	<pre>a=np.arange(1,13) a array([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12])</pre>
<pre>In [12]: Out[12]: In [13]: Out[13]:</pre>	1 a.shape
In []: In []: In [14]:	# indexing and slicing
Out[14]: In [15]: Out[15]: In [16]:	3
Out[16]: In [17]: Out[17]:	12 a[-10] 3
Out[18]:	a[[2,5,9]] array([3, 6, 10]) a[[-10,-7,-3]] array([3, 6, 10])
In [20]: Out[20]: In [21]:	a[[2,5,9,2]] array([3, 6, 10, 3]) a[[2,5,9,-10]]
Out[21]: In []: In [22]:	
Out[22]: In []: In [23]:	array([4, 7])
In [24]:	array([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12])
Out[25]: In [26]:	array([1, 2, 3, 4, 5])
In [28]:	array([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12])
Out[29]: In [30]:	
In [31]: Out[31]:	array([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12]) a[::-1] array([12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1]) a[-2:-7:-1]
In [33]: Out[33]:	array([11, 10, 9, 8, 7]) a[-2:-7:-2] array([11, 9, 7])
Out[34]:	a[-2:-7:1] array([], dtype=int64) a array([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12])
Out[35]: In [36]:	a[-5:10:1] array([8, 9, 10]) a[7:2:-2] array([8, 6, 4])
In []: In []: In [38]:	#fancy indexing or masking
In [39]: Out[39]:	array([2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13])
In [40]: Out[40]: In [43]:	array([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12]) mask=a<6 mask
Out[43]: In [41]: Out[41]: In [44]:	False, False]) 2<6 True a[mask]
Out[44]: In [46]: Out[46]: In [45]:	array([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12])
Out[45]: In [47]: Out[47]:	array([False, True, False, True, False, True, False, True, False, True, False, True, False, True]) a[a%2==0] array([2, 4, 6, 8, 10, 12])
In [48]: Out[48]: In []: In [50]:	array([True, False, True, False, True, False, True, False, True, False, True, False, True, False])
Out[50]: In [51]:	mask1 array([False, True, False, True, False, True, False, True, False, True, False, True, False, True]) mask2 = a%5==0 mask2
Out[51]:	True, Faise, Faise])
<pre>In [53]: Out[53]: In [54]:</pre>	array([10])
In [55]:	ValueError Traceback (most recent call last) /var/folders/hd/9z4dczb56dj54lb7q8w7s4zw0000gn/T/ipykernel_52132/480664235.py in <module>> 1 a[mask1 or mask2] ValueError: The truth value of an array with more than one element is ambiguous. Use a.any() or a.all() a[mask1 mask2]</module>
Out[55]: In []: In [57]:	array([2, 4, 5, 6, 8, 10, 12])
	f=np.array([1,1,0,1],dtype="bool") print(d) print(e) print(f) [True False False True] [True True False True] [True True False True]
In [58]:	d and e ValueError Traceback (most recent call last) /var/folders/hd/9z4dczb56dj54lb7q8w7s4zw0000gn/T/ipykernel_52132/78125458.py in <module>> 1 d and e ValueError: The truth value of an array with more than one element is ambiguous. Use a.any() or a.all()</module>
<pre>In [59]: Out[59]: In [61]: In [62]:</pre>	array([True, False, False, True]) # d or e
	array([True, True, False, True])
In [64]: Out[64]: In [65]:	array([2, 4, 5, 6, 8, 10, 12]) (a%2==0)
Out[65]: In [66]: Out[66]: In [67]:	(a%5==0) array([False, False, False, True, False, False, False, True, False, False, False, False, False])
Out[67]: In [68]:	array([False, True, False, True, True, False, True, False, True, False, True])
In [69]:	a[~mask1] array([1, 3, 5, 7, 9, 11])
In []: In [72]: Out[72]: In [73]:	a==3 array([False, False, True, False, False)
Out[73]:	array([3]) a[a+1] IndexError Traceback (most recent call last)
In [75]:	/var/folders/hd/9z4dczb56dj54lb7q8w7s4zw0000gn/T/ipykernel_52132/3436262419.py in <module>> 1 a[a+1] IndexError: index 12 is out of bounds for axis 0 with size 12 a_list=[1,2,3,4,5,6,7,8,9] a_list[a_list%2==0]</module>
In [76]:	<pre>TypeError</pre>
In [77]:	
Out[77]:	
In []: In [79]: Out[79]:	a =
In [81]:	array([3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14]) np.add(a,2)
Out[81]: In []: In [83]: Out[83]:	a
In [82]: Out[82]: In [84]:	np.sum(a) 78 np.mean(a)
Out[84]: In [85]: Out[85]: In [86]:	np.max(a) 12
Out[86]: In [87]: Out[87]: In [93]:	a.sum() 78
In [94]: Out[94]: In [95]:	array([1, 2, 3, 4, 6, 7, 8, 9]) a a a
Out[95]: In [90]: In [91]: Out[91]:	a.sort() a
Out[91]: In [92]: Out[92]: In [97]:	a array([1, 2, 3, 4, 6, 7, 8, 9])
In [98]: Out[98]:	Downloading From: https://drive.google.com/uc?id=1c0ClC8SrPwJq5rrkyMKyPn80nyHcFikK To: /Users/nikhilsanghi/Downloads/01_dsml-course-main-live/batches/Dec22_Adv_Dec22_Inter/Numpy_2/survey.txt 100%
In [99]: Out[99]: In [100	len(data) 1167
Out[100 In [102 In [103 Out[103	total=data.shape[0] total
Out[103 In [104 Out[104 In [105	data.max() 10 np.max(data)
Out[105 In [106 Out[106 In [110	<pre>np.min(data) 1 detractors=data[data<7].shape[0]</pre>
Out[110 In [111 Out[111	detractors 332 promotors=data[data>8].shape[0] promotors
Out[111 In [112 Out[112 In [113	<pre>passives=data[(data==8) (data==7)].shape[0] passives</pre>
Out[113 In [114 Out[114	52.185089974293064 perc_detractors= (detractors/total)*100 perc_detractors
In [115 Out[115	nps = perc_promotors - perc_detractors nps 23.73607540702657 What is a good NPS score?
	NEEDS IMPROVEMENT GOOD GREAT EXCELLENT
	(-100-0) (1-29) (30-70) (71-100) -100 0 100
	2021 NPS Benchmarks
	Education & Training Insurance Ecommerce Digital Marketing Department Stores 70 61 Department Stores
	Consulting 51 Enterprise Software 44 Construction 43 Airlines 35 Financial Services 34
	SaaS Logistics & Transport Health Insurance Internet Service -50 -25 0 25 50 75 100
In [116 Out[116 In [117	a=np.arange(13) type(a) numpy.ndarray
	array([0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12]) a.dtype dtype('int64')
In []:	

print("Welcome to Numpy-2")

Welcome to Numpy-2

import numpy as np

In [10]: