

Movie Tickets

The Coding Test

In a world of Netflix, Hulu, Amazon Prime and other video streaming services, movie watching customers are dwindling. The powers that be have decided to slash movie ticket prices to entice customers back into cinemas. We have been tasked to build an application that reports the projected cost of movie tickets from historical customer transaction to inform decision making around ticket pricing.

Requirements

- There are four types of movie tickets
 - Adult**: For customers 18 years and older but less than 65 years old. Costs \$25.
 - Senior**: For customers 65 years and older. 30% cheaper than Adult tickets
 - Teen**: For customers 11 years and older but less than 18 years old. Costs \$12
 - Children**: For customers less than 11 years of age. Costs \$5.
- If there are 3 or more **Children**'s tickets in a transaction, there's a 25% discount applied to the cost of **Children**'s tickets

Your task is to implement a java application which will expose an API call to take transaction as input and return below information:

- The ID of the transaction
- Each individual type of movie ticket present in that transaction, ordered alphabetically, and it's quantity and total cost
- The total cost of all movie tickets for that transaction

Ensure any domain logic has associated unit tests.

Sample input and output

Below are some sample request and response:

Request	Response
<pre>{ "transactionId": 1, "customers": [{ "name": "John Smith", "age": 70 }, { "name": "Jane Doe", "age": 5 }, { "name": "Bob Doe", "age": 6 }] }</pre>	<pre>{ "transactionId": 1, "tickets": [{ "ticketType": "Children", "quantity": 2, "totalCost": 10.00 }, { "ticketType": "Senior", "quantity": 1, "totalCost": 17.50 }], "totalCost": 27.50 }</pre>

```

{
  "transactionId": 2,
  "customers": [
    {
      "name":
"Billy Kidd",
      "age": 36
    },
    {
      "name": "Zoe
Daniels",
      "age": 3
    },
    {
      "Name":
"George White",
      "Age": 8
    },
    {
      "name":
"Tommy Anderson",
      "age": 9
    },
    {
      "name": "Joe
Smith",
      "age": 17
    }
  ]
}

```

```

{
  "transactionId": 1,
  "tickets": [
    {
      "ticketType":
"Adult",
      "quantity": 1,
      "totalCost":
25.00
    },
    {
      "ticketType":
"Children",
      "quantity": 3,
      "totalCost":
11.25
    },
    {
      "ticketType":
"Teen",
      "quantity": 1,
      "totalCost":
12.00
    }
  ],
  "totalCost": 48.25
}

```

```

{
  "transactionId": 3,
  "customers": [
    {
      "name":
"Jesse James",
      "age": 36
    },
    {
      "name":
"Daniel Anderson",
      "age": 95
    },
    {
      "name": "Mary
Jones",
      "age": 15
    },
    {
      "name":
"Michelle Parker",
      "age": 10
    }
  ]
}

```

```

{
  "transactionId": 1,
  "tickets": [
    {
      "ticketType":
"Adult",
      "quantity": 1,
      "totalCost":
25.00
    },
    {
      "ticketType":
"Children",
      "quantity": 1,
      "totalCost":
5.00
    },
    {
      "ticketType":
"Senior",
      "quantity": 1,
      "totalCost":
17.50
    },
    {
      "ticketType":
"Teen",
      "quantity": 1,
      "totalCost":
12.00
    }
  ],
  "totalCost": 59.50
}

```

Tools and Libraries

You're free to use whatever development tools and libraries you want to implement the above requirements.