**SHERIDAN COLLEGE**

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Instructor:

Assignment 1

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1. **Problem definition**
2. **Functionalities:**

* The program reads the string from the file.
* The program checks the length of the string
* The program checks out the reverse of the string
* The program checks out whether a string is palindrome or not
* The program writes the results in an output file

1. **Modularity**

* Length.c (contains getLength function)
* Reverse.c (contains reverseString function)
* Palindrome.c (contains checkPalindrome function)
* main.c (contains main and writeResults functions)

**Test input:**

**Output**:

1. **Functions explanation:**

|  |  |
| --- | --- |
| Funtion name | Explanation |
| void initialize (Student \*s) | Accept a student pointer  Read date from input file and initialize each student data using pointer  Calculate final grade by calling calculateFinalGrade(Student\* s) function |
| double calculateFinalGrade(Student \*s) | Accept pointer of Student array  And calculate final grade base on this grade weight:   * Assignment: 25% * Quizzes: 5% * Midterm: 30% * Exam: 40%   Return the final grade |
| void writeToFile(Student \*s) | Accept a pointer of Student array and print student data to console and result.txt file |

**Tpu**

**CreateBoard()**

public void CreateBoard()

{

for (int i = 0; i < 8; i++)

{

for (int j = 0; j < 8; j++)

{

board[i, j] = 0;

buttons[i, j] = new Button();

buttons[i, j].Size = new Size(50, 50);

buttons[i, j].Margin = new Padding(0, 0, 0, 0);

buttons[i, j].Tag = i + "," + j;

buttons[i, j].Click += Button\_Click;

if ((i + j) % 2 == 0)

buttons[i, j].BackColor = Color.DimGray;

tableLayoutPanel1.Controls.Add(buttons[i, j], i, j);

}

}

}

Initialize the board with 2D array buttons