

## IDEATION PROCESS:

The purpose of image preprocessing is improving image statistics so that undesired distortions are suppressed and image capabilities which are probably relevant for similar processing are emphasized. The preprocessing receives an image as input and generates an output image as a gray scale, an invert and a smoothed one. Support Vector Machine(SVM) SVM is a binary classifier to analyze the data and recognize the pattern for classification. The main goal is to design a hyper plane that classifies all the training vectors in different classes. The objective of SVM is to identify a function  $f(x)$  which obtain the hyper-plane. It separates two classes of data sets. The linear classifier is defined as the optimal separating hyper plane. The data sets can be separated in two ways: linearly separated or nonlinearly separated. To compare the performance of the proposed SVM method with the existing CNN (Convolutional Neural Network) method. This method uses SVM to classify leaves, identify the disease and suggest the fertilizer It is compared with the existing CNN based leaf disease prediction. The proposed SVM technique gives a better result when compared to existing CNN.