3.3_solutions

February 6, 2023

1 Solutions

1.0.1 conditionals

1. Write a code that checks if number is bigger than 5. if it is, then prints its double. if it is not, then print zero.

[2]:
```
# change this number to see how the code behaves
x=3

if x>5:
    print(x*2)
else:
    print(0)
```

```
0
```

2. Write a code that print all the number from 1 to 100 that are multiple of 3

[4]:
```
for i in range(1,101):  #we do not use now the step 3. we go over all numbers␣
 ↪in range
    if i % 3 == 0:  #myltiple of three
        print(i, end=' ')

# do you see why we do not need the else statement?
```

```
3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 48 51 54 57 60 63 66 69 72 75 78 81 84
87 90 93 96 99
```

3. Write a code that print all the number from 1 to 100 that end in 3

[6]:
```
# method 1
for i in range(1,101):  #we do not use now the step 3. we go over all numbers␣
 ↪in range
    str_i = str(i)  # transform number in string
    if str_i[-1] == '3':  # last digit a three (but it's the string '3', not␣
 ↪the number 3)
        print(i, end=' ')
```

```
3 13 23 33 43 53 63 73 83 93
```

[9]:
```
# method 2
for i in range(1,101):  #we do not use now the step 3. we go over all numbers␣
 ↪in range
    if i % 10 == 3:  #if rest of dividing mod by 10 is three, the last digit is␣
 ↪a three.
        print(i, end=' ')
```

```
3 13 23 33 43 53 63 73 83 93
```

4. Write a code that print all the number from 1 to 100 that contain at least a 3

[10]:
```
# adapting method 1 previous exercise

for i in range(1,101):  #we do not use now the step 3. we go over all numbers␣
 ↪in range
    str_i = str(i)  # transform number in string
    if '3' in str_i:  # the character "3" is anywhere in the string
        print(i, end=' ')
```

```
3 13 23 30 31 32 33 34 35 36 37 38 39 43 53 63 73 83 93
```

5. Write a python program that counts how many integer numbers there are in a list; for instance: `mylist= [1, 2, 3.5, 'Hi', 5, 6, True, False, 9]` has 5 integer numbers (1,2,5,6,9)

[16]:
```
mylist= [1, 2, 3.5, 'Hi', 5, 6, True, False, 9]

n_ints=0
for e in mylist:
    if type(e)==int:
        n_ints=n_ints+1

print('there are', n_ints, 'integers')
```

```
there are 5 integers
```

[17]:
```
#method 2
mylist= [1, 2, 3.5, 'Hi', 5, 6, True, False, 9]

my_ints=[]
for e in mylist:
    if type(e)==int:
        my_ints.append(e)

n_ints=len(my_ints)
print('there are', n_ints, 'integers, which are:', my_ints)
```

```
there are 5 integers, which are: [1, 2, 5, 6, 9]
```

[ ]:
```

```