TO-DO LIST

Code:

```
#include <iostream>
#include <vector>

using namespace std;

struct Task {
    string description;
    bool isCompleted;

    Task(const string& desc) : description(desc), isCompleted(false) {}
};

void addTask(vector<Task>& tasks) {
    cin.ignore();
    cout << "Enter task description: ";
    string description;
    getline(cin, description);
    tasks.emplace_back(description);
    cout << "Task added!\n";
}
```

```
void viewTasks(const vector<Task>& tasks) {
    if (tasks.empty()) {
        cout << "No tasks available.\n";
        return;
    }

    cout << "\nTo-Do List:\n";
    for (size_t i = 0; i < tasks.size(); ++i) {
        cout << i + 1 << ". [" << (tasks[i].isCompleted ? "Completed" : "Pending") << "] " <<
tasks[i].description << endl;
    }
}

void updateTask(vector<Task>& tasks, const string& action) {
    cout << "Enter task number to " << action << ": ";
    int taskNumber;
    cin >> taskNumber;

    if (taskNumber < 1 || taskNumber > tasks.size()) {
        cout << "Invalid task number!\n";
        return;
    }

    if (action == "complete") {
        tasks[taskNumber - 1].isCompleted = true;
        cout << "Task marked as completed!\n";
```

```
    } else if (action == "remove") {
        tasks.erase(tasks.begin() + taskNumber - 1);
        cout << "Task removed!\n";
    }
}

void displayMenu() {
    cout << "\nTo-Do List Manager\n";
    cout << "1. Add Task\n";
    cout << "2. View Tasks\n";
    cout << "3. Mark Task as Completed\n";
    cout << "4. Remove Task\n";
    cout << "5. Exit\n";
    cout << "Choose an option: ";
}

int main() {
    vector<Task> tasks;
    int choice;

    while (true) {
        displayMenu();
        cin >> choice;

        switch (choice) {
            case 1: addTask(tasks); break;
```

```
        case 2: viewTasks(tasks); break;
        case 3: updateTask(tasks, "complete"); break;
        case 4: updateTask(tasks, "remove"); break;
        case 5: cout << "Goodbye!\n"; return 0;
        default: cout << "Invalid choice! Try again.\n"; break;
      }
   }
}
```

Output:

```
To-Do List Manager
1. Add Task
2. View Tasks
3. Mark Task as Completed
4. Remove Task
5. Exit
Choose an option: 1
Enter task description: playing
Task added!

To-Do List Manager
1. Add Task
2. View Tasks
3. Mark Task as Completed
```

4. Remove Task

5. Exit

Choose an option: 2

To-Do List:

1. [Pending] playing

To-Do List Manager

1. Add Task

2. View Tasks

3. Mark Task as Completed

4. Remove Task

5. Exit

Choose an option: 3

Enter task number to complete: 1

Task marked as completed!

To-Do List Manager

1. Add Task

2. View Tasks

3. Mark Task as Completed

4. Remove Task

5. Exit

Choose an option: 4

Enter task number to remove: 1

Task removed!

To-Do List Manager

1. Add Task

2. View Tasks

3. Mark Task as Completed

4. Remove Task

5. Exit

Choose an option: 2

No tasks available.

To-Do List Manager

1. Add Task

2. View Tasks

3. Mark Task as Completed

4. Remove Task

5. Exit

Choose an option: 5

Goodbye!

=== Code Execution Successful ===