

EXERCISE-29

AIM: To write a C program that finds and prints duplicate values in a given array.

Algorithm:

1. Start the program.
2. Input the number of elements and the array values.
3. Use two nested loops:
 - Outer loop selects each element.
 - Inner loop compares it with the rest of the elements.
4. If a duplicate is found and hasn't been printed before, print it.
5. End the program.

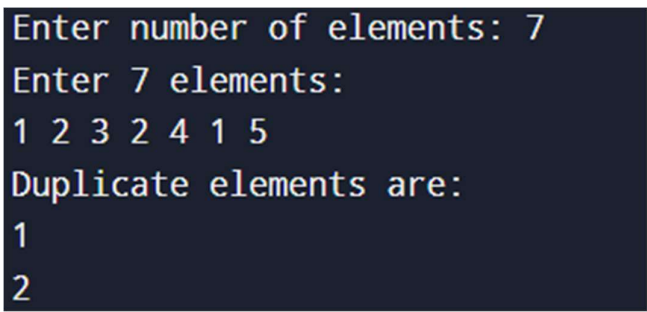
Program Code:

```
#include <stdio.h>

int main() {
    int arr[100], n, i, j;
    int visited[100] = {0};
    printf("Enter number of elements: ");
    scanf("%d", &n);
    printf("Enter %d elements:\n", n);
    for (i = 0; i < n; i++)
        scanf("%d", &arr[i]);
    printf("Duplicate elements are:\n");
    for (i = 0; i < n; i++) {
```

```
    if (visited[i] == 1)
        continue;
    int count = 1;
    for (j = i + 1; j < n; j++) {
        if (arr[i] == arr[j]) {
            visited[j] = 1;
            count++;
        }
    }
    if (count > 1) {
        printf("%d\n", arr[i]);
    }
}
return 0;
}
```

Input and Output:

A screenshot of a terminal window with a dark background. It shows the following text: "Enter number of elements: 7", "Enter 7 elements:", "1 2 3 2 4 1 5", "Duplicate elements are:", "1", and "2".

```
Enter number of elements: 7
Enter 7 elements:
1 2 3 2 4 1 5
Duplicate elements are:
1
2
```

Result:

The program successfully identifies and displays duplicate values in the array.

