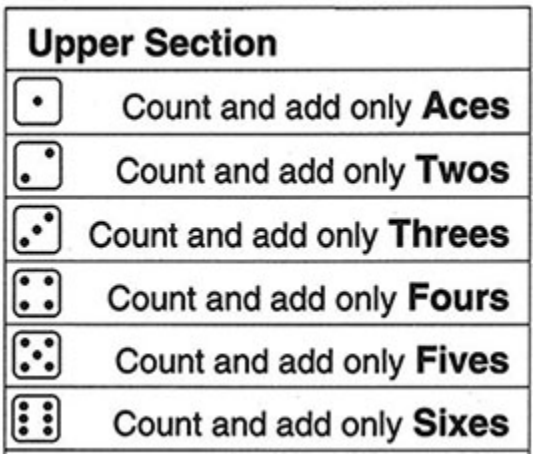
Yahtzee Version 1 Code: Upper Section

Have you ever played Yahtzee? It's a board game that is played by two players. The players take turns rolling **five** 6-sided dice, and the player with the highest score wins.

Now might be a good time to review the game rules: Yahtzee Game Rules.

In the first version, you will implement user-defined functions for the Upper Section of Yahtzee.



Upper Section	
⚀	Count and add only **Aces**
⚁	Count and add only **Twos**
⚂	Count and add only **Threes**
⚃	Count and add only **Fours**
⚄	Count and add only **Fives**
⚅	Count and add only **Sixes**

What to do

Create a new file called `yahtzee1.py`.

Implement the `main` function and following user-defined functions:

- `make_roll`
- `sum_of_given_number`
- `fill_upper_section`
- `display_upper_section`

Example

Your `main` function will do the following:

1. Display the random roll by calling the `make_roll` function. The `make_roll` function returns a tuple of 5 random numbers between 1 and 6 (both endpoints inclusive). Let's

assume that the `make_roll` function returns the random roll **(2, 1, 5, 1, 5),** the following message will be displayed by the main function:
`Rolling the dice... (2, 1, 5, 1, 5)`

2. Fill the upper section of Yahtzee by calling the `fill_upper_section` function. The `fill_upper_section` function takes the random roll as a parameter and returns a list. In the resulting list, each element will represent ***the sum of all occurrences of a specific number that appears in the random roll***. If there are two ones in the random roll, the first element of the list should be 2. If there's only one two, the second element of the list should be 2. If a number doesn't appear in the roll, its corresponding element should be 0.

For example, if the random roll was `(2, 1, 5, 1, 5)`, the list returned by this function will look like this:
`[2, 2, 0, 0, 10, 0]`
It means that the ***sum of all ones is 2 (there are two ones), the sum of all twos is 2 (there is a single two), the sum of all threes is 0 (there are no threes), etc***.

The `fill_upper_section` function will call the `sum_of_given_number` function for each number from 1 to 6 to compute and return the sum of all occurrences of that number.
Unlike real Yahtzee, in our simplified version, the player rolls only once to fill out the entire upper section.

3. Display the upper section as follows by calling the `display_upper_section` function:

```
Aces: 2
Twos: 2
Threes: 0
Fours: 0
Fives: 10
Sixes: 0
```

Use the following template. All functions defined in the template **must be present and implemented** in your code (you may **not** omit functions). You **may** add extra functions if needed.

```
def make_roll() -> tuple:
    """
```

```
    Returns a tuple of five random values between 1 and 6.
    """

    pass


def sum_of_given_number(roll: tuple, number: int) -> int:
    """
    Returns the sum of the values in the roll that match the given number.
    Example: sum_of_given_number((2,6,2,6,1), 6) = 12
    """
    pass


def fill_upper_section(roll: tuple) -> list:
    """
    Returns a list of the sums of all values in the roll.
    """
    pass


def display_upper_section(upper_section_scores: list) -> None:
    """
    Displays the upper section.
    """
    names = ['Aces', 'Twos', 'Threes', 'Fours', 'Fives', 'Sixes']
    pass
def main():
    """
    Main function.
    """
    # TODO: Roll the dice (and print as in demo)
    # TODO: Fill the upper section
    # TODO: Display the upper section

if __name__ == "__main__":
    main()
```

Program name

Save your program as `yahtzee1.py`.

Demo

https://asciinema.org/a/FpaImYV7GxczF8iNVwMRrtqgb

Testing

You will write unit tests for your functions, so there is no need to test the program manually.

Next: Version 1 testing: Upper section

Submitting

Submit `yahtzee1.py` via eClass.