

Exercise 1

1. create a JSON file looking like that

Entrée []:

```
{ "users": [
  {
    "username": "David",
    "password": "12345",
    "email": "david@super.com",
    "message_received": [],
    "message_sent": []
  },
  {
    "username": "Mark",
    "password": "23412",
    "email": "mark@super.com",
    "message_received": [],
    "message_sent": []
  },
  {
    "username": "Jacob",
    "password": "23821",
    "email": "jacob@super.com",
    "message_received": [],
    "message_sent": []
  },
  {
    "username": "Joseph",
    "password": "62797",
    "email": "joseph@super.com",
    "message_received": [],
    "message_sent": []
  }
]
```

Part 1 is the same as exercise 6 of yesterday

for question 5 (the bonus question) you should write the new user inside the json file

For Part 2 you should write every change inside the json file

Exercise 2

Part 1

1. We are trying to recreate the rolling of dice.
2. Your code should keep throwing 2 dice until they both land on the same number.

3. It should keep throwing 2 dice (using your throw_dice function) until they both land on the same number (until we reach doubles). For example: (1, 2), (3, 1), (5,5) → then stop throwing, because doubles were reached.
4. We also want to keep track of the number of throws we had to do to get a double.

Part 2

1. Ask the user how many times does he want to throw dice.
2. Create a variable dictionary called keep_track. It should have three keys: number_of_throw, number_of_double, average_double
3. When we get to a double we want to keep throwing dice and add +1 to the number_of_doubles in our dictionary.
4. At the end calculate the average of double. (number_of_double/number_of_throw)
5. Show the results to the user. The output would show something like this:

- Total throws: 8
- Average doubles: 2.67.

Part 3

1. Save each 'keep_track' dictionary to a JSON file. It should look like that:

Entrée []:

```
{
  'data': [
    {
      'number_of_throw': 12,
      'number_of_double': 2,
      'average_double': 0.16666
    },
    {
      'number_of_throw': 12,
      'number_of_double': 2,
      'average_double': 0.16666
    },
  ]
}
```

Part 4

1. Create a new python file
2. it should read the data from the previous JSON file
3. Calculate the average of double for all the throws (total of double/total of throws)

Entrée []:

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