Class UI\_Base:

string name;

int id;

UI\_Base\* parent;

UI\_Base\* children;

Class Window (UI\_Base):

int x, y, w, h;

string title;

bool visible;

Class Layout (UI\_Base):

int padding;

int spacing;

int orientation; //vertical, horizontal, etc.

int expand\_flag;

//other properties will have a flag here as well

Class Panel (UI\_Base):

int x, y, w, h;

int resize\_flag; //whether the panel would resize with parent or not

Class Button (UI\_Base):

int x, y, w, h;

string label;

int state; //pressed, released, or clicked