PYTHON ASSIGNMENT 17

1. Assign the value 7 to the variable guess_me. Then, write the conditional tests (if, else, and elif) to

print the string &#39;too low&#39; if guess_me is less than 7, &#39;too high&#39; if greater than 7, and &#39;just right&#39; if equal

to 7.

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 &#39;found it!&#39; and exit the loop. If start is greater than guess_me, print &#39;oops&#39; and exit

the loop. Increment start at the end of the loop.

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

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

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

7. Use a generator comprehension to return the string &#39;Got &#39; and a number for the numbers in

range(10). Iterate through this by using a for loop.

8. Define a function called good that returns the list [&#39;Harry&#39;, &#39;Ron&#39;, &#39;Hermione&#39;].

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.

10. Define an exception called OopsException. Raise this exception to see what happens. Then write

the code to catch this exception and print &#39;Caught an oops&#39;.

11. Use zip() to make a dictionary called movies that pairs these lists: titles = [&#39;Creature of Habit&#39;,

&#39;Crewel Fate&#39;] and plots = [&#39;A nun turns into a monster&#39;, &#39;A haunted yarn shop&#39;].

SOLUTIONS

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# 1. Conditional tests for guess_me

guess_me = 7

if guess_me < 7:

    print('too low')

elif guess_me > 7:

    print('too high')

else:

    print('just right')


# 2. While loop with start and guess_me

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

# 3. Print values of the list [3, 2, 1, 0] using a for loop
for value in [3, 2, 1, 0]:
    print(value)

# 4. List comprehension for even numbers in range(10)
even_numbers = [x for x in range(10) if x % 2 == 0]

# 5. Dictionary comprehension for squares
squares = {x: x**2 for x in range(10)}

# 6. Set comprehension for odd numbers in range(10)
odd = {x for x in range(10) if x % 2 != 0}

# 7. Generator comprehension for 'Got ' and a number
generator_result = ('Got ' + str(x) for x in range(10))
for item in generator_result:
    print(item)

# 8. Function good that returns a list
def good():
    return ['Harry', 'Ron', 'Hermione']
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# 9. Generator function get_odds for odd numbers in range(10)
def get_odds():
    for x in range(10):
        if x % 2 != 0:
            yield x

# Find and print the third value returned
third_odd = next(get_odds())
for _ in range(2):
    third_odd = next(get_odds())
print(third_odd)

# 10. Define and catch OopsException
class OopsException(Exception):
    pass

try:
    raise OopsException("Something went wrong")
except OopsException as e:
    print('Caught an oops')

# 11. Use zip() to create the dictionary movies
titles = ['Creature of Habit', 'Crewel Fate']
plots = ['A nun turns into a monster', 'A haunted yarn shop']
movies = dict(zip(titles, plots))
print(movies)
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