**Topic 2: Pointers  
Question:  
Write a function in C that takes a pointer to an integer array and its size, and then rearranges the array in-place such that all even numbers appear before odd numbers, preserving the original relative order using only pointer arithmetic (no indexing with []).**

#include <stdio.h>

void rearrange(int \*arr, int size) {

int \*i = arr;

while (i < arr + size) {

if (\*i % 2 != 0) {

int \*j = i + 1;

while (j < arr + size && \*j % 2 != 0) {

j++;

}

if (j == arr + size) break;

int even = \*j;

int \*k = j;

while (k > i) {

\*k = \*(k - 1);

k--;

}

\*i = even;

}

i++;

}

}

int main() {

int size;

printf("Enter the number of elements in the array: ");

scanf("%d", &size);

int arr[size];

printf("Enter the elements of the array:\n");

for (int i = 0; i < size; ++i) {

printf("Element %d: ", i + 1);

scanf("%d", &arr[i]);

}

printf("Original array: ");

for (int i = 0; i < size; ++i) {

printf("%d ", arr[i]);

}

printf("\n");

rearrange(arr, size);

printf("Rearranged Array: ");

for (int i = 0; i < size; ++i) {

printf("%d ", arr[i]);

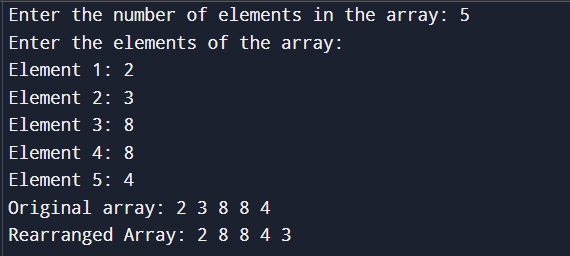
}

printf("\n");

return 0;

}

**OUTPUT:**

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