

## Coding Assignment

Existing coding-test microservice returns transactions.

```
[
  {
    "id": "3fa85f64-5717-4562-b3fc-2c963f66afa6",
    "type": "SALES",
    "timestamp": "2021-07-23T21:26:39.897Z",
    "value": 0
  }
]
```

You need to implement REST Endpoint which return transactions aggregated by type and date interval.

- Your solution must compile and run successfully.
- Your solution must include unit and integration tests for your code.

```
GET "/api/v1/transactions/group?start_date=$start&end_date=$end&type=$type"

Response Type: application/json
Response Format:
[
  {
    "type": "text",
    "interval": "ISO_DATE",
    "value": number
  }
]
```

Ordering:

Response must be ordered by Type in alphabetical order and interval in ascending order.

Parameters:

Parameter	Type	Allowed Values
start_date	Required ISO 8601 Format:	
end_date	Required: ISO 8601 Format	
type	Optional: Text	<i>SALES, RETURN, LOSS</i>

Parameter 'type' is optional and if not provided than aggregation should be done for all types.

Aggregation Rules:

Transactions must be aggregated by the **Type** and **Transaction time** rounded to 15 min interval.

Interval of **2031-12-01T10:15:00Z** includes transactions starting at **2031-12-01T10:00:00Z** **exclusive** and ending at **2031-12-01T10:15:00Z** **inclusive**

For interval **2031-12-01T10:15:00Z**

Transaction posted at or before **2031-12-01T10:00:00Z** will not be counted for the provided interval.

Transaction posted at or before **2031-12-01T10:15:00Z** will be counted for the provided interval.

Data may contain duplicates. Duplicate record should not be counted.

Duplicate record considered a Transaction with the same Type and Timestamp.

#### Sample Request:

```
GET "/api/v1/transactions/group?start_date=2031-12-01T10:00:00Z&end_date=2031-12-01T11:00:00Z"
```

#### Sample Response:

```
[
  {
    "type": "LOSS",
    "interval": "2031-12-01T10:30:00Z",
    "value": 12
  },
  {
    "type": "RETURN",
    "interval": "2031-12-01T10:15:00Z",
    "value": 4
  },
  {
    "type": "RETURN",
    "interval": "2031-12-01T11:00:00Z",
    "value": 8
  },
  {
    "type": "SALES",
    "interval": "2031-12-01T10:15:00Z",
    "value": 3
  },
  {
    "type": "SALES",
    "interval": "2031-12-01T10:30:00Z",
    "value": 17
  },
  {
    "type": "SALES",
    "interval": "2031-12-01T10:45:00Z",
    "value": 10
  }
]
```

#### Sample Request:

```
GET "/api/v1/transactions/group?start_date=2031-12-01T10:00:00Z&end_date=2031-12-01T11:00:00Z&type=LOSS"
```

#### Sample Response:

```
[
  {
    "type": "LOSS",
    "interval": "2031-12-01T10:30:00Z",
    "value": 12
  }
]
```

#### Sample Request:

```
GET "/api/v1/transactions/group?start_date=2031-12-01T11:00:00Z&end_date=2031-12-01T12:00:00Z"
```

#### Sample Response:

```
[ ]
```