Week 1, Examples 1

#1.py

```python
print ("Hello World!")
```

#2.py

```python
# Read in and print whatever you type in
sometext = input("Enter any text you want ")
print ("This is what you typed:")
print (sometext)
```

#3.py

```python
# The \n (just as in the C-language) between quotes # causes a new line wherever it occurs
sometext = input("Enter any text you want \n")
print ("This is what you typed:")
print (sometext)
```

#4.py

```python
# assign a character string to a variable, and then use that variable
waitforinput = "Enter any text you want 
"
sometext = input(waitforinput)
print ("This is what you typed:")
print (sometext)
```

#5.py

```python
# a function with no parameters (i.e., nothing between the parents)
```
def print_some_text():

    print("This is an example of a function ")

    print("that prints these lines ")

    print("whenever you invoke it by name.")

    print("Note that each print is on a new line ")

#——————————————————————————–

#6.py

# A function can accept parameters as input so that you can use # them flexibly

# Remember to use quotes for strings, i.e., name is “Jane”, and # shoe_colour is “pink”

def say_hello(name,shoe_colour):

    print("Hello there ", name)

    print("I do like your stunning ",shoe_colour," shoes!")

#—————————————————————————————

# A function that computes y = f(x^2) (that is x squared) for integer x in the # interval [-20,20]

def main():

    print ("A simple example of a for-loop")

    for x in range (-20,21): #x is an integer variable now used as a for-loop index
        y = x * x

        print (x,y) #————————————————————————————- #8.py

    # Example from textbook (chaotic function), but with two inputs (x and # xprime) simultaneously

    def main():

        print ("We will demonstrate a chaotic function")

        x = eval (input ("Enter any number between 0 and 1: "))

        xprime = x + 0.01

        print(" ",x," ",xprime)

        for i in range (10):

            x = 3.9 * x * (1-x) # this is the

            xprime = 3.9 * xprime * (1 - xprime) # chaotic function
print(i," ",x," ",xprime)

# You'll notice that, even though we left spaces (blank characters) in the # print statement, the numbers will not be printed in even vertical columns. # Why? Because some output numbers have fewer digits after the decimal point # than others. The extra zeroes are not printed.

# We will learn how to format strings later, to get prettier output.
#________________________________________________

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