

# Yahtzee Version 2 Code: Lower Section

---

Game rules: [Yahtzee Game Rules](#).

In the first version, you implemented the Upper Section of Yahtzee. Now, let's add the Lower Section. For simplicity, we will implement only the following lines of the Lower Section:

- 3 of a kind
- 4 of a kind
- Yahtzee

Lower Section	
3 of a kind	Total of all dice
4 of a kind	Total of all dice
Full House	25
Low Straight	30
High Straight	40
Yahtzee	50

## What to do

---

Create a new file called `yahtzee2.py`.

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

- `num_of_a_kind` (this function will **generalize** both the “3 of a kind” and “4 of a kind”)
- `yahtzee`

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.

```

# Version 1 functions here, excluding main()

def num_of_a_kind(roll: tuple, number: int) -> int:
    """
    If a roll has EXACTLY `number` dice of the same face value,
    returns the sum of all five values in the roll.
    Otherwise, returns 0.
    """
    pass

def yahtzee(roll: tuple) -> int:
    """
    Returns 50 if the roll is a Yahtzee (all dice in the roll have the same
    face value). Otherwise, returns 0.
    """
    pass

def main():
    """
    Main function.
    """
    # Version 1 code
    # TODO: Calculate and display "3 of a kind" for the given roll
    # TODO: Calculate and display "4 of a kind" for the given roll
    # TODO: Calculate and display "Yahtzee" for the given roll

if __name__ == "__main__":
    main()

```

## Program name

---

Save your program as yahtzee2.py.

## Demo

---

<https://asciinema.org/a/lsvKXBdpL098LRphTyZMgawyW>

## Testing

---

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

Next: [Version 2 testing: Lower section](#)

## Submitting

---

Submit yahtzee2.py via eClass.

### Copyright

I. Akhmetov, J. Schaeffer, M. Morris and S. Ahmed, Department of Computing Science, Faculty of Science, University of Alberta (2023).