```cpp
 1 //
 2 // Application source file for A2
 3 //
 4 // Hal Bettle
 5 //
 6 // 31 August 2008
 7 //
 8
 9 #include <iostream>
10 #include <iomanip>
11 using namespace std;
12
13 #include "CPTN230A2class_bettle.h"
14
15 void display_the_plane_ptr(plane *);
16 void playing_with_addresses(plane *, plane &);
17
18 int main(int argc, char* argv[])
19 {
20     plane Generic_plane;
21     plane Hals_plane;
22     plane Terrys_plane;
23     plane Spencers_plane;
24     plane *current_plane;
25
26     cout << "Welcome to Assignment 2\n" << endl;
27
28     // Set up the attributes for named plane objects
29
30     Hals_plane.set_owner("Hal's");
31     Hals_plane.set_speed(100);
32     Hals_plane.set_altitude(1000);
33     Hals_plane.set_direction(90);
34     Terrys_plane.set_owner("Terry's");
35     Terrys_plane.set_speed(200);
36     Terrys_plane.set_altitude(2000);
37     Terrys_plane.set_direction(180);
38     Spencers_plane.set_owner("Spencer's");
39     Spencers_plane.set_speed(300);
40     Spencers_plane.set_altitude(3000);
41     Spencers_plane.set_direction(270);
42
43     // Display the planes attrubutes with a function using pointers
44
45     cout << endl;
46     current_plane = &Generic_plane;
47     display_the_plane_ptr(current_plane);
48     current_plane = &Hals_plane;
49     display_the_plane_ptr(current_plane);
50     current_plane = &Terrys_plane;
51     display_the_plane_ptr(current_plane);
52     display_the_plane_ptr(&Spencers_plane);
53
54     // Demonstrate the use of various methoda of referencing the planes
55
56     cout << endl;
57     playing_with_addresses(&Generic_plane,  Generic_plane);
58     playing_with_addresses(&Hals_plane,     Hals_plane);
59     playing_with_addresses(&Terrys_plane,   Terrys_plane);
60     playing_with_addresses(&Spencers_plane, Spencers_plane);
61
62     cout << endl;
63     cout << "Thank you for using Assignment 2" << endl;
64
65     return 0;
66 }
```

```
67
68  void display_the_plane_ptr(plane *the_plane)
69  {
70      cout << the_plane->get_owner()
71           << " plane's speed is "
72           << the_plane->get_speed()
73           << ",\n"
74           << "and the altitude is "
75           << the_plane->get_altitude()
76           << " on a heading of "
77           << the_plane->get_direction()
78           << " degrees."
79           << endl;
80
81      return;
82  }
83
84  void playing_with_addresses(plane *plane_ptr, plane &plane_ref)
85  {
86      plane *first_ptr = plane_ptr;
87      plane *second_ptr;
88
89      cout << "This is "
90           << plane_ptr->get_owner()
91           << " plane's address \""
92           << plane_ptr
93           << "\" and so is this \""
94           << &plane_ref
95           << "\"."
96           << endl;
97
98      second_ptr = plane_ptr->get_address();
99      cout << plane_ref.get_owner()
100          << " plane's addresses by two other methods are \""
101          << first_ptr
102          << "\" == \""
103          << second_ptr
104          << "\"."
105          << endl;
106
107     return;
108 }
109
110
```