Form 1

namespace cardiffGame1

{

public partial class Form1 : Form

{

public Form1()

{

InitializeComponent();

}

private List<Ducky> duckList = new List<Ducky>(); //a list to store all ducks

private List<Bullet> bulletList = new List<Bullet>();

int duckNumber = 0;

int newPos = 0;

private void timer1\_Tick(object sender, EventArgs e)

{

if (duckNumber > 4)

{//all ducks created so turn off timer1

timer1.Enabled = false;

timer2.Enabled = true;

}

else

{

duckList.Add(new Ducky(this, newPos)); //adds a new duck to the list

duckNumber++;

newPos = newPos + 60;

}

}

private void timer2\_Tick(object sender, EventArgs e)

{

duckList.RemoveAll(duck => duck.isDisposed);

foreach (Ducky duck in duckList) //loops through all ducks in the list

{

duck.moveDuck(this);

if (pictureBox1.Bounds.IntersectsWith(duck.aDuck.Bounds))

{

timer2.Enabled = false;

MessageBox.Show("Game over");

return;

}

}

bulletList.RemoveAll((bullet => bullet.isDisposed));

foreach (Bullet bullet in bulletList) //loops all bullets in the list

{

bullet.moveBullet(this); //for each bullet move it

foreach (Ducky duck in duckList)

{

if (bullet.b.Bounds.IntersectsWith(duck.aDuck.Bounds))

{

bullet.isDisposed = true;

bullet.b.Dispose();//delete the bullet that hits a duck

duck.isDisposed = true;

duck.aDuck.Dispose();//delete the duck hit by the bullet

} } } }

private void Form1\_KeyDown(object sender, KeyEventArgs e)

{ //create a new bullet and add it to the list every time the spacebar is pressed

this.bulletList.Add(new Bullet(this, pictureBox1));

}

}

}

Ducky class (blueprint)

namespace cardiffGame1

{

class Ducky

{

public PictureBox aDuck;

int speed = 0;

Random duckSpeed = new Random();

public Boolean isDisposed = false;

public Ducky(Form1 form1, int newPos)

{

//this is the constructor it receives details of the from and new position for the duck

aDuck = new PictureBox();

aDuck.Width = 50;

aDuck.Height = 50;

aDuck.Image = cardiffGame1.Properties.Resources.yellowDuck;

aDuck.SizeMode = PictureBoxSizeMode.StretchImage;

speed = duckSpeed.Next(1, 20);

aDuck.Top = newPos;

aDuck.Left = 0;

form1.Controls.Add(aDuck);

}

public void moveDuck(Form f) //moves the duck

{

aDuck.Left = aDuck.Left + speed;

}

}

}

Creates a new duck off the Ducky blueprint.  
The class needs to arguments passed to it. The form (this) and the position of the duck’s y axis (newPos))

Creates a new bullet off the bullet blueprint (class)

Calls the moveBullet method

Calls the moveDuck method

Bullet class

namespace cardiffGame1

{

class Bullet

{

public PictureBox b;

private int xpos, ypos;

public Boolean isDisposed = false;

//

public Bullet(Form form1, PictureBox player)

{

//this is the constructor it receives details of the form and player

b = new PictureBox();

b.Width = 3;

b.Height = 25;

b.BackColor = Color.Black;

b.Visible = false;

ypos = player.Top + 3;

xpos = player.Left + (player.Width / 2);

b.Location = new Point(xpos, ypos);

form1.Controls.Add(b);

}

public void moveBullet(Form f) //moves a bullet

{

b.Visible = true;

ypos -= 9;

if (ypos <=0)

{

b.Dispose(); //removes the bullet

isDisposed = true;

}

b.Location = new Point(xpos, ypos);

} } }