نمونه کد شبیه‌سازی سیکل رانکین

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

// Sakhtare State baraye zakhire moghayese termodinamiki har halat
struct State {
    double pressure;    // Feshar dar kPa
    double enthalpy;   // Entalpi dar kJ/kg
    double entropy;    // Entropi dar kJ/kg·K
};

int main() {
    // Halat 1: Maye seyr shode dar khoroj condenser
    State state1 = {10, 191.8, 0.6492}; // Feshar (kPa), Entalpi, Entropi

    // Proses pump: Feshar maye ba isentropic compression
    double specific_volume = 0.001010; // Hajm vijaye maye dar halat1 (m³/kg)
    double pump_pressure_out = 10000; // Feshar khoroj pump (kPa)
    double pump_work = specific_volume * (pump_pressure_out - state1.pressure); // Kar pump
    State state2 = {pump_pressure_out, state1.enthalpy + pump_work, state1.entropy}; // Halat2

    // Halat 3: Bokhar superheat shode dar khoroj boiler
    State state3 = {10000, 3625.3, 6.9029}; // Feshar bala va daraee

    // Proses turbine: Expansion isentropic
    double condenser_pressure = 10; // Feshar condenser (kPa)
    // Meghdar entropi baraye maye seyr shode va bokhar dar feshar condenser
    double s_f = 0.6492, s_g = 8.1501;
    double quality = (state3.entropy - s_f) / (s_g - s_f); // Keyfiyat bokhar baad az expansion
    double h_f = 191.8, h_fg = 2392.8; // Meghdar entalpi dar feshar condenser
    double h4 = h_f + quality * h_fg; // Entalpi dar halat4
    State state4 = {condenser_pressure, h4, state3.entropy}; // Halat4

    // Mohasebe kar va garmaye vared shode
    double turbine_work = state3.enthalpy - state4.enthalpy; // Kar turbine
    double heat_input = state3.enthalpy - state2.enthalpy; // Garmaye vared shode
    double net_work = turbine_work - pump_work; // Kar khales
    double efficiency = (net_work / heat_input) * 100; // Zarib kardavari termiki

    // Khoroje natijeha
    cout << "Natije Simulation Rankine Cycle:" << endl;
    cout << "--------------------------------" << endl;
    cout << "Kar Pump: " << pump_work << " kJ/kg" << endl;
    cout << "Kar Turbine: " << turbine_work << " kJ/kg" << endl;
    cout << "Garmaye Vared Shode: " << heat_input << " kJ/kg" << endl;
    cout << "Kar Khales: " << net_work << " kJ/kg" << endl;
    cout << "Zarib Kardavari Termiki: " << efficiency << " %" << endl;

    return 0;
}
// License 'This code is licensed to process-project.com. Unauthorized use, distribution, or modification is prohibited.' "
```