Assumptions: We have an enum with all UI types, an enum for all the functions that they can do and an enum with the states of the mouse. There are some functions and variables that haven't been included. This is a general representation of how our UI System works.

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GUI

SDL_Texture* atlas;
p2SString atlas_file_name;

p2List<UI_element*> UI_elements;

SDL_Texture* scene_intro;
p2SString scene_intro_name;

SDL_Texture* title_intro;
p2SString title_intro_name;

SDL_Texture* licence;
p2SString licence_name;

UI_text* AddText(...);

UI_image* AddImage(...);

UI_button* AddButton(...);

UI_boolbutton* AddBoolButton(...);

UI_window* AddWindow(...);

UI_slider* AddSlider(...);

bool UIDebugDraw();

bool DeleteGui(UI_element* gui);

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UI_image

void BlitElement();

UI_boolbutton

SDL_Rect booltrue;

SDL_Rect boolfalse;

void BlitElement();

UI_button

SDL_Rect OnMouse;

SDL_Rect Tick;

SDL_Rect OnClick;

bool tick = false;

bool clicked = false;

int newposition = 0;

int save_position = 0;

void BlitElement();

void ChangeVolume();

UI_window

void BlitElement();

UI_slider

SDL_Rect OnMouse;

SDL_Rect Tick;

SDL_Rect OnClick;

SDL_Rect image_bar;

UI_button* slider_button;

void BlitElement();

void ChangeVolume();

UI_element

int positionwow;

SDL_Texture* texture = nullptr;

iPoint localPosition;

SDL_Rect section;

element_type element_type;

UI_element_action element_action;

virtual void setOutlined(bool isOutlined)
{}

iPoint calculateAbsolutePosition() const;

virtual void BlitElement()
{}

UI_text

p2SString text;

_TTF_Font* font;

void setText(const p2SString string);

void BlitElement();