```
 1: #ifndef _AQUAFISH_H
 2: #define _AQUAFISH_H
 3:
 4: #include "randgen.h"
 5:
 6: class AquaFish
 7: {
 8:   public:
 9:     AquaFish(int tankSize);     // create new fish at center of tank with given size
10:     void Swim();                // Swim one foot.
11:     int BumpCount() const;      // Return the bump count.
12:
13:   private:
14:     int myPosition;
15:     int myTankSize;
16:     int myBumpCount;
17:     RandGen randomVals;
18:     bool myDebugging;
19: };
20:
21: #endif
22:
```

```cpp
 1: #include <iostream>
 2: #include "aquafish.h"
 3: using namespace std;
 4:
 5: AquaFish::AquaFish(int tankSize)
 6:    : myPosition(tankSize/2),
 7:      myTankSize(tankSize),
 8:      myBumpCount(0),
 9:      randomVals(),
10:      myDebugging(true)
11: {
12:
13: }
14:
15: void AquaFish::Swim()
16: {
17:    int flip;
18:
19:    if (myPosition == myTankSize - 1)
20:    {
21:      myPosition--;
22:    }
23:    else if (myPosition == 0)
24:    {
25:      myPosition++;
26:    }
27:    else
28:    {
29:      flip = randomVals.RandInt(2);
30:
31:      if (flip == 0)
32:      {
33:        myPosition++;
34:      }
35:      else
36:      {
37:        myPosition--;
38:      }
39:    }
40:
41:    if (myDebugging)
42:    {
43:      cout << "*** Position = " << myPosition << endl;
44:    }
45:
46:    if (myPosition == 0 || myPosition == myTankSize - 1)
47:    {
48:      myBumpCount++;
49:    }
50: }
51:
52: int AquaFish::BumpCount() const
53: {
54:    return myBumpCount;
55: }
```