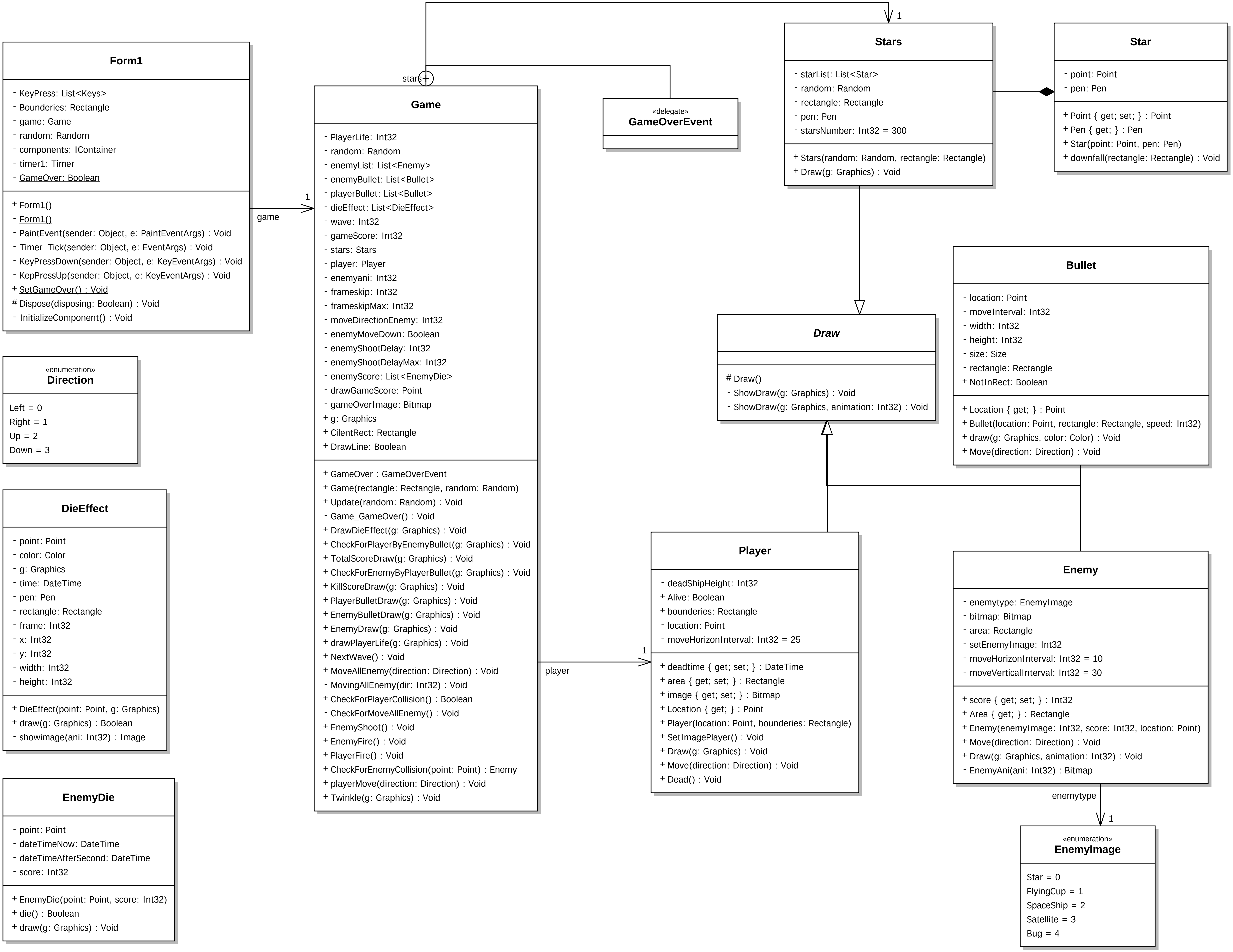

```
Form1
- KeyPress: List<Keys>
- Bounderies: Rectangle
- game: Game
- random: Random
- components: IContainer
- timer1: Timer
- GameOver: Boolean
+ Form1()
- Form1()
- PaintEvent(sender: Object, e: PaintEventArgs) : Void
- Timer_Tick(sender: Object, e: EventArgs) : Void
- KeyPressDown(sender: Object, e: KeyEventArgs) : Void
- KepPressUp(sender: Object, e: KeyEventArgs) : Void
+ SetGameOver() : Void
# Dispose(disposing: Boolean) : Void
- InitializeComponent() : Void
```

```
«enumeration»
Direction
Left = 0
Right = 1
Up = 2
Down = 3
```

```
DieEffect
- point: Point
- color: Color
- g: Graphics
- time: DateTime
- pen: Pen
- rectangle: Rectangle
- frame: Int32
- x: Int32
- y: Int32
- width: Int32
- height: Int32
+ DieEffect(point: Point, g: Graphics)
+ draw(g: Graphics) : Boolean
- showimage(ani: Int32) : Image
```

```
EnemyDie
- point: Point
- dateTimeNow: DateTime
- dateTimeAfterSecond: DateTime
- score: Int32
+ EnemyDie(point: Point, score: Int32)
+ die() : Boolean
+ draw(g: Graphics) : Void
```

```
Game
- PlayerLife: Int32
- random: Random
- enemyList: List<Enemy>
- enemyBullet: List<Bullet>
- playerBullet: List<Bullet>
- dieEffect: List<DieEffect>
- wave: Int32
- gameScore: Int32
- stars: Stars
- player: Player
- enemyani: Int32
- frameskip: Int32
- frameskipMax: Int32
- moveDirectionEnemy: Int32
- enemyMoveDown: Boolean
- enemyShootDelay: Int32
- enemyShootDelayMax: Int32
- enemyScore: List<EnemyDie>
- drawGameScore: Point
- gameOverImage: Bitmap
+ g: Graphics
+ CilentRect: Rectangle
+ DrawLine: Boolean
+ GameOver : GameOverEvent
+ Game(rectangle: Rectangle, random: Random)
+ Update(random: Random) : Void
- Game_GameOver() : Void
+ DrawDieEffect(g: Graphics) : Void
+ CheckForPlayerByEnemyBullet(g: Graphics) : Void
+ TotalScoreDraw(g: Graphics) : Void
+ CheckForEnemyByPlayerBullet(g: Graphics) : Void
+ KillScoreDraw(g: Graphics) : Void
+ PlayerBulletDraw(g: Graphics) : Void
+ EnemyBulletDraw(g: Graphics) : Void
+ EnemyDraw(g: Graphics) : Void
+ drawPlayerLife(g: Graphics) : Void
+ NextWave() : Void
+ MoveAllEnemy(direction: Direction) : Void
- MovingAllEnemy(dir: Int32) : Void
+ CheckForPlayerCollision() : Boolean
- CheckForMoveAllEnemy() : Void
+ EnemyShoot() : Void
+ EnemyFire() : Void
+ PlayerFire() : Void
+ CheckForEnemyCollision(point: Point) : Enemy
+ playerMove(direction: Direction) : Void
+ Twinkle(g: Graphics) : Void
```

```
«delegate»
GameOverEvent
```

```
Stars
- starList: List<Star>
- random: Random
- rectangle: Rectangle
- pen: Pen
- starsNumber: Int32 = 300
+ Stars(random: Random, rectangle: Rectangle)
+ Draw(g: Graphics) : Void
```

```
Star
- point: Point
- pen: Pen
+ Point { get; set; } : Point
+ Pen { get; } : Pen
+ Star(point: Point, pen: Pen)
+ downfall(rectangle: Rectangle) : Void
```

```
Draw
# Draw()
- ShowDraw(g: Graphics) : Void
- ShowDraw(g: Graphics, animation: Int32) : Void
```

```
Bullet
- location: Point
- moveInterval: Int32
- width: Int32
- height: Int32
- size: Size
- rectangle: Rectangle
+ NotInRect: Boolean
+ Location { get; } : Point
+ Bullet(location: Point, rectangle: Rectangle, speed: Int32)
+ draw(g: Graphics, color: Color) : Void
+ Move(direction: Direction) : Void
```

```
Player
- deadShipHeight: Int32
+ Alive: Boolean
+ bounderies: Rectangle
- location: Point
- moveHorizonInterval: Int32 = 25
+ deadtime { get; set; } : DateTime
+ area { get; set; } : Rectangle
+ image { get; set; } : Bitmap
+ Location { get; } : Point
+ Player(location: Point, bounderies: Rectangle)
+ SetImagePlayer() : Void
+ Draw(g: Graphics) : Void
+ Move(direction: Direction) : Void
+ Dead() : Void
```

```
Enemy
- enemytype: EnemyImage
- bitmap: Bitmap
- area: Rectangle
- setEnemyImage: Int32
- moveHorizonInterval: Int32 = 10
- moveVerticalInterval: Int32 = 30
+ score { get; set; } : Int32
+ Area { get; } : Rectangle
+ Enemy(enemyImage: Int32, score: Int32, location: Point)
+ Move(direction: Direction) : Void
+ Draw(g: Graphics, animation: Int32) : Void
- EnemyAni(ani: Int32) : Bitmap
```

```
«enumeration»
EnemyImage
Star = 0
FlyingCup = 1
SpaceShip = 2
Satellite = 3
Bug = 4
```