LEARNING TO CODE

python™

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IEEE SB OF THRACE

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EXERCISES

READ A TEXT FILE

- Create a txt file in notebook containing the following:

  “ Python is an interpreted high-level programming language for general-purpose programming. Created by Guido van Rossum and first released in 1991, Python has a design philosophy that emphasizes code readability, notably using significant whitespace.Python features a dynamic type system and automatic memory management. It supports multiple programming paradigms, including object-oriented, imperative, functional and procedural, and has a large and comprehensive standard library. ”

- Write a Python program to read the text file.

SOLUTION

```
def read_file(fname):
    txt = open(fname)
    print(txt.read())

read_file("test.txt")
```

CREATING A FILE

- Write a Python program to create a text file.

- Text to be written in the file:

" Python is an interpreted high-level programming language for general-purpose programming. Created by Guido van Rossum and first released in 1991, Python has a design philosophy that emphasizes code readability, notably using significant whitespace.Python features a dynamic type system and automatic memory management. It supports multiple programming paradigms, including object-oriented, imperative, functional and procedural, and has a large and comprehensive standard library. "

SOLUTION

```
def create_file(fname):
    txt = open(fname, 'w+')
    txt.write("Python is an interpreted high-level programming language for gene

fname = "test.txt"
create_file(fname)
```

CREATE & READ A FILE

- Write a Python program to create a text file and then read it.

SOLUTION

```
""" Script for creating and reading a file"""

def main():
    fname = "test.txt"
    txt = open(fname, 'w+')
    txt.write("Python is an interpreted high-level programming language for gene
    print(txt.tell())
    txt.seek(0)
    print(txt.tell())
    a = txt.read()
    print(a)
    print(txt.tell())

main()
```

THE MAGIC BOX

Write a program that lets the user ask a question and gives him an answer.

The program should:

- ask the user his name and print “Hello [name]”
- print “You may ask your yes or no question of the Magic Box!”
- pause for 4 sec and then print the answer in the screen
- print “I hope that helped!”
- ask the user again if he wants to ask a question
- the program should stop when the user types “N” in the previous question

THE MAGIC BOX

***Hints*!**

- Possible Answers:

  ["It is certain", "It is decidedly so", "Without a doubt", "Yes, definitely",

  "As I see it, yes", "Most Likely", "Outlook Good",

  "Yes", "Signs point to yes",

  "Better not to tell you now", "Cannot predict now", "Concentrate and ask again",

  "Don't count on it", "My reply is no", "My sources say no", "Obviously no", "Very Doubtful“]

- import random -> random.randrang(_,_), random.randint(_)
- import time -> time.sleep(_)
- import sys -> sys.exit()

SOLUTION

```
import random
import time
import sys
answers = [ "It is certain", "It is decidedly so", "Without a doubt", "Yes, defi
                "As I see it, yes", "Most Likely", "Outlook Good",
                "Yes", "Signs point to yes",
                "Better not to tell you now", "Cannot predict now", "Concentrate
                "Don't count on it", "My reply is no", "My sources say no", "Obvi

print('  __  __          _____ _____ _____ ______   __  __   __  ')
print(' |  \/  |   /\   / ____|_   _/ ____| |     | /   \ \ \ / / ')
print(' | \  / |  /  \ | |  __  | || |      |  ___| |    | \ \/ /  ')
print(' | |\/| | / /\ \| | |_ | | || |      | |___  |    |  \ \/   ')
print(' | |  | |/ ____ \ |__| |_| || |____  |     | |    |  /\ \   ')
print(' |_|  |_/_/    \_\_____|_____\_____| |_____| \___/  /_/\_\  ')
print('')
print('')
print('')
print('Hello World, I am the Magic Box, What is your name?')
name = input()
print('hello ' + name)

def question():
    question = input("You may ask your yes or no question of the Magic Box!\n")
    print("Thinking...")
    time.sleep(random.randrange(0,4))
    print (answers[random.randint(0, len(answers)-1)] ) # or print(random.choice
    print('I hope that helped!')
```

SOLUTION

```
def MagicBox():
    question()
    Replay()


def Replay():
    reply = input('Do you have another question? [Y/N] ')
    if reply == 'Y' or reply == 'y':
        MagicBox()
    elif reply == 'N' or reply == 'n':
        sys.exit()
    else:
        print('I apology, I did not catch that. Please repeat.')
        Replay()


MagicBox()
```