

```
1 """
2 This module is a class that represents a die, that can
3 be rolled and has a value.
4
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6 Honor Code: I affirm that I have carried out the
7 attached academic endeavors with full academic honesty,
8 in accordance with the Union College Honor Code and the
9 course syllabus.
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
16             on the die.
17             __value: An int that represents the current value
18                 showing on the die.
19
20         """
21
22     def __init__(self, sides=6):
23         """
24             Constructs a Die object with a specified number
25             of sides.
26             Param: sides - The number of sides on the die.
27             Defaults to 6.
28             """
29             self.__value = None
30             self.__sides = sides
31
32     def roll(self):
33         """
34             Rolls the die and sets the current value to the
35             random number from 1 to the number of sides.
36             """
37
```

```
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
13    dice_1 = Die()
14    dice_2 = Die(12)
15    game_over = False
16    winner = ""
17
18    while not game_over:
19        user_response = input("Press Enter to roll the
20        dice: ")
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}")
```

File - C:\Users\james\Documents\Personal\College Life\Second Year\Courses\CSC\CSC120\Labs\Lin_Lab4\main.py

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