

```

class Component {
    /**
    **      Component Identification
    **/
    int          component_id ;           // component number
    char    component_name[20] ;    // Component name (string)

    /**
    **      Counters
    **/
    int          block_id_counter ;           // for id assignment of blocks
    int          num_polygonsets;           // Num of polysets attached to firstset

    /**
    **      Link List members
    **/
    Component    *nextc;           //      next component
    Block        *comp_block ;           //      to the first block of block list
    PolygonSet   *firstset;           //      head of the list of polygon sets

    /**
    **      Graph Representation
    **/
    Graph        *comp_graph ;           //      graph which represents this comp
    DimensionGraph *ref_dim_graph; //      Reference Dimension Graph
    DimensionGraph *spec_dim_graph; //      Specified Dimension Graph

    void          Scale(int side,double);

public :

    /**
    **      Link List functionality
    **/
    void          Link_Blocks( Block *cb);
    void          Link_PolygonSets(PolygonSet* pp);

    /**
    **      Transformations
    **/
    void          ScaleX(double val){      Scale(XAXIS,val);}
    void          ScaleY(double val){      Scale(YAXIS,val);}
    void          ScaleZ(double val){      Scale(ZAXIS,val);}
    void          Scale(double val){
        ScaleX(val);
        ScaleY(val);
        ScaleZ(val);
    }

    /**
    **      Display functionality
    **/
    virtual double    Get_max_dimension();
    virtual void      Display_by_phigs(int type);
    virtual int        Check_coplanarity(Polygon* ,Polygon*);
    virtual void      PolygonSet_Display();

    /**
    **      Dimensioning functionality
    **/
    virtual void      Create_default_dim_graphs();

    /**
    **      Editing functions
    **/
    virtual void      Copy_for_Edit( Component* co);

    /**
    **      File operations
    **/
    virtual void      Write_to_file( FILE *fp);
    virtual void      Write_to_Venkys_file( FILE *fp);
};

```