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SEC B

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ASSINGNMENT 03

INPUT:

```
#include <iostream>
#include <queue>
#include <string>
#include <sstream>
using namespace std;

int main() {
    queue<int> q;
    int choice, value;

    do {
        cout << "\n----- MENU ----- \n";
        cout << "1. Enqueue (Add)\n";
        cout << "2. Dequeue (Remove)\n";
        cout << "3. Display Queue\n";
        cout << "4. Create Queues from String\n";
        cout << "5. Exit\n";
        cout << "Enter your choice: ";
        cin >> choice;

        if (choice == 1) {
            cout << "Enter value to add: ";
            cin >> value;
            q.push(value);
            cout << "Added " << value << " to queue.\n";
        }
        else if (choice == 2) {
            if (q.empty())
                cout << "Queue is empty!\n";
            else {
                cout << "Removed " << q.front() << " from queue.\n";
                q.pop();
            }
        }
        else if (choice == 3) {
            if (q.empty())
                cout << "Queue is empty!\n";
            else {
                cout << "Queue elements: ";
                queue<int> temp = q;
                while (!temp.empty()) {
                    cout << temp.front() << " ";
                    temp.pop();
                }
                cout << endl;
            }
        }
        else if (choice == 4) {
            cin.ignore(); // clear input buffer
            string text;
            cout << "Enter a string: ";
```

```

        getline(cin, text);

        stringstream ss(text);
        string word;
        int count = 1;

        while (ss >> word) {
            queue<char> q2;

            // ✔ Using old-style loop (works in all C++ versions)
            for (int i = 0; i < (int)word.length(); i++) {
                char c = word[i];
                q2.push(c);
            }

            cout << "Q" << count++ << ": ";
            while (!q2.empty()) {
                cout << q2.front();
                q2.pop();
                if (!q2.empty()) cout << "-";
            }
            cout << endl;
        }
    }
    else if (choice == 5) {
        cout << "Program Ended.\n";
    }
    else {
        cout << "Invalid Choice!\n";
    }

} while (choice != 5);

return 0;
}

```

Output;

```

C:\Users\DELL\OneD x + v
----- MENU -----
1. Enqueue (Add)
2. Dequeue (Remove)
3. Display Queue
4. Create Queues from String
5. Exit
Enter your choice: 1
Enter value to add: 10
Added 10 to queue.

----- MENU -----
1. Enqueue (Add)
2. Dequeue (Remove)
3. Display Queue
4. Create Queues from String
5. Exit
Enter your choice: 3
Queue elements: 10

----- MENU -----
1. Enqueue (Add)
2. Dequeue (Remove)
3. Display Queue
4. Create Queues from String
5. Exit
Enter your choice: 4
Enter a string: data structure and algo
Q1: d-a-t-a
Q2: s-t-r-u-c-t-u-r-e
Q3: a-n-d
Q4: a-l-g-o

```