Models/Vector2D

Properties

Magnitude

Returns the length of the vector

```
Vector2D v = new Vector2D(3, 4);
double result = v.Magnitude;
```

UnitVector

Returns the unit vector of the vector

```
Vector2D v = new Vector2D(3, 4);
Vector2D unit = v.UnitVector;
```

Static methods

DotProduct

Returns the scalar of two vectors

```
Vector2D v1 = new Vector2D(1, 2);
Vector2D v2 = new Vector2D(3, 4);

float result = Vector2D.DotProduct(v1, v2);
```

CrossProduct

Returns the vectorial product of two vectors.

```
Vector2D v1 = new Vector2D(1, 2);
Vector2D v2 = new Vector2D(3, 4);

float result = Vector2D.CrossProduct(v1, v2);
```

Implemented operators

Addition

```
Vector2D v1 = new Vector2D(1, 2);
Vector2D v2 = new Vector2D(3, 4);

Vector2D result = v1 + v2;
```

Subtraction

```
Vector2D v1 = new Vector2D(1, 2);
Vector2D v2 = new Vector2D(3, 4);

Vector2D result = v1 - v2;
```

ScalarMultiplication

```
Vector2D v = new Vector2D(1, 2);

Vector2D result = v * 2;
```

ScalarDivision

```
Vector2D v = new Vector2D(2, 4);

Vector2D result = v / 2;
```