**(Grade Calculator – Input student scores and calculate averages and grades automatically.)**

## A PROJECT REPORT

***Submitted by***

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***in partial fulfillment for the award of the degree of***

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# BONAFIDE CERTIFICATE

Certified that this project report **“(Grade Calculator – Input student scores and calculate averages and grades automatically.)”** is the bonafide work of “ **(Aman\_22BCA10104)”** who carried out the project work under my/our supervision.

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Submitted for the project viva-voce examination held on

**INTERNAL EXAMINER EXTERNAL EXAMINE**

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**STUDENT GRADING SYSTEM IN EXCEL (5)**

**CHAPTER 1: INTRODUCTION & DEMO**

In today’s academic environment, timely and accurate evaluation of students' performance is crucial. Manual grading can be time-consuming and error-prone. A digital grading system using Microsoft Excel offers a solution that is both efficient and scalable.

This project involves the creation of a Student Grading System using Microsoft Excel. The sheet includes the following features:

* Automatic calculation of Total and Average marks.
* Letter Grade generation based on average scores.
* Conditional formatting for visual feedback.
* Rounded average for improved readability.
* A snapshot of the working model is attached.

This system can be used by teachers, educators, or institutions to automate student evaluations and generate visually interactive grade reports.

**CHAPTER 2: PROJECT OBJECTIVES (6)**

The main goals of the project are:

1. To automate the process of computing student totals and averages.
2. To apply logic-based functions for assigning grades based on average scores.
3. To visually differentiate student performance using conditional formatting and color coding.
4. To use rounding for standardizing average scores.
5. To make the sheet interactive, scalable, and reusable.

**CHAPTER 3: TECHNOLOGIES IMPLEMENTED (7)**

The project uses Microsoft Excel, a powerful spreadsheet tool, as its core platform. Key components include:

* **Excel Formulas:** For calculation of totals, averages, and grades.
* **Conditional Formatting:** For highlighting grades and scores.
* **Rounding Functions:** For user-friendly average values.
* **VBA (Visual Basic for Applications):** Optional feature for dynamic automation.

Important functions used:

* SUM() for total score calculation.
* AVERAGE() for average marks.
* ROUND() for rounding averages.
* IF() for implementing grading logic.

**CHAPTER 4: PROJECT FEATURES (8)**

**4.1 Grade Calculation Formula** The following nested IF formula assigns grades:

=IF(G2 < 50, "F",

IF(G2 >= 90, "A",

IF(G2 >= 80, "B",

IF(G2 >= 70, "C",

IF(G2 >= 50, "D", "F")

)

)

)

)

**4.2 Total and Average Calculation**

* **Total:** =B2+C2+D2+E2
* **Average:** =F2/4
* **Rounded Average:** =ROUND(G2, 1)

**4.3 Conditional Formatting for Grades** Grades are color-coded using conditional formatting:

* A: Green
* B: Light Green
* C: Yellow
* D: Orange
* F: Red

**4.4 Row Formatting Based on Grade** To highlight entire rows:

=$H2="A"

Similar formulas are applied for other grades.

**CHAPTER 5: DEVELOPMENT PROCESS (9)**

**5.1 Steps Taken:**

* Student names and test scores were added to columns A to E.
* Total score was calculated using SUM().
* Average was computed and rounded.
* Grade formula was applied using nested IF statements.
* Conditional formatting rules were created for each grade.

**5.2 Enhancing Readability with Row Colors** Using formula-based conditional formatting, entire rows are highlighted based on the grade column. This enhances the overall readability of student performance at a glance.

**CHAPTER 6: CONCLUSION (10)**

The Student Grading System in Microsoft Excel is a robust and efficient solution for academic assessment. By automating calculations, incorporating logical grading, and enhancing visualization through conditional formatting and color coding, this system streamlines the grading process significantly. It promotes accuracy, saves time, and provides an at-a-glance understanding of student performance. Optional enhancements such as VBA macros and grading scale tables add flexibility and dynamism to the system.

Whether used in schools, colleges, or personal tutoring environments, this system stands out for its simplicity, versatility, and effectiveness. By embracing these Excel capabilities, educators can shift their focus from administrative burdens to meaningful student engagement and performance analysis.

