

# Tracking Rewards Points

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You're going to help us calculate and report on rewards points for our customers.

The code will process a JSON object. You should imagine that the JSON is returned from a request to a service, but you can either read it in from a file or declare it in the code. You can use any programming language that you want. Please choose a language that allows you to best demonstrate your programming ability.

The JSON is composed of a collection of events.

One type of event is "new customer", which will register a new Customer in the app.

The second type of event is "new order", which will notify you of an order attributed to a customer.

Reward points are calculated on the following schedule:

Local time of transaction	Reward points
12pm - 1pm	1 point per \$3 spent
11am - 12pm and 1pm - 2pm	1 point per \$2 spent
10am - 11am and 2pm - 3pm	1 point per \$1 spent
Any other time	0.25 points per \$1

Discard any orders that result in rewards less than 3 or greater than 20. Round up all rewards points to the next integer.

Generate a report containing each customer with total rewards and average rewards per order. Sort the output by total rewards most to least.

Example input:

```
{
  "events": [
    {
      "action": "new_customer",
      "name": "Jessica",
      "timestamp": "2020-07-01T00:00:00-05:00"
    },
    {
```

```

    "action": "new_customer",
    "name": "Will",
    "timestamp": "2020-07-01T01:00:00-05:00"
  },
  {
    "action": "new_customer",
    "name": "Elizabeth",
    "timestamp": "2020-07-01T12:00:00-05:00"
  },
  {
    "action": "new_order",
    "customer": "Jessica",
    "amount": 12.50,
    "timestamp": "2020-07-01T12:15:57-05:00"
  },
  {
    "action": "new_order",
    "customer": "Jessica",
    "amount": 16.50,
    "timestamp": "2020-07-01T10:01:00-05:00"
  },
  {
    "action": "new_order",
    "customer": "Will",
    "amount": 8.90,
    "timestamp": "2020-07-01T12:20:00-05:00"
  },
  {
    "action": "new_order",
    "customer": "Will",
    "amount": 1.50,
    "timestamp": "2020-07-01T12:21:00-05:00"
  }
]
}

```

### Expected output:

```

Jessica: 22 points with 11 points per order.
Will: 3 points with 3 points per order.
Elizabeth: No orders.

```

Workflow:

Please use git and begin with an “Initial commit”. When you’re finished, please submit a **git bundle** (`GIT_DIR=your-code-dir/.git git bundle create your-code.gitbundle --all`).