

C++ Code

```
1  #include "MediaManager.h"
2
3  // Create Photo
4  std::shared_ptr<Photo> MediaManager::createPhoto(const std::string &name, const
std::string &filename, double lat, double lon)
5  {
6      std::shared_ptr<Photo> p(new Photo(name, filename, lat, lon));
7      objects[name] = std::static_pointer_cast<MultimediaObject>(p);
8      return p;
9  }
10
11 // Create Video
12 std::shared_ptr<Video> MediaManager::createVideo(const std::string &name, const
std::string &filename, int duree)
13 {
14     std::shared_ptr<Video> v(new Video(name, filename, duree));
15     objects[name] = std::static_pointer_cast<MultimediaObject>(v);
16     return v;
17 }
18
19 // Create Film
20 std::shared_ptr<Film> MediaManager::createFilm(const std::string &name, const
std::string &filename, int duree)
21 {
22     std::shared_ptr<Film> f(new Film(name, filename, duree));
23     objects[name] = std::static_pointer_cast<MultimediaObject>(f);
24     return f;
25 }
26
27 // Create Groupe
28 GroupePtr MediaManager::createGroupe(const std::string &name)
29 {
30     GroupePtr g(new Groupe(name));
31     groups[name] = g;
32     return g;
33 }
34
35 // Display object
36 void MediaManager::displayObject(const std::string &name, std::ostream &out) const
37 {
38     auto it = objects.find(name);
39     if (it == objects.end())
40     {
41         std::cout << "Objet '" << name << "' introuvable." << std::endl;
42         return;
43     }
44     it->second->affiche(out);
45     out << std::endl;
46 }
47
```

```
48 // Display groupe
49 void MediaManager::displayGroupe(const std::string &name, std::ostream &out) const
50 {
51     auto it = groups.find(name);
52     if (it == groups.end())
53     {
54         std::cout << "Groupe '" << name << "' introuvable." << std::endl;
55         return;
56     }
57     it->second->affiche(std::cout);
58     std::cout << std::endl;
59 }
60
61 // Play object
62 void MediaManager::playObject(const std::string &name, std::ostream &out) const
63 {
64     auto it = objects.find(name);
65     if (it == objects.end())
66     {
67         out << "Objet '" << name << "' introuvable." << std::endl;
68         return;
69     }
70     it->second->jouer(out);
71 }
72
73 // Remove object
74 bool MediaManager::removeObject(const std::string &name)
75 {
76     auto it = objects.find(name);
77     if (it == objects.end())
78         return false;
79     objects.erase(it);
80     return true;
81 }
82
83 // Remove groupe
84 bool MediaManager::removeGroupe(const std::string &name)
85 {
86     auto it = groups.find(name);
87     if (it == groups.end())
88         return false;
89     groups.erase(it);
90     return true;
91 }
92
```