

## Introduction to python



### What we did:

In this class we started learning about python language syntax and wrote our first python program.

### How we did it:

We installed python3 on our system.

We learned python syntax by executing it in python shell (repl).

```
python3 /home/rajeev
File Edit View Search Terminal Help
rajeev@atlantis -> python3
Python 3.6.9 (default, Apr 18 2020, 01:56:04)
[GCC 8.4.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> █
```

We learnt to declare a variable.

```
python3 /home/rajeev
File Edit View Search Terminal Help
rajeev@atlantis ~-> python3
Python 3.6.9 (default, Apr 18 2020, 01:56:04)
[GCC 8.4.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> myname = "Abhijeet"
>>> myage = 15
>>>
>>> print(myname)
Abhijeet
>>> print(myage)
15
>>> □
```

### Use list in python

```
File Edit View Search Terminal Help
rajeev@atlantis ~-> python3
Python 3.6.9 (default, Apr 18 2020, 01:56:04)
[GCC 8.4.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> myFriendList = ["Raghu", "Radha", "Ghanshyam"]
>>> myFriendList[2]
'Ghanshyam'
>>> □
```

We learnt to take input

```
python3 /home/rajeev
File Edit View Search Terminal Help
rajeev@atlantis ~-> python3
Python 3.6.9 (default, Apr 18 2020, 01:56:04)
[GCC 8.4.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> pocketMoney = input("Enter the pocket money you get: ")
Enter the pocket money you get: 200
>>> print(pocketMoney)
200
>>> 
```

We also learnt to use **if..else**

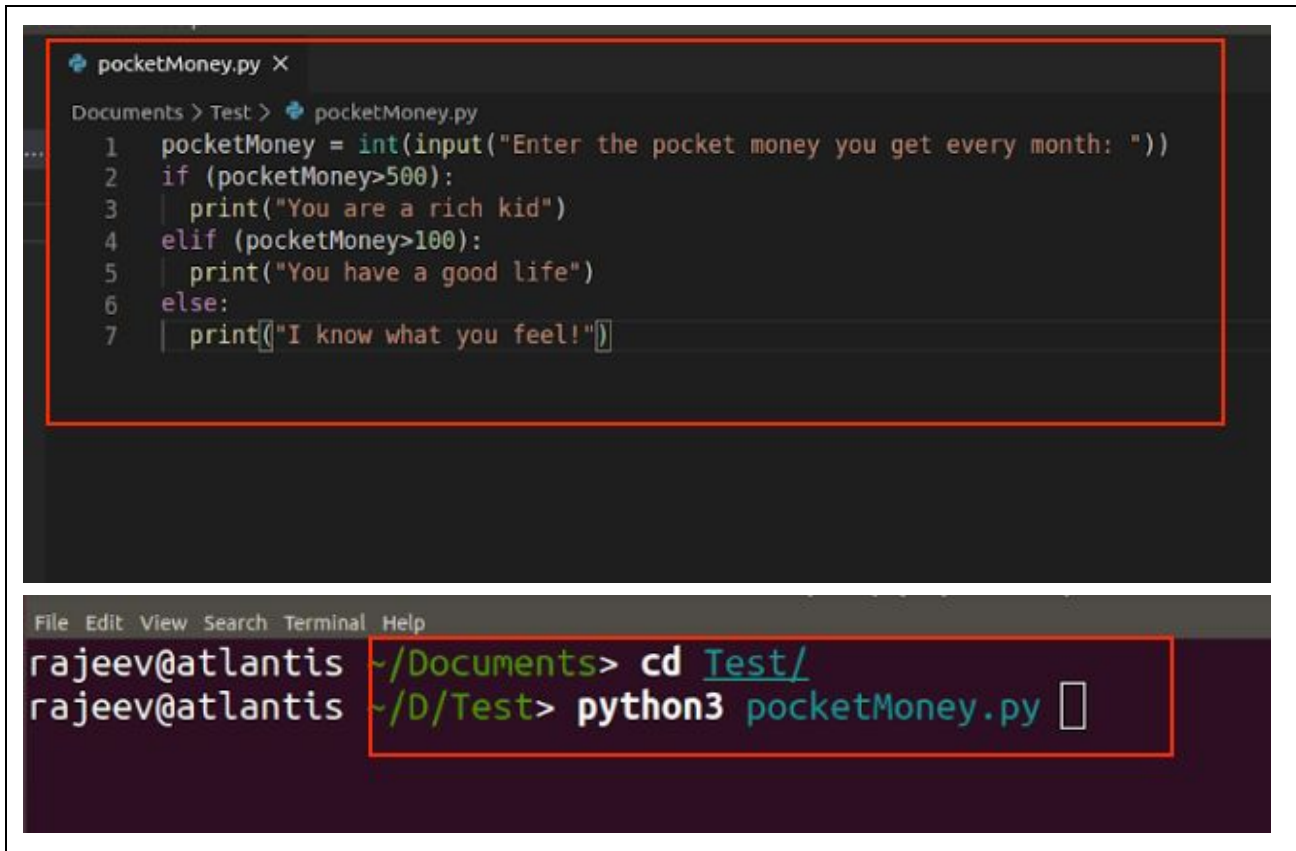
```
python3 /home/rajeev
File Edit View Search Terminal Help
rajeev@atlantis ~-> python3
Python 3.6.9 (default, Apr 18 2020, 01:56:04)
[GCC 8.4.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>>
>>> pocketMoney = int(input("Enter the pocket money you get every month: "))
Enter the pocket money you get every month: 400
>>>
>>> if (pocketMoney>500):
...     print("You are a rich kid")
... elif (pocketMoney>100):
...     print("You have a good life")
... else:
...     print("I know what you feel!")
...
You have a good life
>>> 
```

We also learnt the usage of **for loop** and **while loop**

```
>>>  
>>> myFriendList = ["Ram", "Radha", "Nivedita"]  
>>> for friend in myFriendList:  
...     print(friend)  
...  
Ram  
Radha  
Nivedita  
>>>  
>>>
```

```
>>>  
>>> count = 5  
>>> while (count>=0):  
...     print(count)  
...     count = count - 1  
...  
5  
4  
3  
2  
1  
0  
>>>
```

We learnt to write python code in editor and run it on terminal.



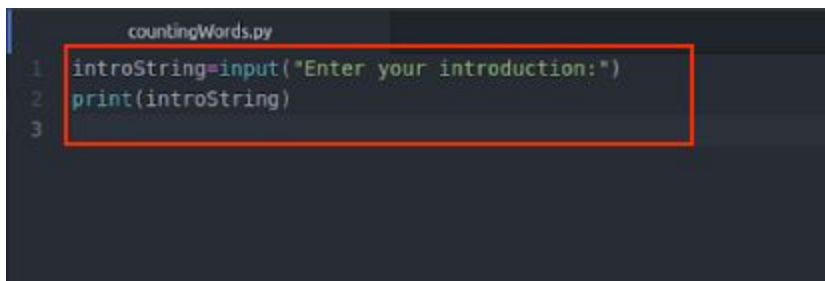
The screenshot shows a code editor window titled 'pocketMoney.py' with the following Python code:

```
1 pocketMoney = int(input("Enter the pocket money you get every month: "))
2 if (pocketMoney>500):
3     print("You are a rich kid")
4 elif (pocketMoney>100):
5     print("You have a good life")
6 else:
7     print("I know what you feel!")
```

Below the code editor is a terminal window. The prompt is 'rajeev@atlantis'. The user enters the command 'cd Test/' and the prompt changes to '~ /D/Test>'. Then the user enters 'python3 pocketMoney.py' and the prompt returns to '~ /D/Test>'. The code and terminal commands are highlighted with red boxes.

Using what we learnt earlier we wrote step by step python program to count a number of words in a string.

1. Used input to take a string from user



The screenshot shows a code editor window titled 'countingWords.py' with the following Python code:

```
1 introString=input("Enter your introduction:")
2 print(introString)
3
```

The first two lines of code are highlighted with a red box.

2. Declared characterCount and wordCount variables

```
countingWords.py
1 introString=input("Enter your introduction:")
2 characterCount=0
3 wordCount=1
4
```

### 3. Used for loop

```
countingWords.py
1 introString=input("Enter string:")
2 characterCount=0
3 wordCount=1
4 for i in introString:
5     characterCount=characterCount+1
6     print(characterCount)
7
```

### 4. Wrote a if condition to count word

```
countingWords.py
1 introString=input("Enter string:")
2 characterCount=0
3 wordCount=1
4 for i in introString:
5     characterCount=characterCount+1
6     if(i==' '):
7         wordCount=wordCount+1
8
```

### 5. Then we printed the word and character count

```
countingWords.py
1 introString=input("Enter string:")
2 characterCount=0
3 wordCount=1
4 for i in introString:
5     characterCount=characterCount+1
6     if(i==' '):
7         wordCount=wordCount+1
8     print("Number of word in the string:")
9     print(wordCount)
10    print("Number of character in the string:")
11    print(characterCount)
12
```

Then we run and test then code

```
File Edit View Search Terminal Help
rajeev@atlantis ~/D/gettingFilesList> python3 countingWords.py
Enter string:My name is abhijeet
Number of word in the string:
4
Number of character in the string:
19
rajeev@atlantis ~/D/gettingFilesList> 
```

**What's next?**

In the next class, we will learn to use user defined functions.