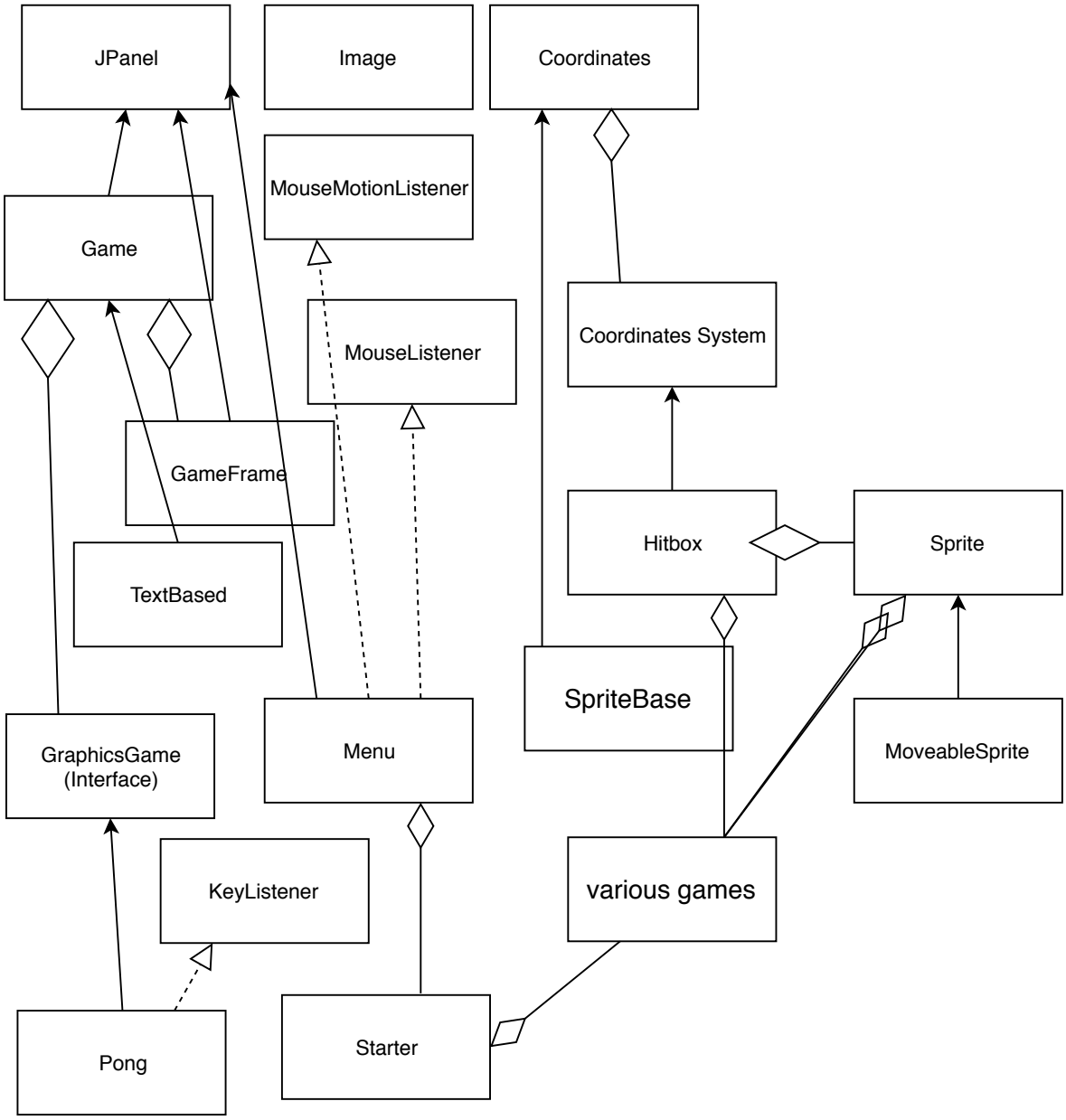
# Capstone UML Diagram (rough draft)



Methods

```
public CoordinateSystem(int x, int y, int xDimension, int yDimension)
// sets left right up down corners

public void rotateRadians(double radians)
 // rotates coordiantes
public void rotateDegrees(double degrees)
 // converts degrees to radians and then rotates them

public Coordinates getCenter()

public Coordinates getBottomRight()

public Coordinates getBottomLeft()

public Coordinates getTopRight()

public Coordinates getTopLeft()
public abstract String getName();

 public abstract void run();
 \\ runs the window and speficed game
 public void run (Game g)
 \\ sets up window and containers

 public abstract void paintComponet (Graphics g);
 public Hitbox (int x, int y, int xDimension, int yDimension) {
 super(x, y, xDimension, yDimension); // sets up a
 rectangle around this object that is easier to interact with

publicMoveableSprite(Imagepic, intx, inty) {
 super(pic, x, y); \\ allows a sprite to  move

public Sprite (Image pic, int x, int y) {
super(pic, x, y);
\\ coverges a sprite and a hitbox together for convenience
 public Hitbox getHitbox()
 \\ returns this box
```

Fields

```
public static final double PI = Math.PI;
private Coordinates topLeft;
private Coordinates topRight;
 private Coordinates bottomLeft;
 private Coordinates bottomRight;
 private Coordinates center;
private int width;
 private int height;
 private int x, y; // measures input coordinates
public AffineTransform getCoordinates()
public void verticalShift(double dy)
public void horizontalShift(double dx)
private Image picture;
private int picHeight;
private int picWidth;
private String name;
```