

Compulsory Task 1

Follow these steps:

- Create a new program named **compTask1.py** and add comments and code to answers to the following questions:
 - Why doesn't `np.array((1, 0, 0), (0, 1, 0), (0, 0, 1, dtype=float))` create a two dimensional array? Write it the correct way. (Help [here](#))
 - What is the difference between `a = np.array([0, 0, 0])` and `a = np.array([[0, 0, 0]])`?
 - A 3 by 4 by 4 is created with `arr = np.linspace(1, 48, 48).reshape(3, 4, 4)`. Index or slice this array to obtain the following (help [here](#), [here](#) and [here](#)):
 - 20.0
 - [9. 10. 11. 12.]
 - [[33. 34. 35. 36.] [37. 38. 39. 40.] [41. 42. 43. 44.] [45. 46. 47. 48.]]
 - [[5. 6.], [21. 22.] [37. 38.]]
 - [[36. 35.] [40. 39.] [44. 43.] [48. 47.]]
 - [[13. 9. 5. 1.] [29. 25. 21. 17.] [45. 41. 37. 33.]]
 - [[1. 4.] [45. 48.]]
 - [[25. 26. 27. 28.], [29. 30. 31. 32.], [33. 34. 35. 36.], [37. 38. 39. 40.]]

Hint: use flatten (help [here](#)) and reshape.

Resources :

- [Numpy Documentation](#)
- [Numpy numpy.linspace](#)
- [Numpy numpy.reshape](#)
- [Numpy numpy.ndarray.flatten](#)