

MyRepos\KI-Kurs-Mystro\exercise_25062024.py

```
1  # -*- coding: utf-8 -*-
2  """Exercise_25062024.ipynb
3
4  Automatically generated by Colab.
5
6  Original file is located at
7      https://colab.research.google.com/drive/1KN1wyvwTQK4lU6rM9b1P0f_NwL6YIGsz
8
9  # Exercise from Eng. Ola 25.06.2024
10
11  Exercise 1: For Loop
12  Problem: Write a program that prints the numbers from 1 to 10 using a for loop.
13  """
14
15  #Ex 01
16  for x in range(1,11):
17      print(x)
18
19  """ Exercise 2: While Loop
20  Problem: Write a program that asks the user to enter a positive number. Keep asking the
21  user
22  for a number until they enter a positive one. Once they enter a positive number, print it.
23  """
24
25  #Ex 02
26  while True :
27      x=int(input("Enter a positive number: "))
28      if x>0 :
29          print(x)
30          break
31      else:
32          continue
33
34  """Exercise 3: Nested Loops
35  Problem: Write a program that prints a multiplication table for numbers 1 to 5. Use nested
36  loops
37  to generate the table.
38  """
39
40  #Ex 03
41  for x in range(1, 6):
42      for y in range(1, 6):
43          print(x * y, end=" ")
44          #print(f"{x} x {y} = {x * y}")
45
46      print()
47
48  """Exercise 4: Simple Function
49  Problem: Write a function greet that takes a name as input and prints a greeting message,
50  e.g., "Hello, [name]!".
51  """
52
53  #Ex 04
54
55  def greet(name):
56      print("Hello, {}".format(name))
```

```
57 greet("Eng. Ola")
58
59 """ Exercise 5: Function with Loop
60 Problem: Write a function countdown that takes a number as input and prints a countdown
61 from that number to zero using a loop
62 """
63
64 #Ex 05
65
66 def countdown(n):
67     for i in range(n, -1, -1):
68         print(i)
69
70 countdown(7)
71
72 """Exercise 6: Function with Loop and Data Types (Lists)
73 Problem: Write a function print_list that takes a list of strings as input and prints each
74 string on a new line using a loop. Then, demonstrate the function with a list of your
75 choice.
76 """
77 #Ex 06
78 def print_list(kurs):
79     for x in kurs:
80         print(x)
81
82 my_list = ["python", "is", "a", "part", "of", "KI-Kurs"]
83 print_list(my_list)
84
85 """Exercise 7: Using break and continue
86 Problem: Write a program that asks the user to enter numbers. If the user enters a negative
87 number, the program should stop asking for input (using break). If the user enters a number
88 greater than 100, the program should ignore it (using continue). Print each valid number
89 entered by the user
90 """
91
92 # Ex 07
93 while True:
94     user_input = int(input("Enter a number: ")) # input user data
95
96     if user_input < 0:          # Check if the input is negative
97         break
98
99     elif user_input > 100:      # Check if the input is greater than 100
100         continue
101
102     else:
103         print(user_input)      # input is valid, print it
104
105
106
107 """Exercise 8: Strings as Lists
108 Problem: Write a function reverse_string that takes a string as input and returns the
109 string
110 reversed by treating it as a list of characters. Do not use any built-in string reversing
111 methods
112 """
113 def reverse_string(string):
114     reversed_s= " "
```

```
115     for char in string:
116         reversed_s = char + reversed_s
117     return reversed_s
118
119 def main():
120     rr= reverse_string (" i have to write a program in python")
121     print (rr)
122
123 if __name__ == "__main__":
124     main()
125
126
127
128
```