# UML - UI SYSTEM

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**App**

**j1Module**

**j1UI**

p2DynArray<UIElement*> UI_elements
SDL_Texture* atlas
p2SString atlas_file_name
bool debug
uint fx_click

bool Awake(pugi::xml_node&)
bool Start()
bool PreUpdate()
bool Update(float dt)
bool PostUpdate()
bool CleanUp()

void DeleteUIElements()
void DeleteUIElementChildren(UIElement* ui_el)
void SetVisibleChildren(UIElement* ui_el)

UIElement* CreateLabel(int x, int y, const char* text,int width, int size, SDL_Color color, const char* font, UIElement* parent)
UIElement* CreateImage(int x, int y, SDL_Rect rectm, UIElement* parent)
UIElement* CreateSlider(int x, int y, float cur_value, float max_value, SDL_Rect rect, SDL_Rect ball, UIElement* parent)
UIElement* CreateButton(int x, int y, SDL_Rect rect, SDL_Rect hovering, SDL_Rect clicked, UIElement* parent)
const SDL_Texture* GetAtlas() const;

**UIElement**

SDL_Rect rect
UIType type
bool clickable
bool draggable
MouseState mouse_state
MouseState prev_mouse_state
iPoint prev_mouse
int local_pos_x
int local_pos_y
int world_pos_x
int world_pos_y

SDL_Rect img_rect
SDL_Texture* texture
p2SString text
_TTF_Font* current_font
UIElement* parent
iPoint mouse_drag
bool btn_clicked
float max_value
float cur_value
float last_value

UIElement(int x, int y, UIType type, UIElement* parent)
virtual ~Element()
virtual Start()
virtual Draw(SDL_Texture* texture)
void PreUpdate()
virtual Update()
virtual MouseState CheckMouseState(int mouse_x, int mouse_y, MouseState mouse_click)
void SetPositionWithParent()
void UpdateText(SDL_Texture* tex)
virtual void SetText(const char* text)

**UILabel**

SDL_Color color

UILabel(int x, int y, const char* text,int width, int size, SDL_Color color, const char* font, UIElement* parent);
void Draw(SDL_Texture* atlas)
SetText(const char* text)

**UIButton**

SDL_rect basic_rect, clicked_rect, hovering_rect;

UIButton(int x, int y, SDL_Rect rect, SDL_Rect hovering, SDL_Rect clicked, UIElement* parent);
void Update()
void Draw(SDL_Texture* atlas)

**UISlider**

SDL_rect bar_rect, ball_rect;
int world_ball_x, world_ball_y, local_ball_x, local_ball_y;

UISlider(int x, int y, float cur_value, float max_value, SDL_Rect rect, SDL_Rect ball, UIElement* parent);
void Update()
void Draw(SDL_Texture* atlas);
float GetSliderValue() const;
void SetSliderValue(float value, float max_value);

**UIImage**

UIImage(int x, int y, SDL_Rect rect, UIElement* parent);
void Draw(SDL_Texture* atlas)