Module: graphics

Responsible for all graphical representation on the screen, such as loading media files, setting up coordinates for the game layout, and positioning images throughout the screen accordingly.

--- Interface ---

Uses:

SDL2/SDL.h
string
board.h
linkedList.h

Defined Macros/Constants:

SCREEN_WIDTH: integer
Window width size for the game

SCREEN_HEIGHT: integer
Window height size for the game

TOKEN_WIDTH: integer
Width of the tokens used to play the game

TOKEN_HEIGHT: integer
Width of the tokens used to play the game

GRID_OFFSET_Y: integer
Offset of column lines for the game playing board

GRID_OFFSET_X: integer
Offset for the row lines for the game playing board

GRID_WIDTH: integer
Width of the game board

GRID_HEIGHT: integer
Height of the game board

Global Declarations:

List<FallingToken>
A list that represents all the falling tokens during gameplay

Defined Types:

FallingToken: struct
Allows token objects to be simulated by gravity

TextureWrapper: struct
Provides a way to give dimensions to a texture

Access programs:

drawFallingToken:
Return Type: void
Parameters: FallingToken *token
Given a token, determine the position to drop it.

clearFallingToken:
Return Type: void
Parameters: FallingToken *fallingToken
Finds the position of the falling token.

updateFallingToken:
Return Type: void
Parameters: FallingToken *fallingToken, float dt
*Updates the position of a falling token depending on the time (*dt*) it has been airborne.*

displayBoard:
Return Type: void
Parameters: None
Determine position and display the playing board onto game window.

displaySetupTokens:
Return Type: void
Parameters: none
In the setup game mode, position and display the tokens on to the screen.

displayMainMenu:
Return Type: void
Parameters: none
Display the main menu window.

displayCreditsMenu: Considering this removing for now
Return Type: void
Parameters: none
Display the credits menu window

highlightToken:
Return Type: void
Parameters: integer row, integer col
highlight the colour of the token found in given row and column coordinate.

creditsMenuRender: Considering this removing for now
Return Type: void
Parameters: none

mainMenuRender:
Return Type: void
Parameters: none
Renders the main menu image for display

transitionSetupRender:
Return Type: void
Parameters: none
Positions and renders the buttons to be used in the setup game mode
to allow players to either start a game from setup mode, or return to main menu.

setupRender:
Return Type: void
Parameters: none
Renders all required image in the setup game mode

init:
Return Type: boolean value
Parameters: none
Returns true if the program has been initialized and window has been created successfully.

loadMedia:
Return Type: boolean value
Parameters: none
Returns true if all media (images) required for the game has been successfully accessed.

close_sdl:
Return Type: void
Parameters: none
Ends the program properly and closes the window

dropToken:
Return Type: boolean
Parameters: Board b, Token tokenColour, integer col
Returns true if a token and been successfully dropped onto the given board, at the specified column.

deleteStillToken:
Return Type: void
Parameters: Falling Token *fallingToken
If falling token has reached the lowest possible position, stop the gravity simulation on that token.