ex01. 다양한 모델 훈련결과 비교

기본 Parameter

- Train Batch Size   : 128

- Valid Batch Size   : 128

- Num of Epoch   : 10

- Loss Function   : LabelSmoothingCrossEntropy()

- Optimizer   : AdamW

- Learning Rate   : 0.0001

- Train Augmentation

```python
train_aug = A.Compose([
    A.SmallestMaxSize(max_size= 224),
    A.Resize(width= 200, height= 200),
    A.RandomCrop(width= 180, height= 180),
    A.HorizontalFlip(p=0.5),
    A.VerticalFlip(p=0.5),
    A.ShiftScaleRotate(shift_limit= 0.05, scale_limit= 0.06,
                                rotate_limit=20, p=0.5),
    A.RandomBrightnessContrast(p= 0.5),
    A.Normalize(mean=(0.485, 0.456, 0.406), std= (0.229, 0.224, 0.225)),
    ToTensorV2()
])
```

- Valid Augmentation

```python
valid_aug = A.Compose([
    A.SmallestMaxSize(max_size= 224),
    A.Resize(width= 200, height= 200),
    A.CenterCrop(width= 180, height= 180),
    A.Normalize(mean=(0.485, 0.456, 0.406), std= (0.229, 0.224, 0.225)),
    ToTensorV2()
])
```

Result

- 모델 종류: swin_t, resnet50, resnet18, vgg16, mnasnet1_3

- 정확도 순서:

swin_t (98.5%) > **resnet50** (97.6%) > **resnet18** (97.1%) > **vgg16** (95.1%) > **mnasnet1_3** (94.8%)

- 표

Model Accuracy				
Epoch	swin_t	resnet50	resnet18	vgg16	mnasnet1_3
1	0.945	0.903	0.796	0.834	0.477
2	0.961	0.947	0.898	0.901	0.656
3	0.97	0.964	0.939	0.928	0.777
4	0.976	0.962	0.941	0.939	0.838
5	0.983	0.965	0.951	0.944	0.887
6	0.983	0.973	0.953	0.95	0.915
7	0.982	0.97	0.956	0.948	0.932
8	0.985	0.965	0.959	0.957	0.928
9	0.987	0.964	0.956	0.957	0.953
10	**0.985**	**0.976**	**0.971**	**0.951**	**0.948**

- 그래프