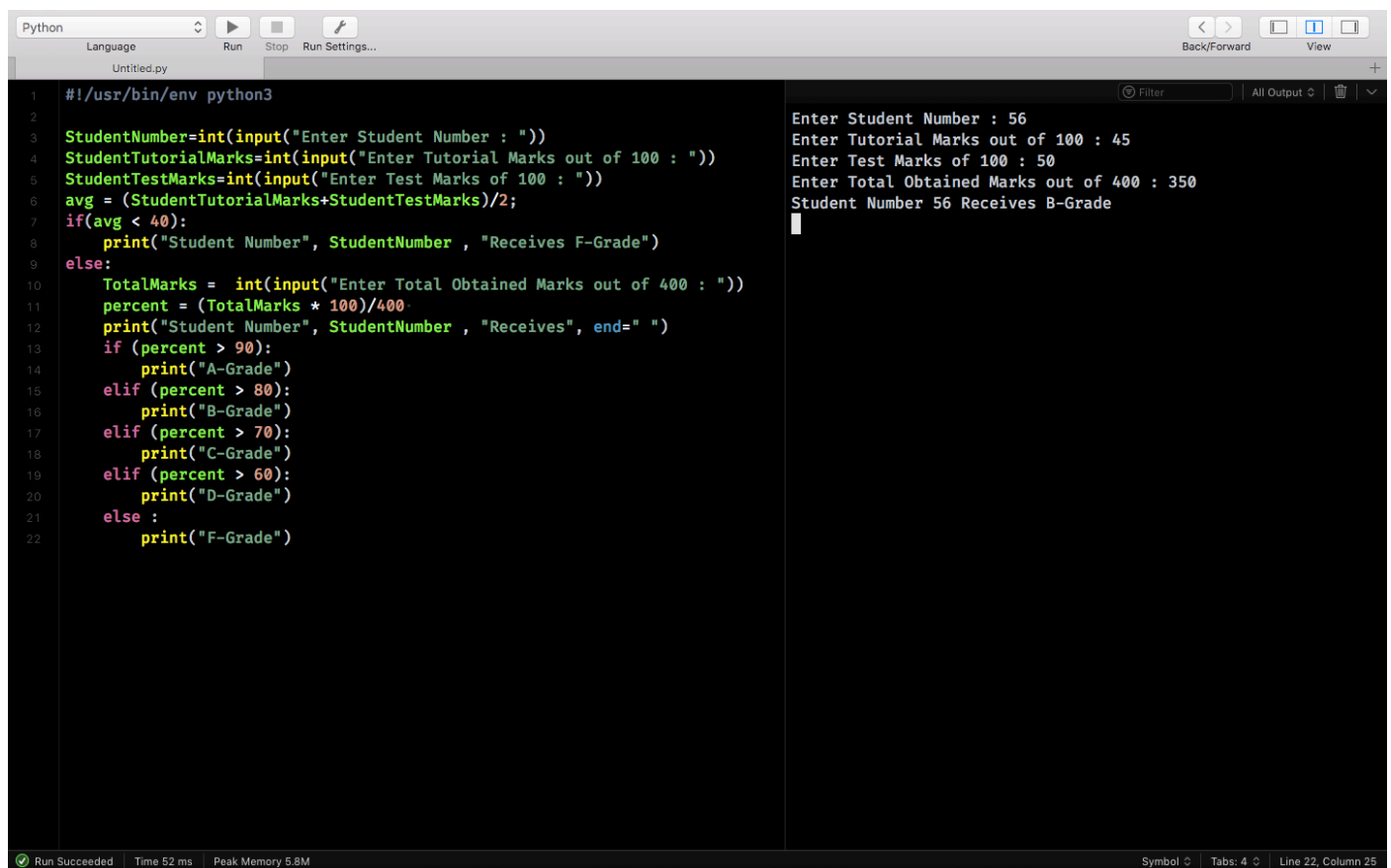
Program:

```
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 :



The screenshot shows a Python IDE window titled 'Untitled.py'. The code on the left defines variables for student number, tutorial marks, test marks, and total marks, then calculates an average and assigns a grade based on a series of if-elif-else conditions. The output on the right matches the text provided in the 'Output' section. The status bar at the bottom indicates 'Run Succeeded', 'Time 52 ms', 'Peak Memory 5.8M', and 'Line 22, Column 25'.

```
1  #!/usr/bin/env python3
2
3  StudentNumber=int(input("Enter Student Number : "))
4  StudentTutorialMarks=int(input("Enter Tutorial Marks out of 100 : "))
5  StudentTestMarks=int(input("Enter Test Marks of 100 : "))
6  avg = (StudentTutorialMarks+StudentTestMarks)/2;
7  if(avg < 40):
8      print("Student Number", StudentNumber , "Receives F-Grade")
9  else:
10     TotalMarks = int(input("Enter Total Obtained Marks out of 400 : "))
11     percent = (TotalMarks * 100)/400
12     print("Student Number", StudentNumber , "Receives", end=" ")
13     if (percent > 90):
14         print("A-Grade")
15     elif (percent > 80):
16         print("B-Grade")
17     elif (percent > 70):
18         print("C-Grade")
19     elif (percent > 60):
20         print("D-Grade")
21     else :
22         print("F-Grade")
```

```
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
```

Run Succeeded | Time 52 ms | Peak Memory 5.8M | Symbol | Tabs: 4 | Line 22, Column 25

Result: I have successfully completed assignment.