

Name: KEY

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ICS 103, Term 132

Computer Programming in C

Quiz# 4

Date: Tuesday, April 29, 2014

Q1. Determine the output of each of the following programs:

<pre>#include &lt;stdio.h&gt; int atest(int a[], int n){     int i, t;     for(i=0; i&lt;n/2; i++){         t=a[i]; a[i]=a[n-i-1]; a[n-i-1]=t;     } } int main() {     int x[10]={1,2,3,4,5,6,7,8,9,10};     atest(x,10);     for (int i=0; i&lt;10; i++)         printf("%d ", x[i]);     return 0; }</pre>	<p>10 9 8 7 6 5 4 3 2 1</p>
<pre>#include &lt;stdio.h&gt; #define SIZE 7 int main() {     int a[SIZE],i;     printf("Enter 7 integers\n");     int count = SIZE-2;     for(i = 1;i &lt;= SIZE; i++){         scanf("%d",&amp;a[count]);         count = count-2;         if(count&lt;0)             count=SIZE-1;     }     for(i=0;i &lt; SIZE; i++)         printf("%d\n",a[i]);     return 0; } Values typed by the user: Enter 7 integers 7 9 2 1 13 15 17</pre>	<p>17 2 15 9 13 7 1</p>

**Q2.** Write a C program that reads 10 integer numbers and store them into an array. The program then prompts the user for an integer number n. After reading n, it will display the numbers from the array that are multiples of n. If the program does not find any multiple of n in the array, it will display "None is found". Write a function that receives an array of integer, its size, and the number for which multiples are to be searched for, and displays the multiples found and returns their count. Use this function in your program to implement the desired functionality.

The sample runs below show how the program works. In the first run, the value typed by the user for n is 4 and in the second run it is 9.

```
#include <stdio.h>
#include <stdlib.h>
```

```
int multiples (int A[], int size, int n)
{
    int i, count=0;
    for (i=0; i < size; i++)
        if (A[i] % n == 0){
            printf("%d\t", A[i]);
            count++;
        }
    return count;
}
```

```
int main ()
{
    int A[10], n, m, i;

    printf("Enter 10 integer numbers :\n");
    for (i=0; i<10; i++)
        scanf("%d", &A[i]);
    printf("Search for multiples of: ");
    scanf("%d", &n);
    m = multiples(A, 10, n);
    if (m == 0)
        printf("None is found\n");
    else
        printf("\n");

    system("pause");
    return 0;
}
```