

EXPERIMENT 4:

FREQUENCY

CODE

```
include <stdio.h>

int main() {
    int arr[100], n, i, j, count;

    printf("Enter number of elements: ");

    scanf("%d", &n);

    printf("Enter elements:\n");

    for(i = 0; i < n; i++)

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


    printf("\nFrequencies:\n");

    for(i = 0; i < n; i++) {
        count = 1;

        // Skip if already counted

        for(j = 0; j < i; j++) {

            if(arr[i] == arr[j])

                break;

        }

        if(i == j) {

            for(j = i + 1; j < n; j++) {

                if(arr[i] == arr[j])

                    count++;

            }

            printf("%d = %d times\n", arr[i], count);

        }

    }

}
```

```
return 0;

}
```

OUTPUT:

The screenshot shows a C++ IDE with the source code for `frequency.cpp` on the left and its execution output on the right. The source code is as follows:

```
#include <stdio.h>

int main() {
    int arr[100], n, i, j, count;
    printf("Enter number of elements: ");
    scanf("%d", &n);
    printf("Enter elements:\n");
    for(i = 0; i < n; i++)
        scanf("%d", &arr[i]);
    printf("\nFrequencies:\n");
    for(i = 0; i < n; i++) {
        count = 1;
        for(j = 0; j < i; j++) {
            if(arr[i] == arr[j])
                break;
        }
        if(i == j) {
            for(j = i + 1; j < n; j++) {
                if(arr[i] == arr[j])
                    count++;
            }
            printf("%d = %d times\n", arr[i], count);
        }
    }
    return 0;
}
```

The execution output on the right shows the program's runtime behavior:

```
Enter number of elements: 5
Enter elements:
1
1
5
5
3

Frequencies:
1 = 2 times
5 = 2 times
3 = 1 times

-----
Process exited after 22.23 seconds with return value 0
Press any key to continue . . .
```

The IDE's status bar at the bottom indicates the current line is 24, column is 6, and the file is `frequency.cpp`. The output window shows the program's execution details, including the output filename, size, and compilation time.