Assignment 17 Solutions

1. Assign the value 7 to the variable guess\_me. Then, write the conditional tests (if, else, and elif) to print the string 'too low' if guess\_me is less than 7, 'too high' if greater than 7, and 'just right' if equal to 7.

def guess\_me(guess\_me):

if guess\_me < 7:

print('too Low')

elif guess\_me > 7:

print('too High')

else:

print('just Right')

guess\_me(guess\_me=7)

guess\_me(guess\_me=5)

guess\_me(guess\_me=15)

just Right

too Low

too High

2. Assign the value 7 to the variable guess\_me and the value 1 to the variable start. Write a while loop that compares start with guess\_me. Print too low if start is less than guess me. If start equals guess\_me, print 'found it!' and exit the loop. If start is greater than guess\_me, print 'oops' and exit the loop. Increment start at the end of the loop

guess\_me = 7

start = 1

while True:

if start < guess\_me:

print('too low')

elif start == guess\_me:

print('found it')

break

else:

print('oops')

break

start += 1

too low

too low

too low

too low

too low

too low

found it

3. Print the following values of the list [3, 2, 1, 0] using a for loop.

in\_list = [3,2,1,0]

for ele in in\_list:

print(ele)

3

2

1

0

4. Use a list comprehension to make a list of the even numbers in range(10)

print([x for x in range(10+1) if x%2==0 ])

[0, 2, 4, 6, 8, 10]

5. Use a dictionary comprehension to create the dictionary squares. Use range(10) to return the keys, and use the square of each key as its value.

# Method 1

print(dict([(x,pow(x,2)) for x in range(10)]))

# Method 2

print({x:x\*\*2 for x in range(10)})

{0: 0, 1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81}

{0: 0, 1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81}

6. Construct the set odd from the odd numbers in the range using a set comprehension (10).

print({x for x in range(10) if x%2 !=0})

{1, 3, 5, 7, 9}

7. Use a generator comprehension to return the string 'Got ' and a number for the numbers in range(10). Iterate through this by using a for loop

gen\_com = ('Got\_'+str(x) for x in range(10))

for ele in gen\_com:

print(ele, end=' ')

Got\_0 Got\_1 Got\_2 Got\_3 Got\_4 Got\_5 Got\_6 Got\_7 Got\_8 Got\_9

8. Define a function called good that returns the list ['Harry', 'Ron', 'Hermione'].

def good():

x = ['Harry', 'Ron', 'Hermione']

return x

print(good())

['Harry', 'Ron', 'Hermione']

9. Define a generator function called get\_odds that returns the odd numbers from range(10). Use a for loop to find and print the third value returned.

def get\_odds():

output = []

for ele in range(10):

if ele%2 != 0:

output.append(ele)

yield output

next(get\_odds())[2]

5

10. Define an exception called OopsException. Raise this exception to see what happens. Then write the code to catch this exception and print 'Caught an oops'.

class OopsException(Exception):

pass

def test(input):

if input <0:

raise OopsException(a)

try:

test(-100)

except Exception as e:

print('Caught in Oops ->',e)

Caught in Oops -> name 'a' is not defined

11. Use zip() to make a dictionary called movies that pairs these lists: titles = ['Creature of Habit', 'Crewel Fate'] and plots = ['A nun turns into a monster', 'A haunted yarn shop'].

titles = ['Creature of Habit', 'Crewel Fate']

plots = ['A nun turns into a monster', 'A haunted yarn shop']

output = dict(zip(titles,plots))

print(output)

{'Creature of Habit': 'A nun turns into a monster', 'Crewel Fate': 'A haunted yarn shop'}