

[View Javadoc](#)

```

1  package model.element.mobile;
2
3  import java.awt.Image;
4  import java.io.IOException;
5
6  import javax.imageio.ImageIO;
7
8  import contract.ElementType;
9  import contract.IElement;
10 import contract.ILevelMap;
11 import model.element.LevelMap;
12
13 /**
14  * The Class Diamond.
15  *
16  * @author Group 5
17  */
18 public class Diamond implements IElement {
19
20     /** The score */
21     private int score = 0;
22
23     /** The exist boolean */
24     private boolean exist = true;
25
26     /** The elementType */
27     private ElementType elementType = ElementType.DIAMOND;
28
29     /** The x */
30     private int x;
31
32     /** The y */
33     private int y;
34
35     /** The levelMap */
36     private ILevelMap levelmap;
37
38     /** The image */
39     private static Image image;
40
41     /** The imageName */
42     private String imageName = "diamond";
43
44     /**
45      * constructor to build and place diamond
46      *
47      * @param x
48      *         The x.
49      * @param y
50      *         The y.
51      * @param levelMap
52      *         The levelMap.
53      */
54     public Diamond(final int x, final int y, ILevelMap levelMap) {
55
56         this.setX(x);
57         this.setY(y);
58         this.setImageName(imageName);
59         this.loadImage();
60         this.setLevelmap(levelMap);
61     }
62
63     /**
64      * Get x position of diamond
65      *
66      * @return x
67      */
68     @Override
69     public int getX() {
70
71         return this.x;
72     }
73
74     /**
75      * Set x position of diamond
76      *
77      * @param x
78      *         The x.
79      */
80     @Override
81     public void setX(int x) {
82
83         this.x = x;
84     }
85
86     /**
87      * Get y position of diamond
88      *
89      * @return y
90      */
91

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92  @Override
93  public int getY() {
94
95      return this.y;
96  }
97
98  /**
99   * Set y position of diamond
100   *
101   * @param y
102   *         The y.
103   */
104  @Override
105  public void setY(int y) {
106
107      this.y = y;
108  }
109
110  /**
111   * Move up the player when up key are pressed
112   */
113  @Override
114  public void moveUp() {
115
116      this.setY(this.getY() - 1);
117
118      this.levelmap.setElement(this.getX(), this.getY(), this);
119      this.levelmap.removeElement(getX(), getY()+1);
120  }
121
122  /**
123   * Move down the player when down key are pressed
124   */
125  @Override
126  public void moveDown() {
127      this.setY(this.getY() + 1);
128
129      this.levelmap.setElement(this.getX(), this.getY(), this);
130      this.levelmap.removeElement(getX(), getY()-1);
131  }
132
133  /**
134   * Move Left the player when Left key are pressed
135   */
136  @Override
137  public void moveLeft() {
138      this.setX(this.getX() - 1);
139
140      this.levelmap.setElement(this.getX(), this.getY(), this);
141      this.levelmap.removeElement(getX()+1, getY());
142  }
143
144  /**
145   * Move right the player when right key are pressed
146   */
147  @Override
148  public void moveRight() {
149      this.setX(this.getX() + 1);
150
151      this.levelmap.setElement(this.getX(), this.getY(), this);
152      this.levelmap.removeElement(getX()-1, getY());
153  }
154
155  /**
156   * do nothing the player when player don't move
157   */
158  @Override
159  public void doNothing() {
160      this.setY(this.getY());
161
162      this.levelmap.setElement(this.getX(), this.getY(), this);
163  }
164
165  /**
166   * Get image of diamond
167   *
168   * @return image
169   */
170  @Override
171  public Image getImage() {
172
173      return Diamond.image;
174  }
175
176  /**
177   * Set image of diamond
178   *
179   * @param image
180   *         The image.
181   */
182  @Override
183
184

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185 public void setImage(Image image) {
186     Diamond.image = image;
187 }
188
189 /**
190  * Load image of diamond
191  */
192 @Override
193 public void loadImage() {
194     Image img = null;
195     try {
196         img = ImageIO.read(getClass().getClassLoader().getResourceAsStream("images/" + this.getImageName() + ".png"));
197     }
198     catch(IOException e) {
199         e.printStackTrace();
200     }
201     this.setImage(img);
202 }
203
204 /**
205  * Get image name of diamond
206  *
207  * @return imageName
208  */
209 @Override
210 public String getImageName() {
211     return this.imageName;
212 }
213
214 /**
215  * Set image name of diamond
216  *
217  * @param imageName
218  *             The image name.
219  */
220 @Override
221 public void setImageName(String imageName) {
222     this.imageName = imageName;
223 }
224
225 /**
226  * check existing of diamond
227  *
228  * @return exist
229  */
230 @Override
231 public boolean isExist() {
232     return this.exist;
233 }
234
235 /**
236  * set exist verification of diamond
237  *
238  * @param exist
239  *             The exist state.
240  */
241 @Override
242 public void setExist(boolean exist) {
243     this.exist = exist;
244 }
245
246 /**
247  * Get Level
248  *
249  * @return level map
250  */
251 public ILevelMap getLevelmap() {
252     return levelmap;
253 }
254
255 /**
256  * Set Level
257  *
258  * @param levelmap
259  *             The LevelMap.
260  */
261 public void setLevelmap(ILevelMap levelmap) {
262     this.levelmap = levelmap;
263 }
264
265 /**
266  * Get score of collected diamond
267  *
268  * @return score
269  */
270 @Override
271 public int getScore() {

```

```
278         return score;
279     }
280
281     /**
282      * Set score of collected diamond
283      *
284      * @param score
285      *             The score.
286      */
287     @Override
288     public void setScore(int score) {
289         this.score = score;
290     }
291
292     /**
293      * Get element type of diamond
294      *
295      * @return element type
296      */
297     @Override
298     public ElementType getElementType() {
299         return elementType;
300     }
301
302     /**
303      * Set element type of diamond
304      *
305      * @param elementType
306      *             The elementType.
307      */
308     @Override
309     public void setElementType(ElementType elementType) {
310         this.elementType = elementType;
311     }
312 }
313 }
```

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