


Objectives:

- C++ Programming Pointers
- C++ File name is **StudentID_qNO.cpp**
- **Note:** Write comments in your code for explaining steps.
- **Note:** Pay attention to the indentations in your code.

Question 1: Define an integer array “arr” with size of (4,4) and initial value of 0.

- Write a function **"replace"** that takes a pointer "ptr" which points "arr" as input and replaces inner values of "arr" with value of 1.
- Print "arr" after calling **"replace"** function in main function.

Before					After			
0	0	0	0		0	0	0	0
0	0	0	0		0	1	1	0
0	0	0	0		0	1	1	0
0	0	0	0		0	0	0	0

Question 2: Define an integer array “grades” with size of 5 which stores the grades of students and implement the given steps below:

- Define a pointer “ptrGrades” that points *grades*. Assign elements of array by integer values taken from user via *ptrGrades*. Print the elements of array via pointer *ptrGrades*.
- Define a string/char array “results” with size of 5 which represent the letter grade of students.
- Define a function that takes two input (*grades*, *results*) and finds the letter grade with respect to the given scale. Fill *results* with given shortcuts of letter grades.
100-80 => AA
80-70 => BB
70-50 => CC
50-0 => FF
- Print *results* on screen in main function considering if letter grade is FF print FAIL otherwise print PASS.

Question 3: Suppose that an array A contains zero and non-zero values. Replace the zero values with the value of -1 and replace it at the end of the array. Use a function “replaceZero2MinusOne” that takes a pointer as input to implement this. Use the given predefined array for this question: A(2,0,0,1,4,9,0,5,0,7)

Step 1: A(2,0,1,4,9,0,5,0,7,-1)

Step 2: A(2,1,4,9,0,5,0,7,-1,-1)

Step 3: A(2,1,4,9,5,0,7,-1,-1,-1)

Step 4: A(2,1,4,9,5,7,-1,-1,-1,-1)