

## **ABSTRACT**

*Teeth are a hard parts in the mouth. Dental health needs to be considered because otherwise various diseases could come at any time. There are some types of dental diseases, such as Periapical Cysts.*

*This final project develops an application that can detect periapical cyst disease using the method of Adaptive Region Growing which is a method of characteristic analysis and K-Nearest Neighbor classification. Classification aims to determine whether the object is cyst classification or just a normal teeth.*

*In this Final Project, the detection has been done using this method that can help the doctors whether the diagnosis of the disease in the patients that physically they see from the radiograph's image is the same as using this detection system. From this research has been obtained the results with the highest level of 90%.*

**Keywords** : *Teeth, Periapical Cyst, Adaptive Region Growing, KNN (K - Nearest Neighbor).*