**Final Assignment**

**Data Structures Lab**

Total Marks: 40

1. Write the program to solve the **postfix expression** using stack data structure.
   1. Implementation of stack data structure. 10
   2. Using the implemented data structure solve postfix expression 10

| Input | Output |
| --- | --- |
| 12 5 + 2 \* -17 / | -2 |
| 12 5 2 \* + 7 - | 15 |
| 9 7 8 5 - + - | -1 |
| 5 12 \* 50 - 20 + | 30 |

1. Write the program to check palindrome string [must use restrictive data structures]
   1. Implementation of the restrictive data structures. 10
   2. Using the implemented data structures to check palindrome strings 10

| Input | Output |
| --- | --- |
| abb1bba | Palindrome |
| wessew | Palindrome |
| 1123321 | Not Palindrome |
| 11121112 | Not Palindrome |