

```
//Shikhar Kanaujia 12311005 CSE-A
```

```
#include <bits/stdc++.h>
```

```
using namespace std;
```

```
class SymbolTableEntry {
```

```
public:
```

```
    string name;
```

```
    string type;
```

```
    string scope;
```

```
    SymbolTableEntry(string name, string type, string scope) {
```

```
        this->name = name;
```

```
        this->type = type;
```

```
        this->scope = scope;
```

```
    }
```

```
};
```

```
int main() {
```

```
    int n;
```

```
    cout << "Enter the number of variables: ";
```

```
    cin >> n;
```

```
    cin.ignore();
```

```
    vector<SymbolTableEntry> table;
```

```
    for (int i = 0; i < n; i++) {
```

```
        string name, type, scope;
```

```
        cout << "Enter details for variable " << (i + 1) << endl;
```

```
        cout << "Name: ";
```

```
        getline(cin, name);
```

```
cout << "Type: ";
```

```
getline(cin, type);
```

```
cout << "Scope (e.g., global, local): ";
```

```
getline(cin, scope);
```

```
table.emplace_back(name, type, scope);
```

```
}
```

```
cout << "\n+-----+-----+-----+" << endl;
```

```
cout << "| " << setw(10) << left << "Name"
```

```
    << " | " << setw(10) << left << "Type"
```

```
    << " | " << setw(10) << left << "Scope" << " |" << endl;
```

```
cout << "+-----+-----+-----+" << endl;
```

```
for (const auto& entry : table) {
```

```
cout << "| " << setw(10) << left << entry.name  
    << " | " << setw(10) << left << entry.type  
    << " | " << setw(10) << left << entry.scope << " |" << endl;  
cout << "+-----+-----+-----+" << endl;  
}
```

```
return 0;
```

```
}
```