Buatlah Class Lingkaran sebagai beikut:

```
15  public class Lingkaran {
16
17      int xp, yp, r;
18      int dx = 5, dy = 2;
19      Color w = new Color(200, 50, 50);
20
21      public Lingkaran(int xp, int yp, int r) {
22          this.xp = xp;
23          this.yp = yp;
24          this.r = r;
25      }
26
27      public void gambar(Graphics g) {
28          g.setColor(w);
29          g.fillOval(xp, yp, r, r);
30      }
31
32      public void hapus(Graphics g) {
33          g.setColor(Color.black);
34          g.fillOval(xp, yp, r, r);
35      }
36
37      public void setdxdy(int dx, int dy) {
38          this.dx = dx;
39          this.dy = dy;
40      }
41      public void setxpyp(int xp, int yp) {
42          this.xp = xp;
43          this.yp = yp;
44      }
45
46      public void pindah() {
47          xp += dx;
48          yp += dy;
49      }
50  }
```

Buatlah Class Persegi sbb:

```
15  public class Persegi {
16
17      int xp, yp, s;
18      int dx = 5, dy = 2;
19      Color w = new Color(200, 200, 50);
20
21      public Persegi(int xp, int yp, int s) {
22          this.xp = xp;
23          this.yp = yp;
24          this.s = s;
25      }
26
27      public void gambar(Graphics g) {
28          g.setColor(w);
29          g.fillRect(xp, yp, s, s);
30      }
31
32      public void hapus(Graphics g) {
33          g.setColor(Color.black);
34          g.fillRect(xp, yp, s, s);
35      }
36
37      public void setdxdy(int dx, int dy) {
38          this.dx = dx;
39          this.dy = dy;
40      }

42          public void setxpyp(int xp, int yp) {
43              this.xp = xp;
44              this.yp = yp;
45          }
46
47      public void pindah() {
48          xp += dx;
49          yp += dy;
50      }
51  }
```

Buatlah Class RelasiAgregasi

```
15  public class RelasiAgregasi {
16
17      Lingkaran L;
18      Persegi P;
19
20      public RelasiAgregasi(Lingkaran L, Persegi P) {
21          this.L = L;
22          this.P = P;
23      }
24
25      public void setdxdy(int dx, int dy) {
26          L.setdxdy(dx, dy);
27          P.setdxdy(dx, dy);
28      }
29
30      public void gambar(Graphics g) {
31          P.gambar(g);
32          L.gambar(g);
33
34      }
35
36      public void hapus(Graphics g) {
37          L.hapus(g);
38          P.hapus(g);
39
40      }
41
42      public void setxpyp(int xp, int yp) {
43          P.setxpyp(xp, yp);
44          L.setxpyp(xp, yp);
45      }
46
47  }
```

RANCANGLAH FORM SEBAGAI BERIKUT:

Form terdiri dari : Jpanel, 3 JButtton.

Dengan code sbb:

```
18  public class FrameAgregasi extends javax.swing.JFrame {
19
20      /**
21       * Creates new form FrameAgregasi
22       */
23      Graphics g;
24      Lingkaran L;
25      Persegi P;
26      RelasiAgregasi RA;
27      Random bilr =  new Random();
28      int Kanan, Bawah,ex,ye,dx,dy;
29      boolean hancur = false;
30      javax.swing.Timer t;
31      public FrameAgregasi() {
32          initComponents();
33          g =  jPanel1.getGraphics();
34          Kanan = jPanel1.getWidth();
35          Bawah = jPanel1.getHeight();
36          t = new javax.swing.Timer(20,new Pindah());
37      }
```

```
127     private void jPanel1MouseClicked(java.awt.event.MouseEvent evt) {
128         bersih();
129         ex = evt.getX(); ye = evt.getY();
130         int r = (1+bilr.nextInt(5))*10;
131         L = new Lingkaran(ex, ye,r );
132         P = new Persegi(ex, ye, r) ;
133         RA = new RelasiAgregasi(L, P);
134         dx = (1+bilr.nextInt(7)); dy = (1+bilr.nextInt(3));
135         RA.setdxdy(dx, dy);
136         RA.gambar(g);
137         hancur = false;
138     }
139
140     private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
141         // TODO add your handling code here:
142         t.start();
143     }
144
145     private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
146     t.stop();
147     }
148
149     private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {
150     hancur = true;
151     int dxp =  2+ bilr.nextInt(7), dyp =  1+ bilr.nextInt(4) ;
152     P.setdxdy(dxp, dyp);
153     int dxl =  2+ bilr.nextInt(7), dyl =  1+ bilr.nextInt(4) ;
154     L.setdxdy(dxl, dyl);
155     }
```

```
160     private void bersih(){
161        g.setColor(Color.black);
162        g.fillRect(0,0, jPanel1.getWidth(), jPanel1.getHeight());
163     }
```

```
201     // End of variables declaration
202
203     private  class Pindah implements ActionListener {
204
205         public Pindah() {
206         }
207
208         @Override
            public void actionPerformed(ActionEvent e) {
210         if(hancur) {
211         P.hapus(g);
212         L.hapus(g);
213         P.pindah();
214         if((P.xp <= 0)||(P.xp >= Kanan)) P.dx = -P.dx;
215         if((P.yp <= 0)||(P.yp >= Bawah)) P.dy = -P.dy;
216         L.pindah();
217         if((L.xp <= 0)||(L.xp >= Kanan)) L.dx = -L.dx;
218         if((L.yp <= 0)||(L.yp >= Bawah)) L.dy = -L.dy;
219         P.gambar(g);
220         L.gambar(g);
221         } else
222         {
223          RA.hapus(g);
224          ex += dx; ye += dy;
225          if((ex <= 0)||(ex >= Kanan)) dx = -dx;
226          if((ye <= 0)||(ye >= Bawah)) dy = -dy;
227          RA.setxpyp(ex, ye);
228          RA.gambar(g);
229         }
230         }
231     }
232 }
```