

*And now for something  
completely different . . .*



# Part 9

## Python 3 Files

# Python Files

9.1 Introduction to Files

9.2 File Operations

# Python Files

## 9.1 Introduction to Files

## 9.2 File Operations

# Introduction to Files

Python has a file object type which permits the use of file methods, allowing access to and manipulation of files which are stored on the computer disk.

# Text Files

A simple text file can be created using a text processing application such as Window's Notepad, Window's Wordpad or a word processor such as Microsoft Word.



New Slide... Slide

- Windows Update
- WinZip
- New Office Document
- Open Office Document
- Netscape 7.1
- Yahoo! Messenger
- Programs
- Favorites
- Documents
- Settings
- Find
- Help
- Run...
- Log Off Anne...
- Shut Down...

Windows98

- 1st Class GradeBook
- 3Com U.S. Robotics
- Accessories
- BlueJ
- Borland C++ 4.52
- Borland C++ 5.02
- ConTEXT
- Dell Accessories
- Dell Documents
- Disabled Startup Items
- FreeJava
- Ghostgum
- Ghostscript
- Gradekeeper
- HP DeskJet Utilities
- InterVideo WinDVD
- Java Media Framework 2.1.1a
- Java Web Start
- JCreator LE
- LapLink for Windows
- LogicWorks 4
- Logitech
- Macromedia
- MGI VideoWave 4
- Microsoft Developer Network
- Microsoft Office Tools
- Microsoft Visual Basic 6.0
- Microsoft Web Publishing
- Mozilla Firefox

51%

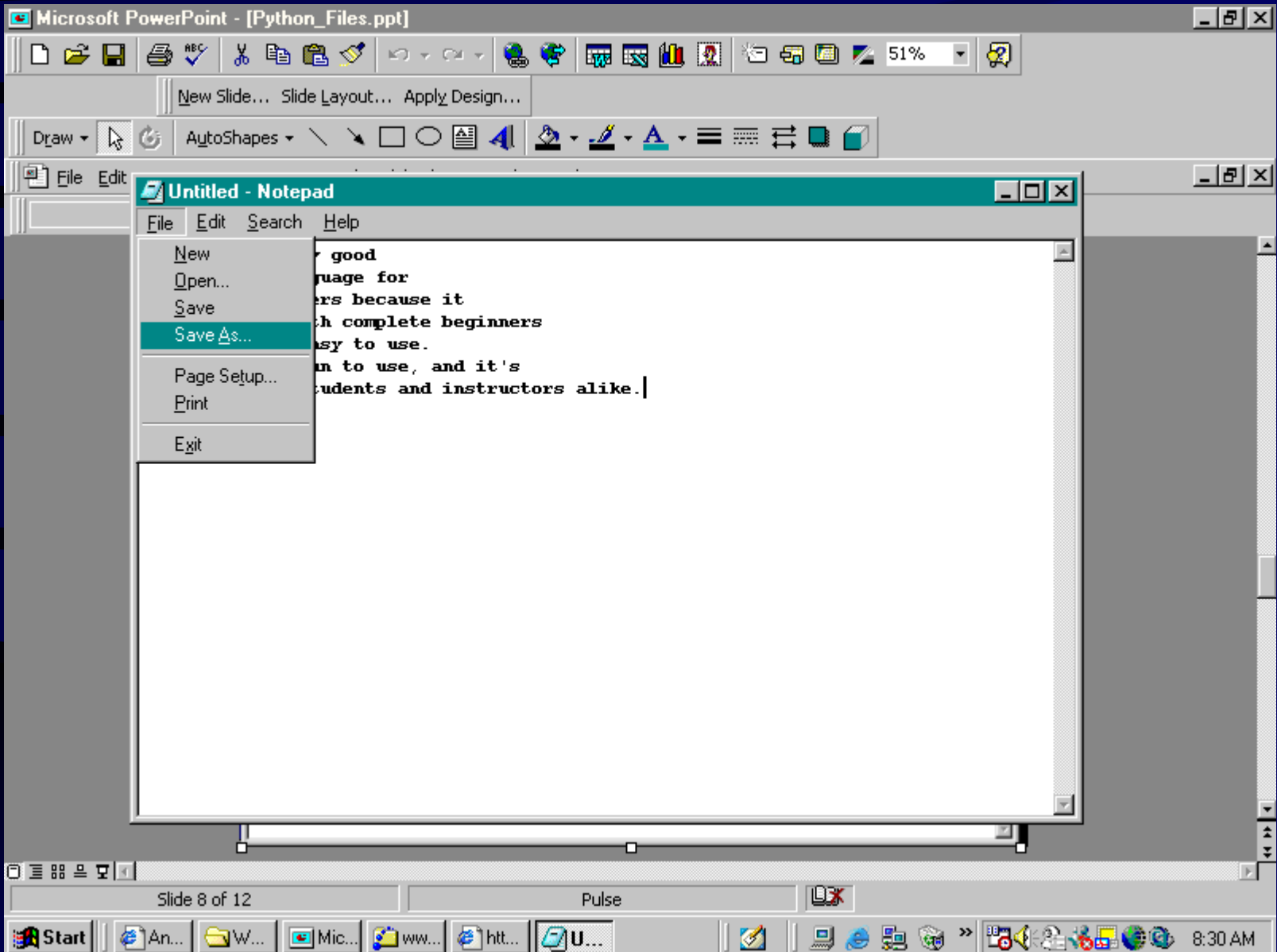
- Communications
- Entertainment
- Games
- Internet Tools
- System Tools
- Address Book
- Calculator
- Imaging
- Notepad
- Paint
- Synchronize
- WordPad

7

8:25 AM

Python is a very good programming language for complete beginners because it was designed with complete beginners in mind. It's easy to use. It's a lot of fun to use, and it's well liked by students and instructors alike.





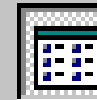
# Save As



Save in:



temp



File name:

file1.txt

Save

Save as type:

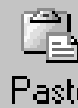
Text Documents

Cancel

temp




File Edit View Go Favorites Help



Address  C:\temp

Norton AntiVirus 

Name	Size	Type	Modified
 file1.txt	1KB	Text Document	11/4/04 8:34 AM

1 object(s)

233 bytes

 My Computer

# Python Files

9.1 Introduction to Files

9.2 File Operations

# An example program using a file

This program reads a line from the file C:\temp\file1.txt, then prints out the line.

```
file1 = open('C:\\temp\\file1.txt','r')
# the line above opens C:\temp\file1.txt for reading
string = file1.readline()
print (string)
```

The output:

```
Python is a very good
```

```
http://www.annedawson.net/python3programs.html
09-01.py
```

# Video: How to read a file in Python

<https://youtu.be/KA-DFjpYFiM>

# Creating and writing to a file

This program creates a file called tester2.txt in folder C:\temp, writes two lines to it, then closes the file.

```
file1 = open("C:\\temp\\tester2.txt", "w")
print (file1) # prints out details about the file
file1.write("Today is Monday\n")
file1.write("Tomorrow is Tuesday")
file1.close()
```

<http://www.annedawson.net/python3programs.html>  
09-02.py

# Video: How to write to a file in Python

[https://youtu.be/Us\\_tkZbMk4M](https://youtu.be/Us_tkZbMk4M)



## Video: Using the backslash escape sequence

`https://youtu.be/Stc4k4CG-zM`

# Reading data from a file

This program opens the file called tester2.txt in folder C:\temp, reads the file into a string variable and prints the string. The file is then closed and opened again, and this time five characters at a time are read from the file.

```
file2 = open("C:\\temp\\tester2.txt","r")
print (file2) # prints out details about the file
string1 = file2.read()
print (string1)
file2.close()
file2 = open("C:\\temp\\tester2.txt","r")
string1 = file2.read(5)
print (string1)
string1 = file2.read(5)
print (string1)
```

<http://www.annedawson.net/python3programs.html>  
09-03.py

# Copying files

This program makes an exact copy of a file. It uses a function to perform the processing.

```
def copyFile(oldFile, newFile):  
    f1 = open(oldFile, "r")  
    f2 = open(newFile, "w")  
    while 1:  
        text = f1.read(50)  
        if text == "":  
            break  
        f2.write(text)  
    f1.close()  
    f2.close()  
    return
```

```
http://www.annedawson.net  
/python3programs.html  
09-04.py
```

```
filecopy = "C:\\temp\\tester2copy.txt"  
#this file will be created
```

```
fileold = "C:\\temp\\tester2.txt" # existing file  
copyFile(fileold, filecopy)
```

# Handling the “file not found” exception

This program opens a file if it exists, otherwise prints an error message.

```
filename = input('Enter a file name: ')
try:
    f = open (filename, "r")
except:
    print ('There is no file named', filename )
```

```
http://www.annedawson.net/python3programs.html
09-05.py
```

# Video: Python Errors and Exceptions

<https://youtu.be/mpYFIwYYD9A>

# Video: Python Exception Handling

<https://youtu.be/zXINeVywNZU>

# Video: Python File Searching

<https://youtu.be/-VvhBKhY-Z4>

# This Presentation uses the following program files:

09-01.py

09-02.py

09-03.py

09-04.py

09-05.py

see all programs at:

<http://www.annedawson.net/python3programs.html>



# This Presentation uses the following videos:

<https://youtu.be/KA-DFjpYFiM>

[https://youtu.be/Us\\_tkZbMk4M](https://youtu.be/Us_tkZbMk4M)

<https://youtu.be/mpYFIwYYD9A>

<https://youtu.be/8SGzhngNTzM>

<https://youtu.be/Stc4k4CG-zM>

<https://youtu.be/zXINeVywNZU>

<https://youtu.be/-VvhBKhY-Z4>

see all videos at:

<https://www.youtube.com/user/annedawson/videos>

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