```cpp
1   //HEADER
2
3   #ifndef PERSON_H
4   #define PERSON_H
5
6   class Subject;
7
8   class Person
9   {
10
11      public:
12
13          Person();
14          virtual ~Person();
15          virtual void update() = 0;
16          void registerSubject(Subject *subject);
17
18      protected:
19
20          Subject *mSubject;
21
22  };
23
24  #endif
25
26  //SOURCE
27
28  #include "person.h"
29  #include "subject.h"
30
31  Person::Person()
32  {
33      mSubject = NULL;
34  }
35
36  Person::~Person()
37  {
38      if(mSubject != NULL)
39      {
40          mSubject->detach(this);
41      }
42  }
43
44  void Person::registerSubject(Subject *subject)
45  {
46      mSubject = subject;
47  }
48
```