Deep Learning Assignment 1

July 5, 2021

[85]:
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#Question 1: Python program to interchange first and last elements in a list.
import random
l = [random.randrange(1,100) for i in range(10)] #importing 10 random numbers␣
 ↪between 1 to 100
print(l)
print(l[0])
print(l[-1])
```

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[91, 22, 44, 53, 56, 16, 39, 82, 55, 44]
91
44
```

[100]:
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#Question 2:Python program to find smallest number in a list.
# list of numbers
list1 = [10, 20, 5, 45, 99]
print("The list is:", *list1[:])
# sorting the list
list1.sort()
# printing the first element
print("Smallest element is:", *list1[:1])
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The list is: 10 20 5 45 99
Smallest element is: 5
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#Question 3: Write a python program to print even numbers in a list.
import random
x = [random.randrange(1,100) for i in range(10)] #importing 10 random numbers␣
 ↪between 1 to 100
print("The list is")
print(x)
print("List of even numbers")
for i in x:
    if i%2==0: #i mod 2 is equal to 0-check
        print(i)
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The list is
[97, 41, 53, 31, 39, 7, 63, 2, 1, 42]
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List of even numbers
2
42
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[101]:
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#Question 4:Write a python program to print odd numbers in a list.
import random
x = [random.randrange(1,100) for i in range(10)] #importing 10 random numbers␣
 ↪between 1 to 100
print("The list is")
print(x)
print("The odd numbers are")
for i in x:
    if i%2!=0: #i mod 2 is not equal to 0-check
        print(i)
```

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The list is
[26, 55, 68, 61, 67, 55, 97, 32, 47, 32]
The odd numbers are
55
61
67
55
97
47
```

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#Question 5:Write a python program to print positive numbers in a list.
import numpy as np #import numpy
l=list(np.random.randn(10)) #generating a random list of 10 numbers
print(l)
for i in l:
    if i>0:
        print(i)
```

```
[-1.629052595798806, 0.0976294774166717, -0.11690934964455804,
0.040921740425214966, 1.2485721026903671, 0.9421907105475043,
1.0645701872428934, 0.5245123462417716, -0.7709872823181867,
-0.2594967486556057]
0.0976294774166717
0.040921740425214966
1.2485721026903671
0.9421907105475043
1.0645701872428934
0.5245123462417716
```

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#Question 6: Write a python program to print negative numbers in a list
import numpy as np #import numpy
l=list(np.random.randn(10)) #generating a random list of 10 numbers
print(l)
```

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for i in l:
    if i<0:
        print(i)
```

```
[-0.5280052569252349, -1.1107376781212828, -0.3701522107845196,
0.23580431397405896, -0.9796836811238943, -0.8943834243986364,
-1.1791969248534742, -0.1713645165397095, -0.8927471246131923,
-0.11276098504574271]
-0.5280052569252349
-1.1107376781212828
-0.3701522107845196
-0.9796836811238943
-0.8943834243986364
-1.1791969248534742
-0.1713645165397095
-0.8927471246131923
-0.11276098504574271
```

[77]:
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#Question 7: Write a python program to covert Fahrenheit to Celsius
celsius = float(input("Enter temperature in celsius :- ")) #give input
fahrenheit = (celsius * 9/5) + 32 #the conversion formula
print('%f Celsius is :- %f Fahrenheit' %(celsius, fahrenheit)) #output
```

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Enter temperature in celsius :- 25
25.000000 Celsius is :- 77.000000 Fahrenheit
```

[98]:
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#Question 8: Write a python program to print maximum and minimum number in a␣
 ↪tuple
import numpy as np #import numpy
x=list(np.random.randn(5)) #generating a random list of 10 numbers
print(x)
m=tuple(x)
print(m) #this is a tuple
n=list(m) #now this is a list
#print(n)
c=max(n) #getting maximum number from a list
print("Maximum is:", c)
n.sort() #sorting the list
# printing the first element
print("Minimum number is:", *n[:1])
```

```
[0.8906358108864215, 0.9560143888113315, -1.0798926429421496,
0.8601974728615249, -1.65296766084757]
(0.8906358108864215, 0.9560143888113315, -1.0798926429421496,
0.8601974728615249, -1.65296766084757)
Maximum is: 0.9560143888113315
Minimum number is: -1.65296766084757
```

[99]:
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#Question 9: Write a python program to convert a list into a tuple.
import numpy as np #import numpy
l=list(np.random.randn(5)) #generating a random list of 10 numbers
print(l)
m=tuple(l)
m
```

```
[0.05294089809097975, -0.040925461416748445, 0.784865497145416,
0.29117705943308825, 0.8066761499210462]
```

[99]:
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(0.05294089809097975,
 -0.040925461416748445,
 0.784865497145416,
 0.29117705943308825,
 0.8066761499210462)
```

[111]:
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#Write a python program to create a list and use the following functions-• append() and extend() • len()• membership (in, not in)
import numpy as np #import numpy
l=list(np.random.randn(5)) #generating a random list of 10 numbers
print("The list is")
print(l)
print("The length of the list is")
print(len(l))
l.append(3.14)
print("Appended one element: ",l)
l.extend([3.16,5,6,7])
print("Extended 3 elements: ",l)
print(3.14 in l) #True
print(3.14 not in l) #False
```

```
The list is
[-1.063857431237993, 2.8776759713031774, -0.19704316553196377,
2.354552956207909, -1.8533791293217943]
The length of the list is
5
Appended one element:  [-1.063857431237993, 2.8776759713031774,
-0.19704316553196377, 2.354552956207909, -1.8533791293217943, 3.14]
Extended 3 elements:  [-1.063857431237993, 2.8776759713031774,
-0.19704316553196377, 2.354552956207909, -1.8533791293217943, 3.14, 3.16, 5, 6,
7]
True
False
```

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