Python Exercise 8

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1 Instructions

Finish the following exercises **without referring to your notes** on a piece of paper and scan a PDF file by 20:59 PM CST, Jan 19. The exercise takes no more than **30** minutes in total. Record the time it takes to finish, and write it down at the end of your answers.

2 Class Recap

In today's lesson, we learnt list in Python. List is an essential, commonly-used, and swift data structure. The understanding on Python list leads to a greater gain of knowledge later.

Codes for every classes can be accessed here.

3 Exercise

3.1 Creating a List

1. How did we create a Python list in class?

2. Search on Google about other common ways to create a list.

3. Now, consider if the following give variable `lst` a list data type:

   (a) `lst = [1,2,3,4]`
   (b) `lst = [100, "One Hundred", 100.0, True]`
   (c) `lst = [52, "Fifty Two", 520 / 10, 520 // 10]`
   (d) `lst = range(10)`
   (e) `lst = list(range(5,15,3))`
   (f) `list()`
   (g) `list("Peng")`

3.2 Accessing Items in List

1. Suppose list `lst = [1,2,3,4,5,6,7]`, write down the value of:

   (a) `lst[0]`
   (b) `lst[1]`
   (c) `lst[5 // 3]`
   (d) `lst[-2]`
   (e) `lst[len(lst)-3]`

3.3 Slicing a List

1. Suppose list `lst = list(range(10))`, write down the value of:

   (a) `lst[1:3]`
   (b) `lst[1:8:2]`
   (c) `lst[1:-2]`
   (d) `lst[8:]`
   (e) `lst[:3]`
   (f) `lst[:]`
   (g) `lst[::-1]`
   (h) `lst[::-2]`
   (i) `lst[-5:-1]`