

## MyRepos\KI-Kurs-Mystro\exercises\_24\_06\_2024.py

```
1  # -*- coding: utf-8 -*-
2  """ Attia: Exercises_24-06-2024.ipynb
3
4  Automatically generated by Colab.
5
6  Original file is located at
7      https://colab.research.google.com/drive/1TPPZMSWcxSslv696okPyr175bvBWfKj5
8  """
9
10
11
12  """#Today Afternoon with Eng. Ola am 24.06.2024
13  Python Task 2 : Operators and conditions
14
15  Exercise 1: Basic Conditions Problem: Write a program that asks the user to input their age
16  and then prints whether they are a minor (under 18), an adult (18-64), or a senior (65 and
17  older).
18  """
19
20  age = int(input("input your age = "))
21
22  if age < 18 :          print ("he is a minor ")
23
24  elif age > 18 and age < 65:      print ("he is a adult")
25  else :
26      print ("he is a senior ")
27
28  """ Exercise 2: Comparison Operators
29  Problem: Write a program that takes two numbers as input from the user and prints which one
30  is greater or if they are equal.
31  """
32
33  x = int(input("input x = "))
34  y = int(input("input y = "))
35
36  if x >= y:
37      print (x)
38
39  """ Exercise 3: Logical Operators
40  Problem: Write a program that checks if a number input by the user is positive, even, and
41  greater than 10.
42  """
43
44  a1 = int(input("input your Number = "))
45  if a1 > 0 and a1 > 10 and a1 % 2 == 0:
46      print (" the number is positive, even and > 10 : ",a1)
47  else:
48      print ("the number is negative oder or or less than 10 -:", a1)
49
50  """Exercise 4: Nested Conditions
51  Problem: Write a program that asks for the user's score on a test and prints the grade: 'A'
52  (90-100), 'B' (80-89), 'C' (70-79), 'D' (60-69), or 'F' (below 60).
53  """
54
55  score = int(input("input your score = "))
56  if score > 90:
57      print (" your score is ", score," and your grade is A ")
58  elif score > 80 and score < 89 :
59      print (" your score is ", score," and your grade is B ")
```

```
57 elif score > 70 and score < 79 :
58     print (" your score is ", score," and your grade is C ")
59 elif score > 60 and score < 69 : print (" your score is ", score," and your grade is D ")
60 else:
61     print (" your score is ", score," and your grade is F ")
62
63 """ ##Exercise 5: Arithmetic Operators
64 Problem:
65 Write a program that asks the user to input two numbers and then prints the sum,
66 difference, product, and quotient of those numbers.
67 """
68
69 x1 = int(input("input number x1 = "))
70 x2 = int(input("input number x2 = "))
71
72 def mysum(x,y):
73     result = x+y
74     return result
75 def mydif(x,y):
76     result = x-y
77     return result
78 def mypro(x,y):
79     result = x*y
80     return result
81 def myquo(x,y):
82     if y == 0:
83         print (" no result x2 is 0")
84         return
85     else:
86         result = x/y
87         return result
88
89 print ("sum numbers is ", mysum(x1,x2))
90 print ("diff numbers is ", mydif(x1,x2))
91 print ("prod numbers is ", mypro(x1,x2))
92 print ("quo numbers is ", myquo(x1,x2))
93
94 """ Exercise 6: Using elif
95 Problem: Write a program that asks for the day of the week (1-7, where 1 is Monday and 7 is
96 Sunday) and prints whether it is a weekday or the weekend.
97 """
98
99 d1 = int(input("input the day number 1-7 = "))
100 if d1== 1:
101     print ("it's a weekday Monday")
102 elif d1==2 : print (" it's a weekday Tu")
103 elif d1==3 : print (" it's a weekday We")
104 elif d1==4 : print (" it's a weekday Th")
105 elif d1==5 : print (" it's a weekend Fi")
106 elif d1==6 : print (" it's a weekend Sa")
107 elif d1==7 : print (" it's a weekend Su")
108 else:
109     print ("no Day")
110
111 """ Exercise 7: Modulus Operator
112 Problem: Write a program that takes a number as input and prints whether it is odd or even.
113 """
114
115 n1 = int(input("input your Number = "))
116 if n1 % 2 == 0:
```

```
117     print ("the number is even", n1)
118 else:
119     print ("the number is odd", n1)
120
121 """ Exercise 8: Multiple Conditions
122 Problem: Write a program that asks the user to input a year and determines whether it is a
123 leap
124 year or not.
125 """
126 year = int(input("input your Number = "))
127 if year % 4 == 0:
128     print ("the year is a leap", year)
129 else:
130     print ("the year is not leap", year)
131
132 """Exercise 9: Combining Input and Conditions
133 Problem: Write a program that asks the user to input a number and then prints whether the
134 number is positive, negative, or zero.
135 """
136
137
138
139 number = int(input("input your Number = "))
140 if number > 0: print ("the number is positive", number)
141 elif number < 0: print ("the number is negative", number)
142 else:
143     print ("the number is zero", number)
144
145
146
147 """Exercise 10: Basic Calculator
148 Problem: Write a program that takes two numbers and an operator (+, -, *, /) as input and
149 performs the corresponding operation.
150 """
151
152 def mysum(x,y):
153     result = x+y
154     return result
155 def mydif(x,y):
156     result = x-y
157     return result
158 def mypro(x,y):
159     result = x*y
160     return result
161 def myquo(x,y):
162     if y == 0:
163         print (" no result x2 is 0")
164         return
165     else:
166         result = x/y
167         return result
168
169 def main():
170     x1 = int(input("input number x1 = "))
171     x2 = int(input("input number x2 = "))
172     x3 = input("input a operation from (+, -, *, /) = ")
173
174     if x3 == "+": print ("sum numbers is ", mysum(x1,x2))
175     elif x3 == "-": print ("diff numbers is ", mydif(x1,x2))
```

```
176     elif x3 == "*": print ("prod numbers is ", mypro(x1,x2))
177     elif x3 == "/": print ("quo numbers is ", myquo(x1,x2))
178
179 if __name__ == "__main__":
180     main()
181
```