

```
1  """
2  This module is a class that represents a die, that can
   be rolled and has a value.
3
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5  Honor Code: I affirm that I have carried out the
   attached academic endeavors with full academic honesty,
6  in accordance with the Union College Honor Code and the
   course syllabus.
7  """
8
9  import random
10
11
12  class Die:
13      """
14      Represents a die with a specified number of sides.
15      __sides: An int that represents the number of sides
   on the die.
16      __value: An int that represents the current value
   showing on the die.
17      """
18
19      def __init__(self, sides=6):
20          """
21          Constructs a Die object with a specified number
   of sides.
22          Param: sides - The number of sides on the die.
   Defaults to 6.
23          """
24          self.__value = None
25          self.__sides = sides
26
27      def roll(self):
28          """
29          Rolls the die and sets the current value to the
   random number from 1 to the number of sides.
30          """
```

```
31         self.__value = random.randint(1, self.__sides)
32
33     def get_value(self):
34         """
35         Returns the current value showing on the die.
36         Returns: An int that represents the current
37         value on the die.
38         """
39         return self.__value
40
41     def get_sides(self):
42         """
43         Returns the number of sides on the die.
44         Returns: An int that represents the number of
45         sides on the die.
46         """
47         return self.__sides
```

```
1 from die import *
2
3
4 def main():
5     """
6     Runs a die game with a D6 and D12.
7
8     The game continues until one die is twice the value
9     of the other. The game will continue to roll when
10    users press Enter
11    """
12    dice_1 = Die()
13    dice_2 = Die(12)
14    game_over = False
15    winner = ""
16
17    while not game_over:
18        user_response = input("Press Enter to roll the
19        dice: ")
20
21        if user_response == "":
22            dice_1.roll()
23            dice_2.roll()
24
25            if (dice_1.get_value() * 2) == dice_2.
26            get_value():
27                winner = "Die 2"
28                game_over = True
29            elif (dice_2.get_value() * 2) == dice_1.
30            get_value():
31                winner = "Die 1"
32                game_over = True
33
34            print("Dice Rolled: ", dice_1.get_value(),
35            dice_2.get_value())
36
37            if winner:
38                print(f"Winner is {winner}")
39
40
```

```
33
34
35
36 if __name__ == "__main__":
37     main()
```