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CA – 3 (CAP 770)

```cpp
#include <iostream>
using namespace std;
int main() {
    void fun();
    fun();
}

int que[10];
int top = -1;
string name;
int nu;
int temp;
fun () {
    //which operation to perform
    cout << "Enter you want to enqueue or dequeue or end? ";
    cin >> name;
    //enqueue
    if (name == "e") {
        if (top == sizeof(que)) {
            cout << "Queue overflow" << endl;
        }
        else {
            cout << "Enter the number you want to enqueue? ";
            cin >> nu;
            top = top + 1;
            que[top] = nu;
        }
        fun();
    }
    //dequeue
    else if (name == "d") {
        if (top < 0) {
            cout << "Queue underflow" << endl;
        }
        else {
            temp = que[0];
            for (int i = 0 ; i <= top ; i++) {
                que[i] = que[i+1];
            }
            top = top-1;
            cout << "Number deleted is " << temp << endl;
        }
        fun();
```

```cpp
    }
    //end
    else if (name == "end"){
        for (int i = 0; i <= top; i++) {
            cout << que[i] << endl;
        }
    }
}
```

Output –

```
Enter you want to enqueue or dequeue or end? e
Enter the number you want to enqueue? 3
Enter you want to enqueue or dequeue or end? e
Enter the number you want to enqueue? 4
Enter you want to enqueue or dequeue or end? e
Enter the number you want to enqueue? 5
Enter you want to enqueue or dequeue or end? e
Enter the number you want to enqueue? 6
Enter you want to enqueue or dequeue or end? e
Enter the number you want to enqueue? 7
Enter you want to enqueue or dequeue or end? e
Enter the number you want to enqueue? 9
Enter you want to enqueue or dequeue or end? d
Number deleted is 3
Enter you want to enqueue or dequeue or end? d
Number deleted is 4
Enter you want to enqueue or dequeue or end? end
5
6
7
9
PS E:\MCA\MCA 2nd\DATA STUCTURE\1-22-24>
```