```
 1 import random
 2
 3
 4 class Die:
 5     """
 6     instance of a die
 7     """
 8     def __init__(self, sides=6):
 9         """
10         Initializes an instance of a die object
11
12         :param sides: number of sides of the die. 6 sides
   by default
13         """
14         self.__sides = sides
15         self.__top_value = random.randint(1, sides)
16
17
18     def get_sides(self):
19         """
20         getter method for number of sides of the die
21
22         :return: number of sides
23         """
24         return self.__sides
25
26     def get_value(self):
27         """
28         getter method for tip value of the die
29
30         :return: top value
31         """
32         return self.__top_value
33
34
35
36     def roll(self):
37         """
38         rolls the die, setting the top value as a random
   number in the range of the die's number of sides
39
40         :return: none
41         """
42         sides = self.get_sides()
43         self.__top_value = random.randint(1, sides)
44
```

```
1  """
2  Ian Sulley
3
4  I affirm that I have carried out the attached academic
   endeavors with full academic honesty,
5  in accordance with the Union College Honor Code and the
   course syllabus.
6  """
7
8  from die import Die
9
10
11 def main():
12     """
13     instantiates two dice objects and plays a game
   comparing the results.
14     If twice the 6 sided die equals the result of the 12
   sided die you win, else you lose and roll again.
15     :return: Die values and Win or Lose
16     """
17     die_12 = Die(12)
18     die_6 = Die()
19
20     while (die_6.get_value() * 2) != die_12.get_value():
21
22         print(str(die_12.get_value()) + " does not equal "
    + str(die_6.get_value()) + " times 2")
23         print("You lose! Roll again. \n")
24
25         die_6.roll()
26         die_12.roll()
27
28
29     else:
30         print(str(die_12.get_value()) + " equals " + str(
   die_6.get_value()) + " times 2")
31         print("You win!")
32
33
34 if __name__ == '__main__':
35     main()
36
```