```
1 import torch
```

```
1 my_torch = torch.arange(10)
2 my_torch
```

```
tensor([0, 1, 2, 3, 4, 5, 6, 7, 8, 9])
```

## Reshape and View

```
1  # Reshape and View
2  my_torch = my_torch.reshape(2, 5)
3  my_torch
```

```
tensor([[0, 1, 2, 3, 4],
        [5, 6, 7, 8, 9]])
```

## Reshape if the number of items is not known using -1\

```
1 # Reshape if the number of items is not known using -1
2 my_torch2 = torch.arange(10)
3 my_torch2
4
```

```
tensor([0, 1, 2, 3, 4, 5, 6, 7, 8, 9])
```

```
1 my_torch2 = my_torch2.reshape(2, -1)
2 my_torch2
```

```
tensor([[0, 1, 2, 3, 4],
        [5, 6, 7, 8, 9]])
```

```
1  my_torch2 = torch.arange(15)
2  my_torch2
3
```

```
tensor([ 0,  1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14])
```

```
1  my_torch2 = my_torch2.reshape(3, -1)
2  my_torch2
```

```
tensor([[ 0,  1,  2,  3,  4],
        [ 5,  6,  7,  8,  9],
        [10, 11, 12, 13, 14]])
```

## opposite direction

```
1  # opposite direction
2  my_torch2 = torch.arange(15)
3  my_torch2
4
```

```
tensor([ 0,  1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14])
```

```
my_torch2 = my_torch2.reshape(-1, 5)
my_torch2
```

```
tensor([[ 0,  1,  2,  3,  4],
        [ 5,  6,  7,  8,  9],
        [10, 11, 12, 13, 14]])
```

```
my_torch2 = torch.arange(15)
print(my_torch2)
my_torch2 = my_torch2.reshape(-1, 5)
my_torch2
```

```
tensor([ 0,  1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14])
tensor([[ 0,  1,  2,  3,  4],
        [ 5,  6,  7,  8,  9],
        [10, 11, 12, 13, 14]])
```

## View

```
# View
my_torch3 = torch.arange(10)
my_torch3
```

```
tensor([0, 1, 2, 3, 4, 5, 6, 7, 8, 9])
```

```
my_torch4 = my_torch3.view(2, 5)
my_torch4
```

```
tensor([[0, 1, 2, 3, 4],
        [5, 6, 7, 8, 9]])
```

Differences bewwen Shape and View:

SO discussion

## With reshape and view, they will update

```
# With reshape and view, they will update
my_torch5 = torch.arange(10)
my_torch5
```

```
tensor([0, 1, 2, 3, 4, 5, 6, 7, 8, 9])
```

```
my_torch6 = my_torch5.reshape(2, 5)
my_torch6
```

```
tensor([[0, 1, 2, 3, 4],
```

```
        [5, 6, 7, 8, 9]])
```

```
my_torch5[1] = 4141
my_torch5
```

```
tensor([   0, 4141,    2,    3,    4,    5,    6,    7,    8,    9])
```

```
my_torch6
```

```
tensor([[   0, 4141,    2,    3,    4],
        [   5,    6,    7,    8,    9]])
```

## Slices

```
# Slices
my_torch7 = torch.arange(10)
my_torch7
```

```
tensor([0, 1, 2, 3, 4, 5, 6, 7, 8, 9])
```

### Grab a specific item

```
# Grab a specific item
my_torch7[7]
```

```
tensor(7)
```

### Grab a slice

```
# Grab a slice
my_torch8 = my_torch7.reshape(5, 2)
my_torch8
```

```
tensor([[0, 1],
        [2, 3],
        [4, 5],
        [6, 7],
        [8, 9]])
```

```
# Get the second column
my_torch8[:, 1]
```

```
tensor([1, 3, 5, 7, 9])
```

```
 # Return a column
 my_torch8[:, 1:]
```

```
tensor([[1],
        [3],
        [5],
        [7]
```

```
[7],
[9]])
```