```
abstract boolean isDone()
abstract Object currentItem()

Rectangle : AbstractShape :

public:
Rectangle()
AbstractShape getMarkedShape()
paint()
accept()
AbstractList<AbstractShape> getListOfShapes(AbstractList<AbstractShape>)
```

public:

Triangle()

Triangle: AbstractShape:

AbstractShape getMarkedShape()

AbstractIterator

AbstractIterator()

abstract next()

abstract first()

public:

```
ShapeFactory

public:
ShapeFactory()
static instance()
Square createSquare()
SquareProxy createSquareProxy()
createCircle()
createTriangle()
createRectangle()
private:
int getMaxSize(AbstractShape s)
AbstractSquare getMarkedParent()
boolean isTooSmall(AbstractShape s, double width, double
height)
create(AbstractShape s)

protecte
```

```
abstract void visit(Triangle t)
   ShapeApplet: JApplet: KeyListener,
     MouseListener, ActionListener
public:
      ShapeApplet()
       static setOutputText(String s)
      mouseClicked(MouseEvent evt)
      mouseEntered(MouseEvent evt)
       mouseExited(MouseEvent evt)
       mousePressed(MouseEvent evt)
      mouseReleased(MouseEvent evt)
       keyPressed(KeyEvent evt)
       keyReleased(KeyEvent evt)
      keyTyped(KeyEvent evt)
      actionPerformed(ActionEvent evt)
private
       makeMenu()
```

AbstractVisitor

AbstractVisitor()

abstract void visit(Square s)

abstract void visit(Circle c)

abstract void visit(Rectangle r)

public:

```
Circle : AbstractShape :

public:
    Circle()
    AbstractShape getMarkedShape()
    paint()
    accept()
    AbstractList<AbstractShape>getListOfShapes()

protected:
    setWidth(int w)
    setHeight(int h)
```

```
AbstractShape
protected:
       static boolean paintChildren
public:
       AbstractShape()
protected:
       int getHeight()
       int getWidth()
       int getY()
       int getX()
       AbstractSquare getParent()
       setHeight(int h)
       setWidth(int w)
       setY(int y)
       setX(int x)
       setParent(AbstractSquare p)
       AbstractShape getSibling()
       setSibling(AbstractShape s)
friendly:
       paint(Graphics g)
       abstract accept(AbstractVisitor v)
       getMarkedShape(int x, int y)
       getListOfShapes(AbstractList<AbstractShape>)
       removeOverlap(Rectangle bounds)
```

SquareProxy: AbstractShape:

accept(AbstractVisitor v)

boolean hasChildren()

addChild(AbstractShape child)

AbstractShape getLastChild()

SquareProxy()

public:

```
public:
```

```
AbstractSquare
public:
       AbstractSquare()
       abstract accept(AbstractVisitor v)
       abstract addChild(AbstractShape child)
       setDepth(int d)
       int getDepth()
       abstract boolean hasChildren()
       abstract AbstractShape getLastChild()
       abstract AbstractList<AbstractShape> getListOfShapes(AbstractList<AbstractShape>)
       abstract paint(Graphics g)
       abstract paintChildren(Graphics g)
       abstract AbstractShape getMarkedShape()
                                                                              Marked
              Square: AbstractSquare:
                                                            public:
public:
       Square()
                                                                   static paint(Graphics g)
       AbstractShape getMarkedShape()
       paint()
```

```
public:

Square()
AbstractShape getMarkedShape()
paint()
paintChildren(Graphics g)
accept()
AbstractList<AbstractShape>getListOfShapes()
addChild(AbstractShape child)
boolean hasChildren()
AbstractShape getLastChild()

protected:
setWidth(int w)
setHeight(int h)
```

ShapePanel: JPanel:

markedClickedShape(MouseEvent evt)

makeTestShapes(int number)

applyIterator()

applyVisitor()

setPaintDefault()

setPaintVisitor()

setPaintIterator()

paint()

```
Marked

public:
    static AbstractShape instance()
    static boolean isControlDown()
    static paint(Graphics g)
    static markShape(AbstractShape s)
    static setControlDown()
    static setControlUp()

private:
    Marked()
```