IS F311 Computer Graphics Assignment

1.0

Generated by Doxygen 1.8.11

Contents

Chapter 1

Class Index

1.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

Chapter 2

Class Documentation

2.1 Graphics Class Reference

Public Member Functions

- void **setThickness** (int _thickness)
- void **setColor** (tuple< GLfloat, GLfloat, GLfloat, GLfloat > _color)
- void drawLine (int start_x, int start_y, int end_x, int end_y)
- pair< int, int > drawVector (int x0, int y0, int len, float angle)
- void drawCircle (int x0, int y0, int radius)

2.1.1 Member Function Documentation

2.1.1.1 void Graphics::drawCircle (int *x0,* int *y0,* int *radius*) [inline]

Takes the centre of the circle as x0, y0 values, and the radius of the circle Circle is rendered using the mid-point algorithm

2.1.1.2 void Graphics::drawLine (int *start_x,* int *start_y,* int *end_x,* int *end_y*) [inline]

Draws a line on the viewport given the starting point and ending point Uses Bresenham's line drawing algorithm for rendering Lines can be drawn in all four quadrants using this function Swap start and end point in case starting X pixel is after the ending X pixel

2.1.1.3 pair<int, int> Graphics::drawVector (int *x0,* int *y0,* int *len,* float *angle*) [inline]

In many cases, we have to draw a line only given its starting point, length and angle drawVector(..) takes these parameters and calculates the endpoints for such Lines using simple trignometry Lines are rendered using a call to drawLine(..) Returns an std::pair<int, int> with endpoints of the given line

The documentation for this class was generated from the following file:

- Graphics.h

2.2 Turtle Class Reference

Public Member Functions

- void **changeColor** ()
- void **reduceThickness** ()
- void **translate** (int x_target, int y_target)
- void **setAngle** (float angle)
- void **draw** ()
- void **rotate** (float angle)
- void **saveState** ()
- void **restoreState** ()
- void **drawLeaf** ()

The documentation for this class was generated from the following file:

- Turtle.h

Index