```java
package com.company;

import java.util.List;

public class Dice {
    public void Roll(List<Ninja> ninjas){
        for(Ninja ninja : ninjas){
            int randomNumber = (int)Math.floor(Math.random()*(100)+1);
            ninja.setDiceRollPoint(randomNumber);
        }
    }
}
```

```java
package com.company;

public class Ninja {
    private String name;
    private int health;
    private int attackPoint;
    private int diceRollPoint;
    private final int maxPercentAttack = 100;
    private int minPercentAttack;

    public Ninja(String name) {
        this.name = name;
        health = 10;
        attackPoint = 1;
        minPercentAttack = 50;
    }

    public int getMinPercentAttack() {
        return minPercentAttack;
    }

    public void setMinPercentAttack(int minPercentAttack) {
        this.minPercentAttack = minPercentAttack;
    }

    public int getHealth() {
        return health;
    }

    public void setHealth(int health) {
        this.health = health;
    }

    public int getAttackPoint() {
        return attackPoint;
    }
```

```java
37
38      public void setAttackPoint(int attackPoint) {
39          this.attackPoint = attackPoint;
40      }
41
42      public int getDiceRollPoint() {
43          return diceRollPoint;
44      }
45
46      public void setDiceRollPoint(int diceRollPoint) {
47          this.diceRollPoint = diceRollPoint;
48      }
49
50      public boolean Defense(Ninja enemyNinja) {
51          int randomNumber = (int) ((Math.random() * enemyNinja.maxPercentAttack - enemyNinja.minPercentAttack +
    1) + enemyNinja.minPercentAttack);
52          System.out.println(randomNumber);
53          if (randomNumber > enemyNinja.minPercentAttack){
54              enemyNinja.minPercentAttack += 1;
55              return true;
56          }
57          else{
58              return false;
59          }
60      }
61
62      public void Attack(Ninja enemyNinja) {
63          if (!enemyNinja.Defense(enemyNinja)) {
64              if (this.minPercentAttack != 70) {
65                  this.minPercentAttack += 1;
66              }
67
68              System.out.println("Successfull hit from " + enemyNinja.getName() + " by " + enemyNinja.
    getAttackPoint() + " hit");
69              enemyNinja.setHealth(enemyNinja.getHealth() - getAttackPoint());
70          } else {
```

```java
71              System.out.println("Missed , maybe next time " + enemyNinja.getName());
72          }
73
74
75      }
76
77      public String getName() {
78          return name;
79      }
80 }
81
```

```java
package com.company;

import java.util.List;

public class PlayingArea {
    private List<Ninja> ninjas;
    private Dice dice;
    private int roundCount;

    public PlayingArea(List<Ninja> ninjas){
        this.ninjas = ninjas;
        this.dice = new Dice();
        roundCount = 1;
    }

    private boolean CheckIfAnyNinjaDead(List<Ninja> ninjas){
        for (Ninja ninja : ninjas){
            if (ninja.getHealth() <= 0)
                return false;
        }

        return true;
    }

    private Ninja CheckWhichNinjaIsDead(List<Ninja> ninjas){
        if (ninjas.get(0).getHealth() <= 0)
            return ninjas.get(0);
        else
            return ninjas.get(1);
    }


    private Ninja GetAttackingNinja(List<Ninja> ninjas){
        //it can be draw , or one winner

```

```java
37          if (ninjas.get(0).getDiceRollPoint() > ninjas.get(1).getDiceRollPoint())
38              return ninjas.get(0);
39          else if(ninjas.get(0).getDiceRollPoint() < ninjas.get(1).getDiceRollPoint())
40              return ninjas.get(1);
41          else
42              return null;
43      }


     public void Fight() throws InterruptedException {

          System.out.println("Let the fight begin ...");

          //Thread.sleep(3000);
          System.out.println();

          while(CheckIfAnyNinjaDead(ninjas)){
              System.out.println("ROUND "+roundCount+ " FIGHT");
              roundCount++;

              //Thread.sleep(3000);
              System.out.println();

              System.out.println("Rolling dice ...");
              dice.Roll(ninjas);

              //Thread.sleep(3000);
              System.out.println();

              List<Ninja> tempArray = ninjas;


              Ninja attackingNinja = GetAttackingNinja(ninjas);
```

```java
73              if (attackingNinja==null){
74                  System.out.println("This round is DRAW");
75                  System.out.println("-------------------------------------------");
76                  //Thread.sleep(3000);
77                  continue;
78              }
79
80              else{
81                  System.out.println("Attacking turn : " + attackingNinja.getName());
82                  tempArray.remove(attackingNinja);
83                  Ninja defendingNinja = tempArray.get(0);
84                  System.out.println("DEFEND YOURSELF , " + defendingNinja.getName());
85
86                  System.out.println();
87                  //Thread.sleep(2000);
88
89                  tempArray.add(attackingNinja);
90
91                  attackingNinja.Attack(defendingNinja);
92                  //Thread.sleep(3000);
93
94              }
95
96              System.out.println("-------------------------------------------");
97          }
98
99          Ninja deadNinja = CheckWhichNinjaIsDead(ninjas);
100         System.out.println("RIP to the "+deadNinja.getName());
101
102         //Thread.sleep(2000);
103
104         ninjas.remove(deadNinja);
105         Ninja winnerNinja = ninjas.get(0);
106         System.out.println(winnerNinja.getName().toUpperCase()+" WINS");
107         System.out.println("FATALITY");
108
```

```
109          //Thread.sleep(3000);
110     }
111 }
112
```

```java
package com.company;

import java.util.ArrayList;
import java.util.List;

public class Main {

    public static void main(String[] args) {
        Ninja ninja1 = new Ninja("Momochi Sandayu");
        Ninja ninja2 = new Ninja("Fuma Kotaro");

        List<Ninja> fightingNinjas = new ArrayList<Ninja>();
        fightingNinjas.add(ninja1);
        fightingNinjas.add(ninja2);

        PlayingArea playingArea = new PlayingArea(fightingNinjas);
        try {
            playingArea.Fight();
        } catch (InterruptedException e) {
            e.printStackTrace();
        }
    }
}
```

```
 1 C:\Users\sahin\.jdks\openjdk-17\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2021.2.2\lib\
   idea_rt.jar=62311:C:\Program Files\JetBrains\IntelliJ IDEA 2021.2.2\bin" -Dfile.encoding=UTF-8 -classpath C:\
   Users\sahin\Desktop\BachelorDegree\SecondYear\ObjectOrientedProgramming\Week4\NinjaAttackGame\out\production\
   NinjaAttackGame com.company.Main
 2 Let the fight begin ...
 3
 4 ROUND 1 FIGHT
 5
 6 Rolling dice ...
 7
 8 Attacking turn : Momochi Sandayu
 9 DEFEND YOURSELF , Fuma Kotaro
10
11 Successfull hit from Fuma Kotaro by 1 hit
12 --------------------------------------------
13 ROUND 2 FIGHT
14
15 Rolling dice ...
16
17 Attacking turn : Momochi Sandayu
18 DEFEND YOURSELF , Fuma Kotaro
19
20 Successfull hit from Fuma Kotaro by 1 hit
21 --------------------------------------------
22 ROUND 3 FIGHT
23
24 Rolling dice ...
25
26 Attacking turn : Momochi Sandayu
27 DEFEND YOURSELF , Fuma Kotaro
28
29 Successfull hit from Fuma Kotaro by 1 hit
30 --------------------------------------------
31 ROUND 4 FIGHT
32
33 Rolling dice ...
```

```
34
35 Attacking turn : Momochi Sandayu
36 DEFEND YOURSELF , Fuma Kotaro
37
38 Missed , maybe next time Fuma Kotaro
39 ------------------------------------------
40 ROUND 5 FIGHT
41
42 Rolling dice ...
43
44 Attacking turn : Fuma Kotaro
45 DEFEND YOURSELF , Momochi Sandayu
46
47 Missed , maybe next time Momochi Sandayu
48 ------------------------------------------
49 ROUND 6 FIGHT
50
51 Rolling dice ...
52
53 Attacking turn : Momochi Sandayu
54 DEFEND YOURSELF , Fuma Kotaro
55
56 Missed , maybe next time Fuma Kotaro
57 ------------------------------------------
58 ROUND 7 FIGHT
59
60 Rolling dice ...
61
62 Attacking turn : Fuma Kotaro
63 DEFEND YOURSELF , Momochi Sandayu
64
65 Missed , maybe next time Momochi Sandayu
66 ------------------------------------------
67 ROUND 8 FIGHT
68
69 Rolling dice ...
```

```
 70
 71 Attacking turn : Momochi Sandayu
 72 DEFEND YOURSELF , Fuma Kotaro
 73
 74 Missed , maybe next time Fuma Kotaro
 75 ------------------------------------------
 76 ROUND 9 FIGHT
 77
 78 Rolling dice ...
 79
 80 Attacking turn : Momochi Sandayu
 81 DEFEND YOURSELF , Fuma Kotaro
 82
 83 Successfull hit from Fuma Kotaro by 1 hit
 84 ------------------------------------------
 85 ROUND 10 FIGHT
 86
 87 Rolling dice ...
 88
 89 Attacking turn : Fuma Kotaro
 90 DEFEND YOURSELF , Momochi Sandayu
 91
 92 Missed , maybe next time Momochi Sandayu
 93 ------------------------------------------
 94 ROUND 11 FIGHT
 95
 96 Rolling dice ...
 97
 98 Attacking turn : Fuma Kotaro
 99 DEFEND YOURSELF , Momochi Sandayu
100
101 Missed , maybe next time Momochi Sandayu
102 ------------------------------------------
103 ROUND 12 FIGHT
104
105 Rolling dice ...
```

```
106
107 Attacking turn : Momochi Sandayu
108 DEFEND YOURSELF , Fuma Kotaro
109
110 Missed , maybe next time Fuma Kotaro
111 ----------------------------------------
112 ROUND 13 FIGHT
113
114 Rolling dice ...
115
116 Attacking turn : Momochi Sandayu
117 DEFEND YOURSELF , Fuma Kotaro
118
119 Successfull hit from Fuma Kotaro by 1 hit
120 ----------------------------------------
121 ROUND 14 FIGHT
122
123 Rolling dice ...
124
125 Attacking turn : Fuma Kotaro
126 DEFEND YOURSELF , Momochi Sandayu
127
128 Successfull hit from Momochi Sandayu by 1 hit
129 ----------------------------------------
130 ROUND 15 FIGHT
131
132 Rolling dice ...
133
134 Attacking turn : Fuma Kotaro
135 DEFEND YOURSELF , Momochi Sandayu
136
137 Successfull hit from Momochi Sandayu by 1 hit
138 ----------------------------------------
139 ROUND 16 FIGHT
140
141 Rolling dice ...
```

```
142
143 Attacking turn : Momochi Sandayu
144 DEFEND YOURSELF , Fuma Kotaro
145
146 Successfull hit from Fuma Kotaro by 1 hit
147 ----------------------------------------
148 ROUND 17 FIGHT
149
150 Rolling dice ...
151
152 Attacking turn : Momochi Sandayu
153 DEFEND YOURSELF , Fuma Kotaro
154
155 Missed , maybe next time Fuma Kotaro
156 ----------------------------------------
157 ROUND 18 FIGHT
158
159 Rolling dice ...
160
161 Attacking turn : Fuma Kotaro
162 DEFEND YOURSELF , Momochi Sandayu
163
164 Missed , maybe next time Momochi Sandayu
165 ----------------------------------------
166 ROUND 19 FIGHT
167
168 Rolling dice ...
169
170 Attacking turn : Momochi Sandayu
171 DEFEND YOURSELF , Fuma Kotaro
172
173 Successfull hit from Fuma Kotaro by 1 hit
174 ----------------------------------------
175 ROUND 20 FIGHT
176
177 Rolling dice ...
```

```
178
179 Attacking turn : Momochi Sandayu
180 DEFEND YOURSELF , Fuma Kotaro
181
182 Missed , maybe next time Fuma Kotaro
183 ------------------------------------------
184 ROUND 21 FIGHT
185
186 Rolling dice ...
187
188 Attacking turn : Momochi Sandayu
189 DEFEND YOURSELF , Fuma Kotaro
190
191 Missed , maybe next time Fuma Kotaro
192 ------------------------------------------
193 ROUND 22 FIGHT
194
195 Rolling dice ...
196
197 Attacking turn : Fuma Kotaro
198 DEFEND YOURSELF , Momochi Sandayu
199
200 Successfull hit from Momochi Sandayu by 1 hit
201 ------------------------------------------
202 ROUND 23 FIGHT
203
204 Rolling dice ...
205
206 Attacking turn : Momochi Sandayu
207 DEFEND YOURSELF , Fuma Kotaro
208
209 Missed , maybe next time Fuma Kotaro
210 ------------------------------------------
211 ROUND 24 FIGHT
212
213 Rolling dice ...
```

```
214
215 Attacking turn : Fuma Kotaro
216 DEFEND YOURSELF , Momochi Sandayu
217
218 Successfull hit from Momochi Sandayu by 1 hit
219 ----------------------------------------
220 ROUND 25 FIGHT
221
222 Rolling dice ...
223
224 Attacking turn : Momochi Sandayu
225 DEFEND YOURSELF , Fuma Kotaro
226
227 Missed , maybe next time Fuma Kotaro
228 ----------------------------------------
229 ROUND 26 FIGHT
230
231 Rolling dice ...
232
233 Attacking turn : Fuma Kotaro
234 DEFEND YOURSELF , Momochi Sandayu
235
236 Successfull hit from Momochi Sandayu by 1 hit
237 ----------------------------------------
238 ROUND 27 FIGHT
239
240 Rolling dice ...
241
242 Attacking turn : Fuma Kotaro
243 DEFEND YOURSELF , Momochi Sandayu
244
245 Successfull hit from Momochi Sandayu by 1 hit
246 ----------------------------------------
247 ROUND 28 FIGHT
248
249 Rolling dice ...
```

```
250
251 Attacking turn : Fuma Kotaro
252 DEFEND YOURSELF , Momochi Sandayu
253
254 Successfull hit from Momochi Sandayu by 1 hit
255 -----------------------------------------
256 ROUND 29 FIGHT
257
258 Rolling dice ...
259
260 Attacking turn : Momochi Sandayu
261 DEFEND YOURSELF , Fuma Kotaro
262
263 Successfull hit from Fuma Kotaro by 1 hit
264 -----------------------------------------
265 ROUND 30 FIGHT
266
267 Rolling dice ...
268
269 Attacking turn : Fuma Kotaro
270 DEFEND YOURSELF , Momochi Sandayu
271
272 Successfull hit from Momochi Sandayu by 1 hit
273 -----------------------------------------
274 ROUND 31 FIGHT
275
276 Rolling dice ...
277
278 This round is DRAW
279 -----------------------------------------
280 ROUND 32 FIGHT
281
282 Rolling dice ...
283
284 Attacking turn : Momochi Sandayu
285 DEFEND YOURSELF , Fuma Kotaro
```

```
286
287 Missed , maybe next time Fuma Kotaro
288 ----------------------------------------
289 ROUND 33 FIGHT
290
291 Rolling dice ...
292
293 Attacking turn : Momochi Sandayu
294 DEFEND YOURSELF , Fuma Kotaro
295
296 Successfull hit from Fuma Kotaro by 1 hit
297 ----------------------------------------
298 ROUND 34 FIGHT
299
300 Rolling dice ...
301
302 Attacking turn : Momochi Sandayu
303 DEFEND YOURSELF , Fuma Kotaro
304
305 Successfull hit from Fuma Kotaro by 1 hit
306 ----------------------------------------
307 RIP to the Fuma Kotaro
308 MOMOCHI SANDAYU WINS
309 FATALITY
310
311 Process finished with exit code 0
312
```