fullyConnectedLayer (fc) :

It creates a fully connected layer, a key component in neural networks. Each neuron in this layer connects to every neuron in the previous layer, allowing for comprehensive feature integration. It's crucial for transforming high-level features into final outputs, such as class probabilities in classification tasks. This layer performs a linear transformation (weighted sum plus bias) followed by an optional activation function, facilitating complex pattern learning and decision making in deep learning models.

SoftmaxLayer:

It is used to create a softmax layer, which converts the raw output scores of a neural network into probabilities. This layer applies the softmax function, normalizing the input values so they sum to one. It's essential for classification tasks as it interprets the network's output as probability distributions over multiple classes, enabling the identification of the most likely class. The softmax layer is typically placed at the end of a network for multi-class classification problems.

ClassificationLayer:

It is used to create a classification output layer. This layer is crucial for training neural networks on classification tasks. It calculates the cross-entropy loss between the predicted class probabilities (usually from a preceding SoftmaxLayer) and the true class labels. This loss is then minimized during training to improve the model's accuracy.