```
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Text;
5  using System.Threading.Tasks;
6  using System.Drawing;
7  using System.Windows.Forms;
8
9  namespace Car_Soccer
10 {
11     class Computer : Car
12     {
13         private double _angleToBall;
14         private double _angleDiff;
15         private bool _switchD;
16         public Computer(int x, int y, Team team, string file)
17         {
18             _x = x;
19             _y = y;
20             _team = team;
21             if (team == Team.Blue)
22             {
23                 _color = Color.Blue;
24             }
25             else if (team == Team.Red)
26             {
27                 _color = Color.Red;
28             }
29             _angle = 315;
30             _image = Image.FromFile(file);
31         }
32         public void Advance(Ball ball)
33         {
34             bool temp = _input;
35             _input = IsFacingBall(ball);
36             if (temp != _input)
37             {
38                 if(temp)
39                     _turnDirection = !_turnDirection;
40             }
41
42             base.Advance();
43         }
44         public bool IsFacingBall(Ball ball)
45         {
46             if (_switchD)
47             {
48                 _switchD = false;
49                 return false;
50             }
51             else
52             {
53                 float xDiff = _x - ball.X;
54                 float yDiff = _y - ball.Y;
55                 _angleToBall = ((Math.Atan2(yDiff, xDiff) * 180.0 / Math.PI) -
                    90) % 360;
```

```
56                  if (_angleToBall < 0)
57                  {
58                      _angleToBall += 360;
59                  }
60                  _angleDiff = Math.Sqrt(Math.Pow((_angle - _angleToBall) %
                      360,2));
61
62                  //I made an attempt at making it smart but it occaisionally
                      gets stuck moving upwards
63                  if (_angleDiff > -5 && _angleDiff < 5)
64                  {
65                      return false;
66                  }
67                  else if (_angleDiff > 0 && !_turnDirection)
68                  {
69                      _switchD = true;
70                  }
71                  else if (_angleDiff < 0 && _turnDirection)
72                  {
73                      _switchD = true;
74                  }
75                  return true;
76              }
77
78          }
79          public double AngleToBall
80          {
81              get { return _angleToBall; }
82          }
83          public double AngleDiff
84          {
85              get { return _angleDiff; }
86          }
87      }
88  }
89
```