

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

enum State { A, B, C, D, E, F, G, H };

State transition(State current, char input) {
    switch (current) {
        case A:
            if (input == 'a') return B;
            else if (input == 'b') return C;
            break;

        case B:
            if (input == 'a') return B;
            else if (input == 'b') return D;
            break;

        case C:
            if (input == 'a') return E;
            else if (input == 'b') return C;
            break;

        case E:
            if (input == 'a') return F;
            else if (input == 'b') return G;
            break;
    }
}
```

```
    if (input == 'a') return E;
    else if (input == 'b') return F;
    break;

case F:
    if (input == 'a') return G;
    else if (input == 'b') return F;
    break;

case G:
    if (input == 'a') return G;
    else if (input == 'b') return H;
    break;

case H:
    return H;

case D:
    return D;

}

return D;
}
```

```
int main() {
    string input;
    cout << "Enter input string: ";
    cin >> input;
```

```
State current = A;

for (char ch : input) {
    current = transition(current, ch);
}

if (current == H)
    cout << "Accepted\n";
else
    cout << "Rejected\n";

return 0;
}
```