Assignment - 2

**Q1.** Write a pseudo code

1. For an array of integer perform the following operations.
2. Insert at index.

i) define an integer array **A** with **N** elements and maximum it can store is defined by **MAX**.

ii) **index** is the index at which element is to be inserted.

iii) if N = MAX

display message “array is full”

return

iv) for i = N to index

A[i + 1] = A[i]

end i loop

v) A[index] = new\_element

vi) N = N + 1

vii) return

1. Delete first element.

i) define an integer array **A** with **N** elements.

ii) the maximum elements **A** can store is defined by **MAX**.

iii) if N = 0

display message “array is empty”

return

else

iv) for i = 0 to N

A[i] = A[i+1]

end i loop

v) N = N -1

vi) return

1. Traverse in reverse order.

i) define an integer array **A** with **N** elements and maximum it can store is defined by **MAX**.

ii) if N = 0

display message “array is empty”

else

iii) for i = N to 0

display A[i]

end i loop

iv) return

1. For a strings perform the following operations.
2. Check palindrome.

i) let **STR** be the input string and **N** be the characters in the string.

ii) temp = STRING variable

iv) for i = N to 0

temp[n - i] = STR[i]

end i loop

v) if(STR = temp)

display “palindrome”

return true

else

display “not palindrome”

return false

1. Find occurrence of a given character.

i) let **STR** be the input string with **N** characters

ii) get **C** character to check the occurrence

iii) let **COUNT** be the counter with initial value **0**

v) for i = 0 to N

if STR[i] = C

COUNT = COUNT + 1

end i loop

vi) display COUNT

vii) return COUNT

1. Compare two strings.

i) let **STR1** and **STR2** be the two input strings with **N1** and **N2** length respectively.

ii) if N1 != N2

display ”Not Equal”

return false

else

iii) for i = 0 to N1

if STR1[i] != STR2[i]

display ”Not Equal”

return false

end i loop

iv) if i = N1

display “Equal”

return true

1. Multiply two 3x3 matrices.

i) let **A** and **B** be the input matrices

ii) let **ANSWER** bet the matrix holding the multiplication

iii) for i = 1 to 3

for j = 1 to 3

sum = 0

for k = 1 to 3

sum = sum + A[i, k] \* B [k, j]

end k loop

ANSWER[i, j] = sum

end j loop

end i loop

iv) return ANSWER