

FOSSEE

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Spreading Python

Prabhu Ramachandran

Indian Institute of Technology, Bombay

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Acknowledgement

FOSSEE group (fossee.in)
based at
IIT Bombay
and Funded by
The National Mission on Education
through ICT,
Ministry of HRD, India

FOSSEE Goals

- Promote Free And Open Source software
- Reduce dependency on proprietary software
- Improve quality of education through ICT

FOSS Promoted



Scilab



Python



Osdag



DWSIM



OR Tool

OpenModelica



eSim



Sandhi



Single Board
Heater System



OpenFoam

Open
PLC

FOSSEE
Laptop

Python Activities

- 1 Python Workshops
- 2 Spoken tutorials
- 3 Textbook Companion
- 4 Yaksh: (like hackerrank)
- 5 Conferences

python.fossee.in

Python Workshops

- Remote assistance
- Completely hands-on
- 50+ practice exercises
- Online tests
- Certificates
- Free!

python.fossee.in/python-workshops

Python Workshops

- 1 Introduction to Scientific Computing using Python (ISCP)
- 2 Basic Programming using Python
- 3 More coming ...



Suvigya Agrawal,

Manipal Institute of Technology, Udupi, Karnataka

I really liked the kind of content that was available in the workshop. The questions for the quiz were very good. Overall it was a perfect workshop.

Pritam Wanjarkar,

Shri Guru Gobind Singhji Institute of Engineering and Technology Engineering college, Nanded

It was really a very good attempt. The whole day was very enjoyable and fruitful. Till now whichever the workshops I've attended, this one was the most interesting. We would be more happy to learn under you again.



Jayant Shinde,

Walchand College Of Engineering, Sangli

Very well conducted. Clear explanations make us more eager to learn more in depth.

Developed by FOSSEE group, IIT Bombay



Figure : Workshop Booking interface

All Courses

Home

Enrolled Courses

Profile

Change Password

Search Course

Course Code

Search

Cancel

**AE-102, 2017, IIT Bombay by
Prabhu Ramachandran**

Enroll

**Trial Course for Workshops by
Mahesh Gudi**

Enroll

Course Instructions

Please check the videos from the Workshop found at - <http://static.fossee.in/python/1-day-workshop/> Follow the quiz instructions carefully

**Demo Quiz for Nasscom by
Mahesh Gudi**

Enroll

Enrolled

Figure : Yaksh Quiz Enroll

Question Navigator

1	2	3	4
5	6	7	8
9	10	11	

Question(s) left: 11

Write a function `is_palindrome(arg)` which will take one string argument.
Return True if the argument is palindrome & False otherwise.
The function should be case sensitive.

For Example:

`is_palindrome("Hello")` should return `False`

Write your program below:

[Reset Answer](#)

```
1 def is_palindrome(s):  
2     pass
```

[Check Answer](#)[Attempt Later](#)

Testcase No. 1

```
Expected Test Case:  
assert is_palindrome("hello") == False  
Error Traceback - AssertionError in:
```

Figure : Yaksh Test Sample

Quiz Results

Course Name: ISCP Workshop, BVRIT, 13/02/2017

Quiz Name: ISCP7 Quiz 4

Number of papers: 121

Papers completed: **121**

Papers in progress: **0**

[Question Statistics](#)

[Download CSV](#)

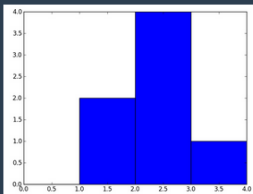
Name	Username	Roll number	Institute	Questions answered	Marks obtained	Attempts	Time Remaining	Status
Punuru Priyanka	punuru_priyanka	123			12.0	13	0:0:0	completed
Puvula Nagasiri	nagasiri27	123			12.0	10	0:0:0	completed
Sravya Cherukuri	sravya_cherukuri	123			12.0	9	0:0:0	completed
Sravani Yara	yara.sravani	123			12.0	9	0:0:0	completed
Nikhitha Chinthakindi	nikhithachinthakindi	123			12.0	11	0:0:0	completed
Deepika Korla	deepika_korla	123			12.0	9	0:0:0	completed
Siripuram Vinitha	vinitha588	123			12.0	9	0:0:0	completed
Mounika Padidapu	mounikapadidapu	123			12.0	9	0:0:0	completed
Pooja Kharge	pooja29	123			12.0	12	0:0:0	completed
Laharii Chowdary	laharii	123			12.0	9	0:0:0	completed
Sushma Kukkadapu	sushmak	123			12.0	10	0:0:0	completed
Harika Bhupati Raju	harika5797	123			12.0	9	0:0:0	completed

Figure : Monitoring Quiz

Textbook Companions

- Repository of standard engineering and science textbooks
- Download complete book or individual chapters
- Modify and run Jupyter notebook files online
- 480+ books!
- 4000+ notebooks!

[python.fossee.in/
textbook-companion-project](https://python.fossee.in/textbook-companion-project)



Practical C Programming

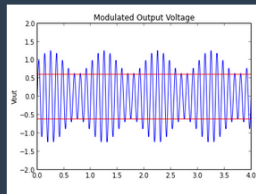
```
In [31]: '''
EXAMPLE 3A.2 Using a vector of strings
'''
def loadVec():
    v.append('Japan')
    v.append('China')
    v.append('Spain')
    v.append('India')
    v.append('USA')
    v.append('Russia')
    v.append('France')
    v.append('Germany')
    v.append('Italy')
    v.append('Mexico')

def print_vec():
    for i, str in v:
        print i

v = []
loadVec()
print_vec()

In [31]: '''
Japan
China
Spain
India
USA
Russia
France
Germany
Italy
Mexico
'''
```

Schaum's Outlines - Programming with C++



Electronic Devices

```
In [31]: '''
EXAMPLE 3A.2
Demonstrates shortest path with weighted, directed graph
'''
class Grapher:
    def __init__(self, g): # constructor
        self.graph = g
        self.parentList = []

class Vertex:
    def __init__(self, label): # constructor
        self.label = label
        self.neighbors = []

class Graph:
    def __init__(self): # constructor
        self.vertices = [] # adjacency matrix
        self.adjMat = []
        self.sources = []
        self.sinks = []
        for i in range(20): # set adjacency
            v = i
            for j in range(20):
                if i < j:
                    self.adjMat.append((i, j, 1))
                    self.adjMat.append((j, i, 1))
        self.sources = [0]
        self.sinks = [19]
```

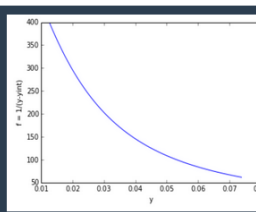
Data Structures and Algorithms in Java

```
example 6.3 page no: 30
In [31]: '''
example 6.3 page no: 30
'''
class Point:
    def __init__(self, x, y):
        self.x = x
        self.y = y

def printPoint(p):
    print "%d, %d, %d, %d" % (p.x, p.y, p.x, p.y)

pt = Point(3, 4, 4, 4)
printPoint(pt)
(3, 4, 4, 4)
```

Beginning C++ through Game Programming



Principles And Modern Applications Of Mass

Figure : TBC Examples

Chapter 3: The Loop Control Structure

[Edit examples of this chapter](#)

Simple Interest using While Loop, Page number: 99

```
In [1]: #Variable declaration
count = 1
pr = [1000,2000,3500]
yr = [5,5,5]
intr = [13.5,13.5,3.5]

# while loop
while count <= 3:
    #Input from the user
    #p,n,r = raw_input("Enter values of p, n and r : ").split()
    p = pr[count-1] # principle
    n = yr[count-1] # number of years
    r = intr[count-1]# rate of interest

    #Calculation
    si = p * n * r / 100 ; #formula for simple interest

    #Result
    print "Simple interest = Rs.",si

    #Increment count
    count = count + 1
```

Figure : TBC Sample Page

Chapter 3: The Loop Control Structure

Simple Interest using While Loop, Page number: 99

```
In [1]:
#Variable declaration
count = 1
pr = [1000,2000,3500]
yr = [5,5,5]
intr = [13.5,13.5,3.5]

# while loop
while count <= 3:
    #Input from the user
    #p,n,r = raw_input("Enter values of p, n and r : ").split()
    p = pr[count-1] # principle
    n = yr[count-1] # number of years
    r = intr[count-1]# rate of interest
```

Figure : TBC Jupyter Notebook

What's in for you?

- Join us: help promote Python/FOSS
- Internships
- Free workshops
- Visit the FOSSEE stall

fossee.in/jobs

