Importing PyTorch From https://pytorch.org/ website where PyTorch Build Stable (1.9.0) OS Linux Package Pip Language Python Compute Platform CPU

pip install torch==1.9.0+cpu torchvision==0.10.0+cpu torchaudio==0.9.0 -f https://download.pytorch.org/whl/torch_stable.html

```
import torch
```

```
torch.__version__
```

```
'1.9.0+cpu'
```

Tensor is same like numpy array or nd-array

```
a= torch.tensor([[1,2],[3,4]])
print(a)
```

```
tensor([[1, 2],
        [3, 4]])
```

```
type(a)
```

```
torch.Tensor
```

In torch we can do the same operations of numpy

```
#To make a zero array of row 4 & col 4
```

```
a_Zero = torch.zeros(4,4)
print(a_Zero)
```

```
tensor([[0., 0., 0., 0.],
        [0., 0., 0., 0.],
        [0., 0., 0., 0.],
        [0., 0., 0., 0.]])
```

```
#To make a one array of row 4 & col 4


a_One = torch.ones(4,4)
print(a_One)
```

```
     tensor([[1., 1., 1., 1.],
             [1., 1., 1., 1.],
             [1., 1., 1., 1.],
             [1., 1., 1., 1.]])
```

```
#To make an array of random values with row 4 & col 4


Ran = torch.rand(4,4)
print(Ran)
```

```
     tensor([[0.2008, 0.3556, 0.2323, 0.0916],
             [0.9762, 0.2004, 0.9662, 0.3331],
             [0.1973, 0.1248, 0.4539, 0.6970],
             [0.2410, 0.8835, 0.3881, 0.2648]])
```

```
#Addition Operation
a1 = torch.rand(2 , 2)
a2 = torch.rand(2 , 2)


print(a1)
```

```
     tensor([[0.2493, 0.6974],
             [0.4215, 0.4909]])
```

```
print(a2)
```

```
     tensor([[0.5253, 0.9814],
             [0.3059, 0.7764]])
```

Will use 3 method to add a1 with a2

```
print(a1 + a2)
```

```
 ⮕  tensor([[0.7746, 1.6787],
             [0.7274, 1.2672]])
```

```
print(a1.add(a2))
```

```
     tensor([[0.7746, 1.6787],
             [0.7274, 1.2672]])
```

```
#Here a1 will be equals to a1 + a2
a1.add_(a2)
```

```
tensor([[0.7746, 1.6787],
        [0.7274, 1.2672]])
```

```
print(a1)
```

```
tensor([[0.7746, 1.6787],
        [0.7274, 1.2672]])
```

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