# **Smart India Hackathon**

# **IIIT Nagpur**

**Team Name: Double Trident**

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**Topic: Marksheet Generation.**

# **Description:**

**Now, there are a lot of Colleges and Schools that are present, and they are rising each day. So, it is become challenging to calculate the grades of each student perfectly within the designated time. To surmount this obstacle, we are going to build a Mark sheet generation system that will generate the score card of each student. By use of this system all Universities, Colleges, and Schools will get the benefit and can provide the result (CGPA) of students with minimal error and in minimum time.**

# **Existing system:**

**Glancing at the existing mark sheet generation system, it is found that many educational institutions, principally engineering colleges, have consolidated “Grading System” in their educational stream. But the problem here is that they are still using hand-operated methods for computing grades and entering them in the mark sheet. This is a very time consuming and uneconomical process. Updating the data in this kind of system is very hard and time consuming.**

# **Proposed system:**

**The self-regulation of mark sheet generation will overcome the time to create the marks card of the student. The University only needs to upload the input file to the system and then the system will build the rest of the operation. This application will check all file inputs and will return the result. The application also provides features to update the provided data. This reduces the computers are much faster than humans, and hence it will take less time to produce the result. University management can also improve the procedure to produce the result if they want. The automation of mark sheet generation system will not only reduce the time but it will also reduce the cost as the number of the person require is less.**

**Mark sheet generation Program:**

**Admin: The University, college or school management who is responsible for generating the marks sheet will be the admin. They will observe the work process and can stop the system if there are any problem.**

**Work process:**

**Admin Login Unit, this will consist of upload and check procedure of input files. For admin read & edit format will be available and for students only read unit will be shown. If error is present in the data then Exception Handling with deal with it and reallocation of the data will be expected from the user.**

**Student Login Unit, This Program will give a feature to the students that according to the SGPA and his expectation SGPA the program will show how he should perform in the next semester to equate the total GPA to the extent.**

**Result: According to the details provided at the time of upload this system will generate the mark sheet of each student. Subject wise the data will be sorted and according to that the result will be shown to the user (SGPA)**

# **Features:**

## **Big Data Analysis.**

## **Data Update via Admin/ verification and evaluation of marks for special cases.**

## **Different login pages for admin & Students.**

## **Final outline of mark sheet using Gaussian quadrature rule.**

## **Ordinance for grace marks for failing students.**

## **Display of top performers in Semester.**

## **Score Card Generator for each student in pdf format.**

## **Additional feature of Attendance for each subject.**

## **Student Friendly GUI for calculation of expected SGPA so as to maintain the desired GPA.**

## **Automated fetching of marks of the students from database.**

## **Calculation of Grades and credits for each course.**

## **Display of Final Performance of the student in terms of Pass/Fail.**

## **Veto Power Allocation for Admin Login.**

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# **Software Used:**

**Python Packages (Pandas,Tkinter,Bisect ,numpy, sympy, Graph)**

**Django (Framework)**

# **Conclusion:**

**We have automated the examination system for generating the mark sheet of the students.**

**In the existing marksheet generators, the data could be tampered with and thus we had added an extra security layer for the system. The program verifies data before calculating the final grades, and this reduces**

**We will make webpage for this to access the data (future proposal).**