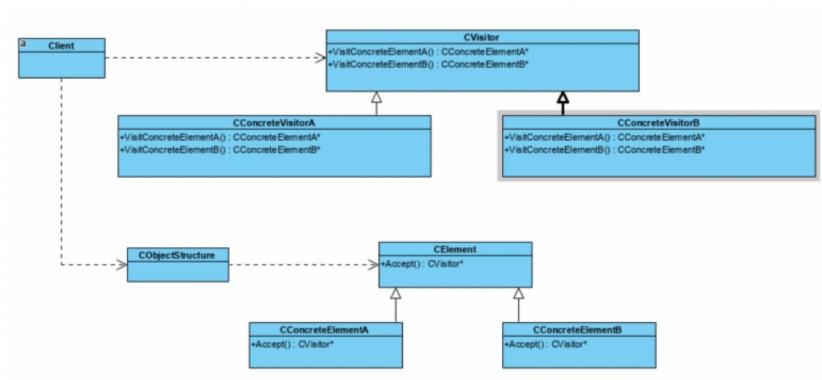**定义:**表示一个作用于某对象结构中各元素的操作. 使得可以在不改变(稳定)各元素的类的前提下定义(扩展)作用于这些元素的新操作(变化) ---<设计模式>GoF


```cpp
1  #include <iostream>
2  #include <list>
3  using namespace std;
4  class Classroom;
5  class Playground;
6  class Visitor{ //角色=visitor类
7  public:
8      virtual ~Visitor(){}
9      virtual void Visit(Classroom *classroom) = 0;
10     virtual void Visit(Playground *playground) = 0;
11 };
12 class Student : public Visitor{
13 public:
14     void Visit(Classroom *classroom){
15         cout << "Student Study in classroom" << endl;
16     }
17     void Visit(Playground *playground){
18         cout << "Student play in playground" << endl;
19     }
20 };
21 class Teacher: public Visitor{
22 public:
23     void Visit(Classroom *classroom){
24         cout << "Teacher teach in classroom" << endl;
25     }
26     void Visit(Playground *playground){
27         cout << "Teacher watch in playground" << endl;
28     }
29 };
30 class Place{
31 public:
32     virtual ~Place(){}
33     virtual void Accept(Visitor *v) = 0;
34 };
35 class Classroom : public Place{
36 public:
```

```cpp
37        void Accept(Visitor *v){
38            v->Visit(this);
39        }
40    };
41    class Playground: public Place{
42    public:
43        void Accept(Visitor *v){
44            v->Visit(this);
45        }
46    };
47    class School{
48    public:
49        void Add(Place* place){
50            listPlace.push_back(place);
51        }
52        void Remove(Place* place){
53            listPlace.remove(place);
54        }
55        void Accept(Visitor *v){
56            list<Place*>::iterator iter = listPlace.begin();
57            for(;iter != listPlace.end();iter++){
58                (*iter)->Accept(v);
59            }
60        }
61    private:
62        list<Place*> listPlace;
63    };
64    int main(){
65        School *pSchool = new School;
66        Place *pclassroom = new Classroom;
67        Place *pplaygroud = new Playground;
68        Visitor *pStu = new Student();
69        Visitor *pTeacher = new Teacher();
70        pSchool->Add(pclassroom);
71        pSchool->Add(pplaygroud);
72        pSchool->Accept(pStu);
73        pSchool->Accept(pTeacher);
74        delete pTeacher;
75        delete pStu;
76        delete pplaygroud;
77        delete pclassroom;
78        delete pSchool;
79        return 0;
80    }
```

```
weishichundembp:DesignPattnsStudy weishichun$ g++ -o Visitor_1.out Visitor_1.cpp
weishichundembp:DesignPattnsStudy weishichun$ ./Visitor_1.out
Student Study in classroom
Student play in playground
Teacher teach in classroom
Teacher watch in playground
weishichundembp:DesignPattnsStudy weishichun$
```