Protobyte API

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***API Key:***

* ***Headers***
* **/Directories/and/Paths.ext**
* *Code*
* Menu Options

***Variables:***

* Project Title
  + The title of your project
* projectName
  + Name of your project. Will be used to name main project .cpp and .h files

***Beginning a New Project:***

1. Creating Project Files
   1. Open terminal window
   2. Navigate to **project\_wizard** directory of Protobyte
      1. Current Absolute Path
         1. **/Dropbox/ira\_dev/Protobyte\_0.1.0\_quark/Protobyte/project\_wizard/**
   3. Execute command *./wizard projectName*
      1. Creates .cpp and .h files in **/Protobyte\_0.1.0\_quark /Protobyte/src**
2. Adding Project Files to Protobyte Environment
   1. Open Visual Studios
   2. Open project file
      1. Current Absolute Path
         1. **/Dropbox/ira\_dev/Protobyte\_0.1.0\_quark/protobyte\_dev\_WIN/Zhlong\_dev\_WIN/Shlonh\_dev\_WIN.vcxproj**
   3. Add new project files to Visual Studios Project
      1. Right click **srcProtobyte** folder under **Protobyte\_Project**
      2. Hover over Add menu option
      3. Select Existing Item
      4. Navigate to **src** directory
         1. Current Absolute Path
            1. **/Dropbox/ira\_dev/Protobyte\_0.1.0\_quark/Protobyte/src/**
      5. Select and Add projectName.h and projectName.cpp
3. Running new project
   1. Open ProtoMain.cpp
   2. At top of document
      1. *#include “projectName.h”*
   3. In main()
      1. ijg::ProtoPlasm objectName(windowWidth, windowHeight, “Project Title”, new projectName());

***General Information about Visual Environment:***

* Origin (0, 0) is at the center of the window
* Default background color is black
* Default stoke color is black
* Default fill color is white
* RGB is on a 0-1 scale
* Greyscale
  + 0 = black
  + 1 = white

***Visual Environment:***

Variables:

std::string appTitle

int width

int height

int appWidth

int appHeight

int canvasWidth

int canvasHeight

Dim2i canvasSize

Dim2i windowFrameSize

int frameCount

float frameRate

bool isStroke

bool isFill

float linewidth

Col3f bgColor

Col4f fillColor

Col4f strokeColor

Functions:

void setWindowFrameSize(const Dim2i& windowFrameSize)

int getWidth();

int getHeight();

Dim2i getSize();

void background(float color)

void setBackground(float color)

void stroke(float color)

void strokeWeight(float lineWidth)

void noStroke()

void fill(float color)

void noFill()

getFrameCount()

setFrameCount()

getFrameRate()

setFrameRate()

push()

pop()

translate()

rotate()

scale()

***Objects:***

Col4f

Col4

Col3f

Col3

Vec2f

Vec2

***Mouse/Key Events:***

Global Variables:

float mouseX

float mouseY

float mouseLastFrameX

float mouseLastFrameY

int mouseButton

int mouseAction

int mouseMods

bool isMousePressed

Functions:

void keyPressed()

void mousePressed()

void mouseRightPressed()

void mouseReleased()

void mouseRightReleased()

void mouseMoved()

void mouseDragged()

***Two Dimensional Primitives:***

Rectangle

void rect(float radius1, float radius2);

* rect(width, height);
* Draws a rectangle centered at origin with width of *width* and height of *height*

void rect(const Vec2 &pt0, const Vec2 &pt1);

void rect(float x, float y, float w, float h);

***Suggestions:***

General Information about Visual Environment

* Default background color should be different from default stroke color
  + Maybe have default background color be a shade of grey

Visual Environment

* Overload = operator for Col4f = Col3f so that when using global variables to set fill and stroke color, users may pass the variable a Col4f object or a Col3f object

***Problems:***

Mouse/Key Events

* Origin for mouseX and mouseY calculations is in the top left corner of the screen
  + Should be in the center

Two Dimensional Primitives

* Rectangle
  + x, y, width, and height measurements are not pixel accurate
    - Max width and height of Screen
      * 1800 x 1000
    - Max width and height of rectangle so that it fills the screen
      * 1380 x 770