**Abstract**

A brain tumor is defined as the growth of abnormal cells in the tissues of the brain. Brain tumors can be benign (noncancerous) or malignant (cancerous). MRI represents an interesting approach for the anatomical assessment of brain tumors since it provides superior soft tissue contrast and high-resolution information. MRI scan images are taken for this project to process further. This work proposed artificial neural network approach namely Back propagation network (BP-ANN).Image segmentation is done by using region growing algorithm which is used to detect the tumor present in the brain MRI images. GLCM is used for extracting the brain features in the images. This system proposed two modes namely training and testing phase which is used to classify the output.