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1: #include <iostream>
2: #include <fstream>
3: #include <string>
4: #include <iomanip>
5:
6: using namespace std;
7:
8: class Employee {
9: public:
10:     Employee (string name_, double years_of_service_)
11:         : name(name_), years_of_service(years_of_service_) {}
12:     friend ostream & operator<< (ostream &ofs, Employee &rhs);
13:     int get_salary () { return salary; }
14: protected:
15:     string name;
16:     double years_of_service;
17:     int salary;
18: };
19:
20: ostream & operator<< (ostream &ofs, Employee &rhs) {
21:     ofs << left << setw(30) << rhs.name << setw(13)
22:     << rhs.years_of_service << setw(15) << rhs.salary;
23:     return ofs;
24: }
25:
26: class Parttimer : public Employee {
27: // Finish the class
28: public:
29:     Parttimer(string name_, double years_of_service_);
30: };
31: Parttimer::Parttimer(string name_, double years_of_service_)
32: :Employee(name_, years_of_service_)
33: {salary=20000+1000*years_of_service_;}
34:
35: class Manager : public Employee {
36: // Finish the class
37: public:
38:     Manager(string name_, double years_of_service_);
39:
40: };
41: Manager::Manager(string name_, double years_of_service_)
42: :Employee(name_, years_of_service_)
43: {salary=20000+15000+5000*years_of_service_;}
44:
45: class Chairman : public Manager {
46: // Finish the class

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47: public:
48:     Chairman(string name_, double years_of_service_);
49: };
50: Chairman::Chairman(string name_, double years_of_service_)
51: :Manager(name_, years_of_service_)
52: {salary=(20000+15000+5000*years_of_service_)+50000;}
53:
54:
55: void print_out (Employee **employee_list, int num_employee) {
56:     // selection sort
57:     for (int i=0; i<num_employee; ++i) {
58:         for (int j=i+1; j<num_employee; ++j)
59:             if ((*employee_list[i]).get_salary()<(*employee_list[j]).
60:                 get_salary()) {
61:                 Employee *tmp;
62:                 tmp = employee_list[i];
63:                 employee_list[i] = employee_list[j];
64:                 employee_list[j] = tmp;
65:             }
66:         cout << *employee_list[i] << endl;
67:     }
68:
69: int main()
70: {
71:     ifstream ifs("input3.txt");
72:     Employee **employee_list;
73:     int num_employee;
74:     ifs >> num_employee;
75:     employee_list = new Employee *[num_employee];
76:     // Finish the reading of input file
77:     // -----
78:     for(int i=0 ; i<num_employee ; ++i){
79:         string namee;
80:         ifs>>namee;
81:         char cmp;
82:         ifs>>cmp;
83:         double year;
84:         ifs>>year;
85:         switch(cmp)
86:         {
87:             case 'C':
88:                 employee_list[i]=new Chairman(namee,year);
89:                 break;
90:             case 'M':
91:                 employee_list[i]=new Manager(namee,year);
92:                 break;

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93:         case 'P':
94:             employee_list[i]=new Parttimer(namee,year);
95:             break;
96:     }
97:
98: }
99: // -----
100: print_out(employee_list, num_employee);
101: for (int i=0; i<num_employee; ++i)
102:     delete employee_list[i];
103: delete[] employee_list;
104: ifs.close();
105: return 0;
106: }
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