

Opening Hours

Version 2.7

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In short

Your task is to write an endpoint that accepts **JSON-formatted** opening hours of a restaurant as an input and returns the rendered **human readable format** as a text output.

Input data

Input JSON consists of keys indicating days of a week and corresponding opening hours as values. One JSON file includes data for one restaurant.

```
{  
    <dayofweek>: <opening hours>  
    <dayofweek>: <opening hours>  
    ...  
}
```

<dayofweek>: *monday / tuesday / wednesday / thursday / friday / saturday / sunday*

<opening hours>: an array of objects containing opening hours. Each object consist of two keys:

- **type**: *open* or *close*
- **value**: opening / closing time as UNIX time (1.1.1970 as a date),
e.g. 32400 = 9 AM, 37800 = 10:30 AM,
max value is 86399 = 11:59:59 PM

Example: on Mondays a restaurant is open from 9 AM to 8 PM

```
{
```

```

    "monday" : [
      {
        "type" : "open",
        "value" : 32400
      },
      {
        "type" : "close",
        "value" : 72000
      }
    ],
    ....
  }

```

Special cases

- If a restaurant is closed the whole day, an array of opening hours is empty.
 - `"tuesday": []` means a restaurant is closed on Tuesdays
- A restaurant can be opened and closed multiple times during the same day,
 - E.g. on Mondays from 9 AM - 11 AM and from 1 PM to 5 PM
- A restaurant might not be closed during the same day
 - A restaurant can be opened e.g. on a Friday evening and closed early Saturday morning. In that case *friday*-object includes only the opening time. Closing time is part of the *saturday*-object.
 - When printing opening hours which span between multiple days, closing time is always a part of the day when a restaurant was opened (e.g. Friday 8 PM - 1 AM)

```

{
  "friday" : [
    {
      "type" : "open",
      "value" : 64800
    }
  ],
  "saturday": [
    {
      "type" : "close",
      "value" : 3600
    },
    {
      "type" : "open",
      "value" : 32400
    },
    {
      "type" : "close",

```

A restaurant is open:

Friday: 6 PM - 1 AM

Saturday: 9 AM -11 AM, 4 PM - 11 PM

```

        "value" : 39600
      },
      {
        "type" : "open",
        "value" : 57600
      },
      {
        "type" : "close",
        "value" : 82800
      }
    ]
  }

```

Deliverable

Part 1

Build a HTTP API that accepts opening hours data as an input (JSON) and returns a more **human readable version of the data formatted using a 12-hour clock**.

Output example in 12-hour clock format:

Monday: 8 AM - 10 AM, 11 AM - 6 PM

Tuesday: Closed

Wednesday: 11 AM - 6 PM

Thursday: 11 AM - 6 PM

Friday: 11 AM - 9 PM

Saturday: 11 AM - 9 PM

Sunday: Closed

Return the formatted version in HTTP response.

Part 2

Tell us what you think about the data format. Is the current JSON structure the best way to represent that kind of data or can you come up with a better version? There are no right answers here 😊. **Please write your thoughts to *readme.md*.**

Documentation

You should create a readme file with instruction how to run your app.

Sending the assignment

Send a link to github or gitlab project and a link to a docker registry with your app.

A word about potential edge cases

If you're unsure about the expected behavior in some edge cases, please take the best approach you can think of and document your assumptions as part of the readme.

Testing

You should write unit/integration test for your code. Coverage should be more than 60%.

Docker

You should create a docker image of this application and upload it to a registry(e.g. docker hub)

Technologies

Feel free to use python. 3rd party libraries and frameworks are also allowed.

Full JSON Example

Input

```
{
  "monday" : [],
  "tuesday" : [
    {
      "type" : "open",
      "value" : 36000
    },
    {
      "type" : "close",
      "value" : 64800
    }
  ],
  "wednesday" : [],
  "thursday" : [
    {
      "type" : "open",
      "value" : 37800
    },
    {
      "type" : "close",
      "value" : 64800
    }
  ],
  "friday" : [
    {
      "type" : "open",
      "value" : 36000
    }
  ],
  "saturday" : [
    {
      "type" : "close",
      "value" : 3600
    },
    {
      "type" : "open",
      "value" : 36000
    }
  ],
  "sunday" : [
    {
      "type" : "close",
      "value" : 3600
    },
    {

```

```
    "type" : "open",  
    "value" : 43200  
  },  
  {  
    "type" : "close",  
    "value" : 75600  
  }  
]  
}
```

Output

Monday: Closed

Tuesday: 10 AM - 6 PM

Wednesday: Closed

Thursday: 10:30 AM - 6 PM

Friday: 10 AM - 1 AM

Saturday: 10 AM - 1 AM

Sunday: 12 PM - 9 PM