

## ABSTRACT

In today's competitive world the evaluation of students' academic performance is the most important task for any educational institution. And in most of the cases this task i.e. the grading of the students is managed manually which is very pain staking and time consuming and not even error free. In this project a system has been developed that is used to calculate the grades of the students in different courses based on their performances on those courses.

Tezpur University is expanding very rapidly in the past couple of years. Thereby the number of students studying in this university is also increasing and hence grading system became tougher. So, we have made an attempt to implement a computerized grading system that deals with the problems on generating the students' grades manually.

Project Environment:

Operating System Used: Windows XP

Software Used: Visual Basics 6.0

This system allows an user to enter the course details, students' details and marks obtained by them in different components of a particular course. Thereby, based on the total marks of the students, the system computes the clustering by using K-means clustering algorithm. Since in this University, there are mainly eight categories of grades that can be assigned to a particular student in a particular course namely A+, A, B+, B, C+, C, D, F, so our system computes the clustering for a minimum of two clusters to a maximum of eight clusters and displays the results of each to the user.

It also specifies the best clustering done which is calculated using "Silhouette Co-efficient". The user has the option to either go with the best result specified by the system or he/she can choose any cluster to be the best and then finally assign grades himself/herself based on the comparison between the mean of the cluster and the highest mark obtained by the students in that course.

It has been taken care of that a higher grade cannot be assigned to a mean which is lower than the previous mean and then finally the grades of each student is displayed.

We have developed the project under Visual Basic 6 environment because it is more users friendly and GUI oriented. Also the syntax is very simple to understand. The use of computerized grades generating system is very much helpful. This method will take fewer amounts of time and also less pain staking.