

Experiment No: 01**Experiment Name:** Operations in Array

Objective: To learn how to store data in an array and display it in reverse order by traversing the array from end to start and performing multiplication

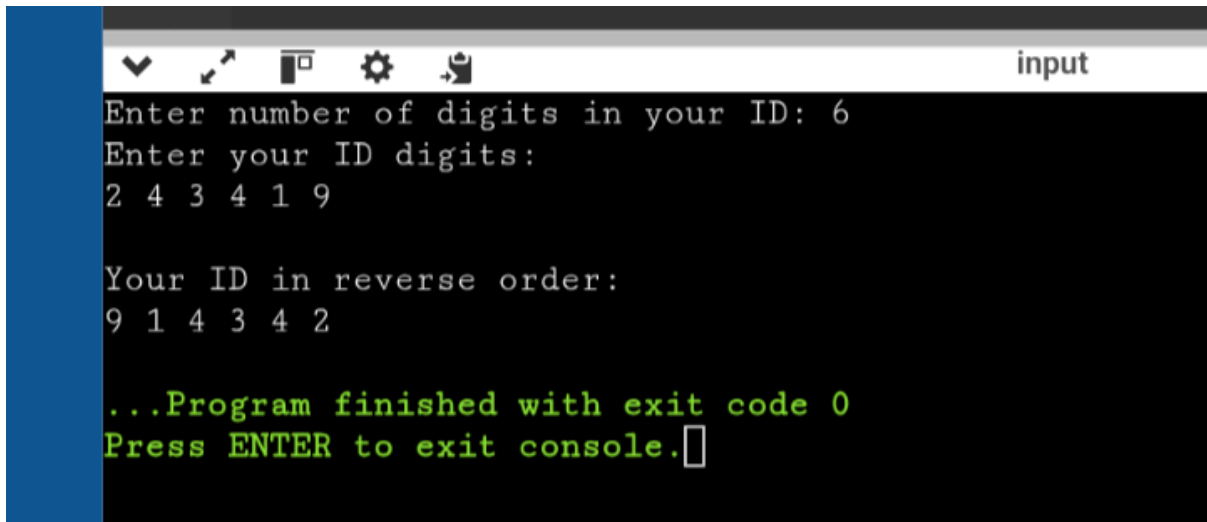
Task No: 01

Problem Statement: Input your own ID as an array and print the array in reverse order.

Source Code (C):

```
1  #include <stdio.h>
2
3  int main() {
4      int n, i;
5
6      // Task 1: Input ID digits
7      printf("Enter number of digits in your ID: ");
8      scanf("%d", &n);
9
10     int arr1[n];
11     printf("Enter your ID digits:\n");
12     for(i = 0; i < n; i++) {
13         scanf("%d", &arr1[i]);
14     }
15
16     // Print ID in reverse order
17     printf("\nYour ID in reverse order:\n");
18     for(i = n - 1; i >= 0; i--) {
19         printf("%d ", arr1[i]);
20     }
21
22     return 0;
23 }
24
```

Output:



```

input
Enter number of digits in your ID: 6
Enter your ID digits:
2 4 3 4 1 9

Your ID in reverse order:
9 1 4 3 4 2

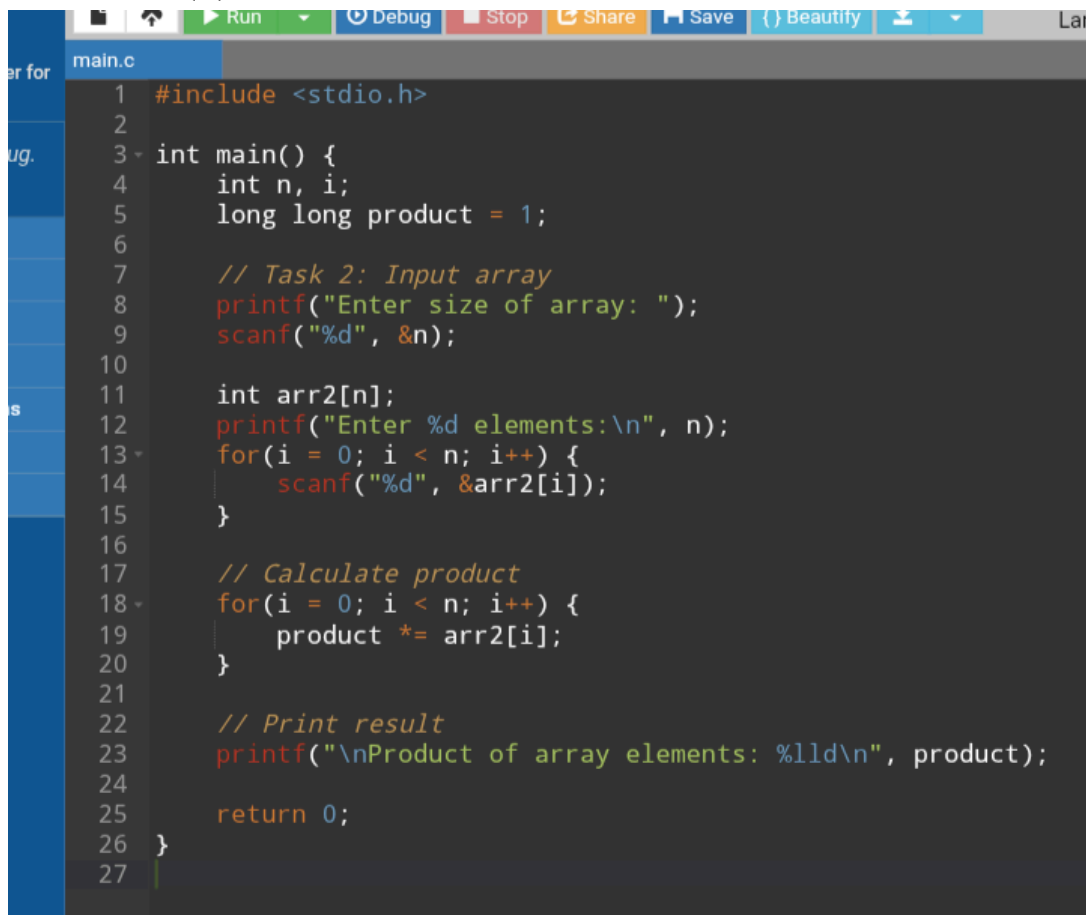
...Program finished with exit code 0
Press ENTER to exit console.

```

Task No: 02

Problem Statement: Input an array from the user. Find the product of the elements of the array.

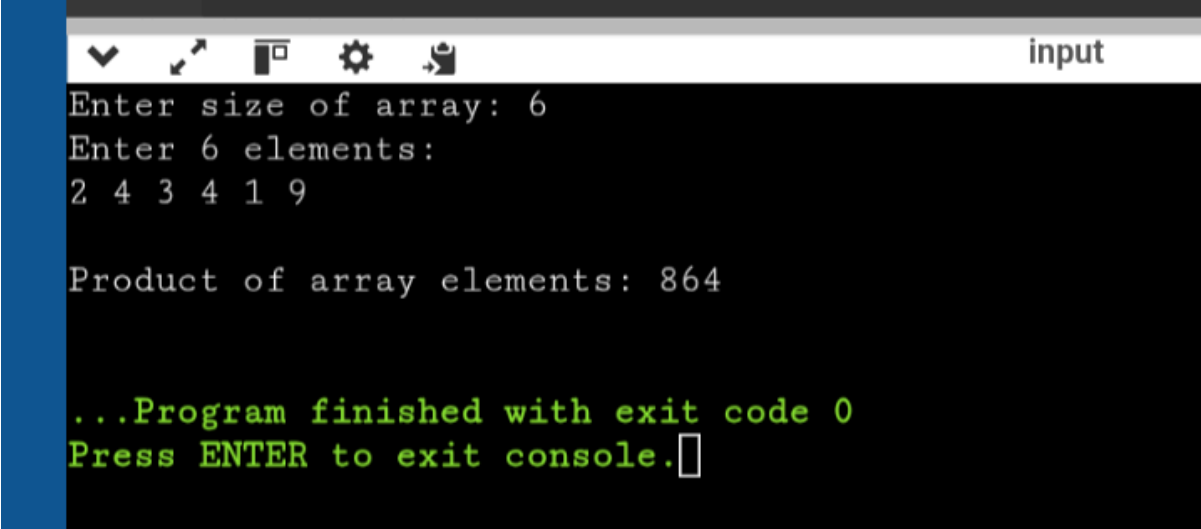
Source Code (C):



```

main.c
1  #include <stdio.h>
2
3  int main() {
4      int n, i;
5      long long product = 1;
6
7      // Task 2: Input array
8      printf("Enter size of array: ");
9      scanf("%d", &n);
10
11     int arr2[n];
12     printf("Enter %d elements:\n", n);
13     for(i = 0; i < n; i++) {
14         scanf("%d", &arr2[i]);
15     }
16
17     // Calculate product
18     for(i = 0; i < n; i++) {
19         product *= arr2[i];
20     }
21
22     // Print result
23     printf("\nProduct of array elements: %lld\n", product);
24
25     return 0;
26 }
27

```

Output:A screenshot of a console window with a dark background and a light blue title bar. The title bar contains several icons (a checkmark, a cursor, a square, a gear, and a folder) and the word "input" on the right. The console text is as follows:

```
Enter size of array: 6
Enter 6 elements:
2 4 3 4 1 9

Product of array elements: 864

...Program finished with exit code 0
Press ENTER to exit console.
```

Discussion: In this experiment, I learned how to efficiently manipulate arrays through different operations. By printing my ID in reverse order, I gained a clear understanding of array indexing and traversing arrays backward. The second task, calculating the product of array elements, reinforced the importance of initializing a variable correctly and iterating through all elements without errors. These tasks demonstrated how arrays can store and process multiple values systematically. I also observed how proper handling of loops ensures accurate results, even with larger datasets. Overall, this experiment strengthened my logical thinking and practical skills in array operations, laying a strong foundation for more advanced programming challenges.