Programming for DA

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Review

Goal: use data files.

1. Open the “base_code.py” file and run it to get a working base code. Pay attention to:

   How to open a file.

   How to go through each line of the file.

   How to convert a string into a number.

2. Extend the base code to get the total sum of revenue.

3. Extend your code to get the percentage of revenue vs income.

How do I get the result?

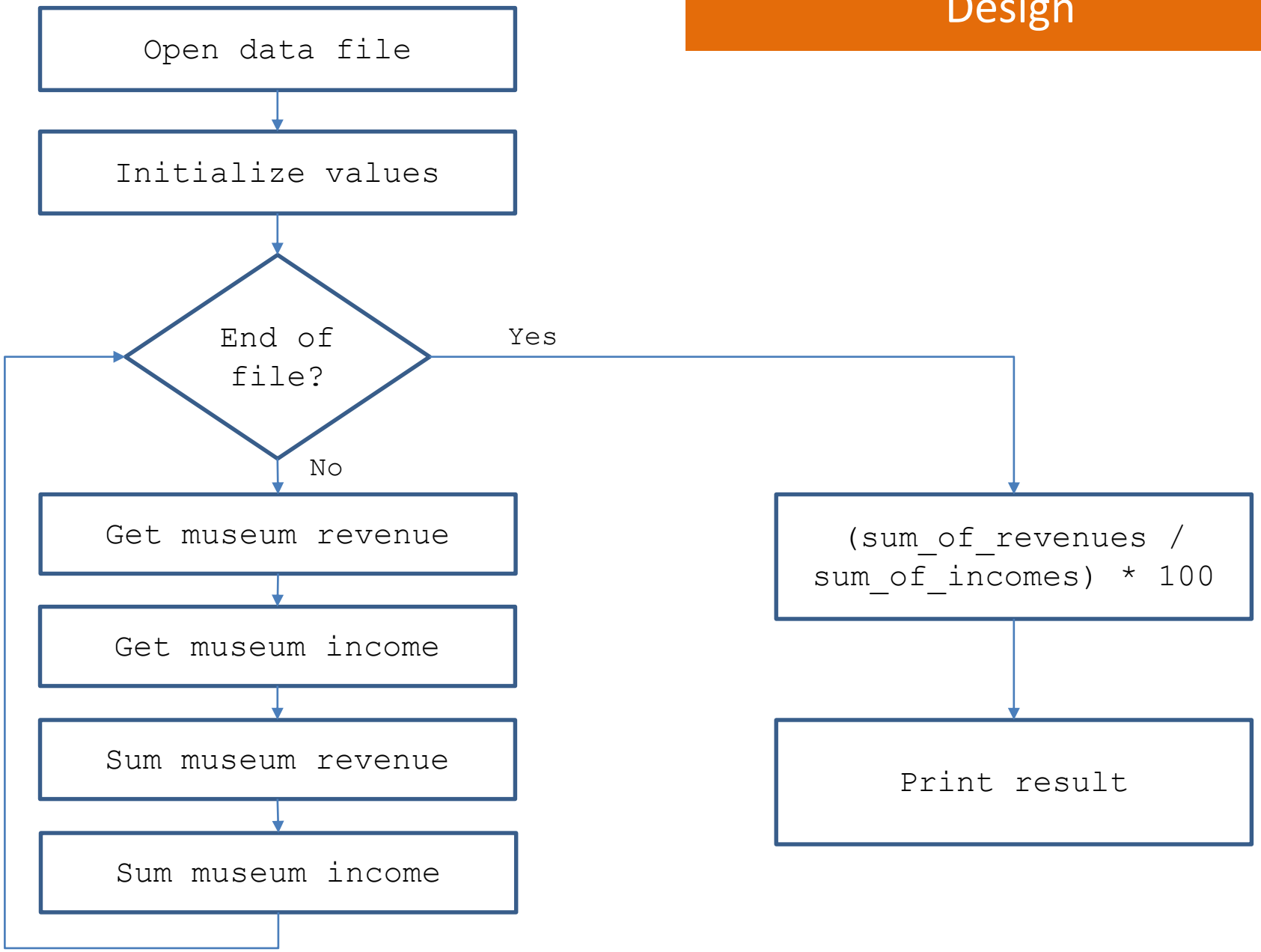
How do I get the percentage?

```
(sum of all revenues / sum of all incomes) * 100
```

How do I get the sum of all revenues and incomes?

```
Go through the data file and add up the values for
each museum
```

Design


Open data file
Initialize values
End of file?
Yes
No
Get museum revenue
Get museum income
Sum museum revenue
Sum museum income
(sum_of_revenues / sum_of_incomes) * 100
Print result

Implementation

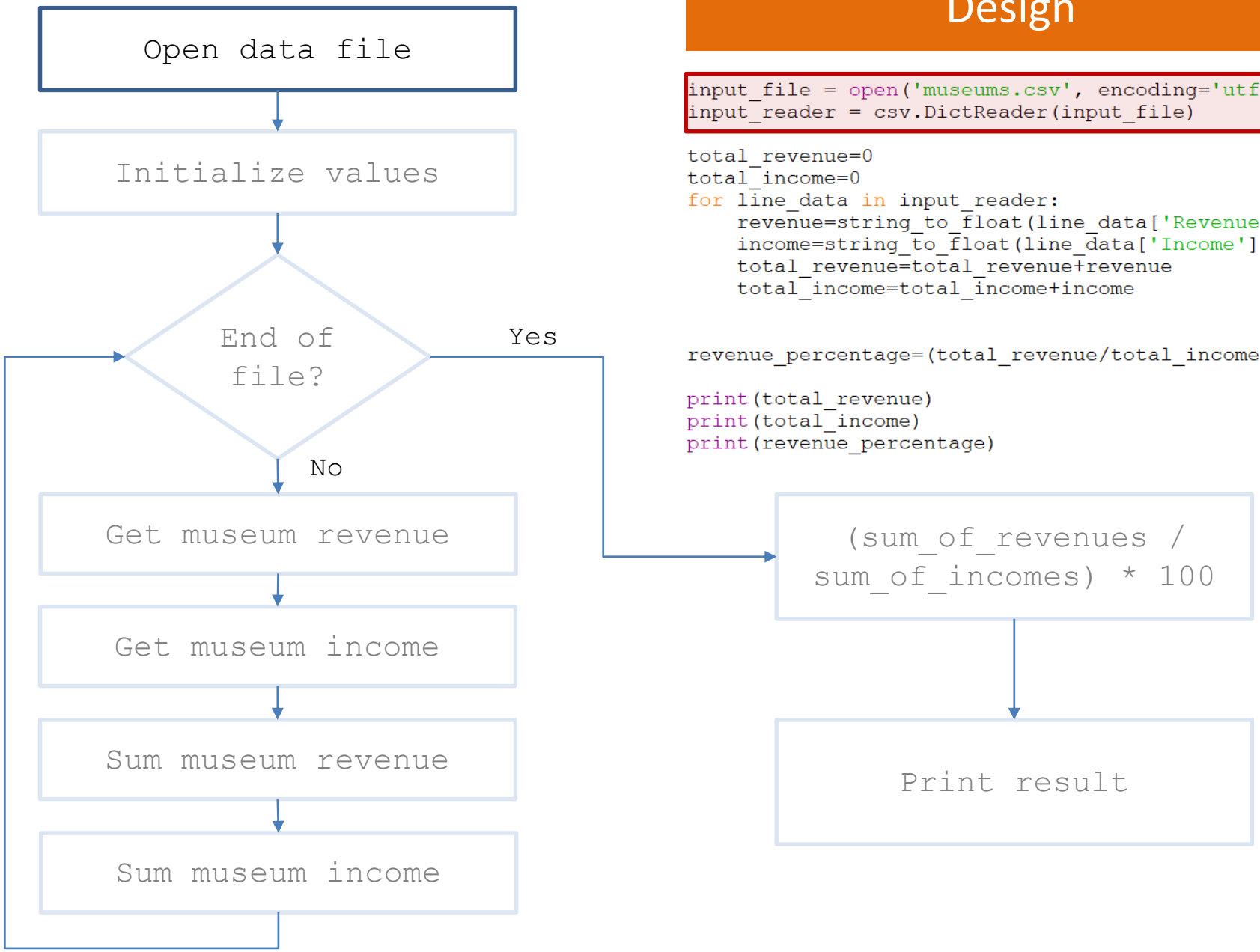
```
input_file = open('museums.csv', encoding='utf-8')
input_reader = csv.DictReader(input_file)

total_revenue=0
total_income=0
for line_data in input_reader:
    revenue=string_to_float(line_data['Revenue'])
    income=string_to_float(line_data['Income'])
    total_revenue=total_revenue+revenue
    total_income=total_income+income


revenue_percentage=(total_revenue/total_income)*100

print(total_revenue)
print(total_income)
print(revenue_percentage)
```

Design

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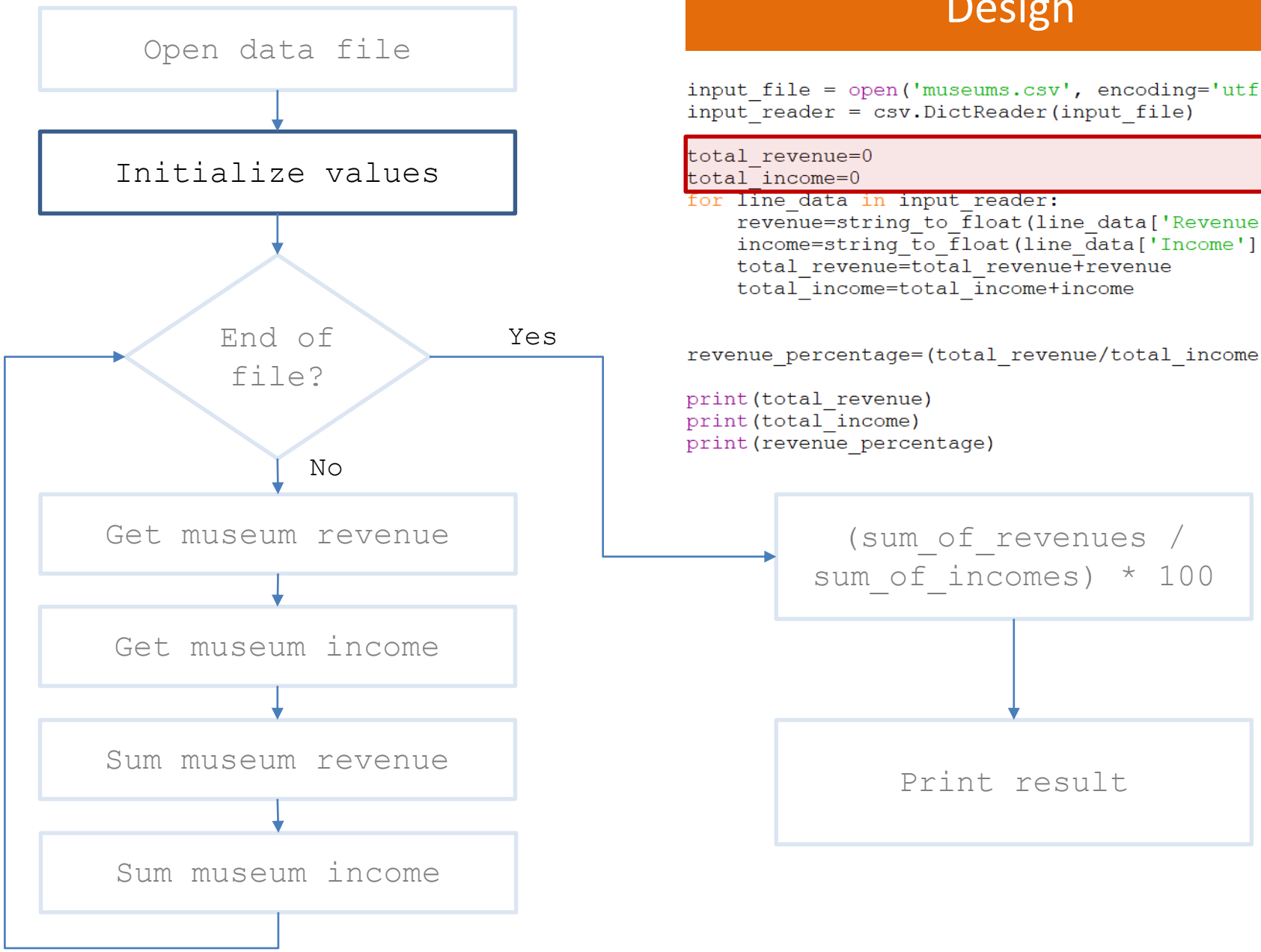


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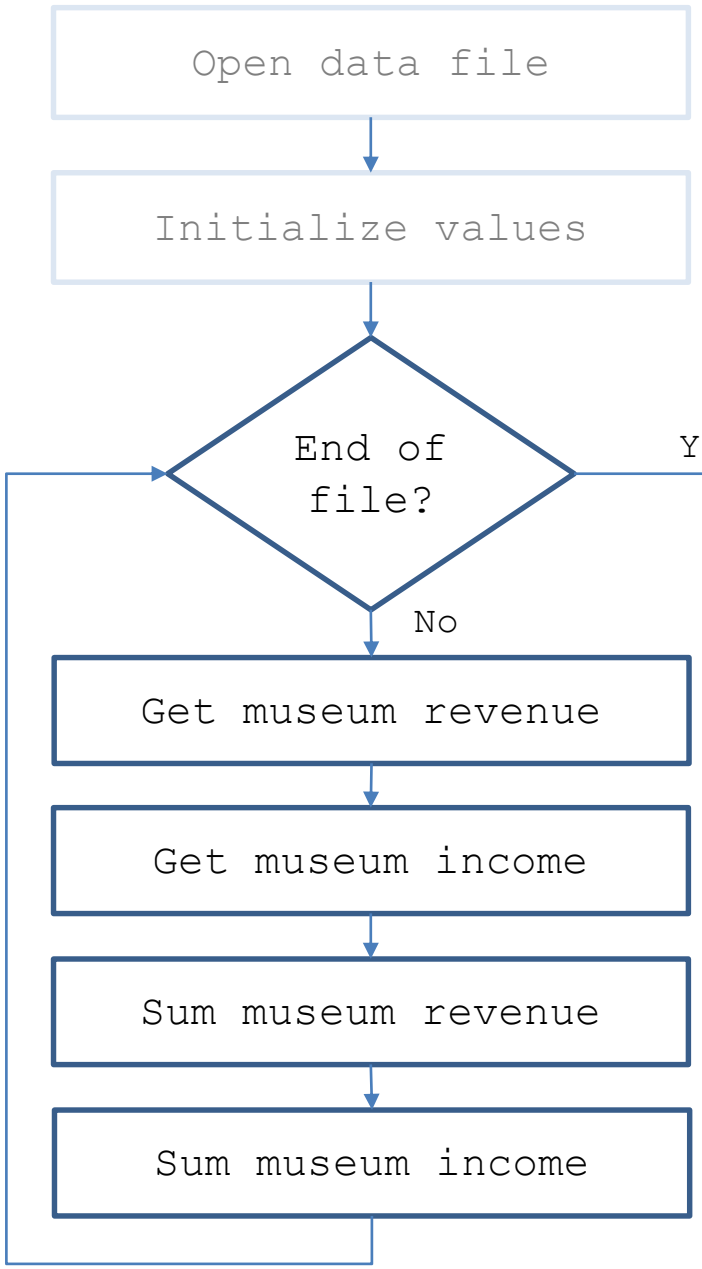


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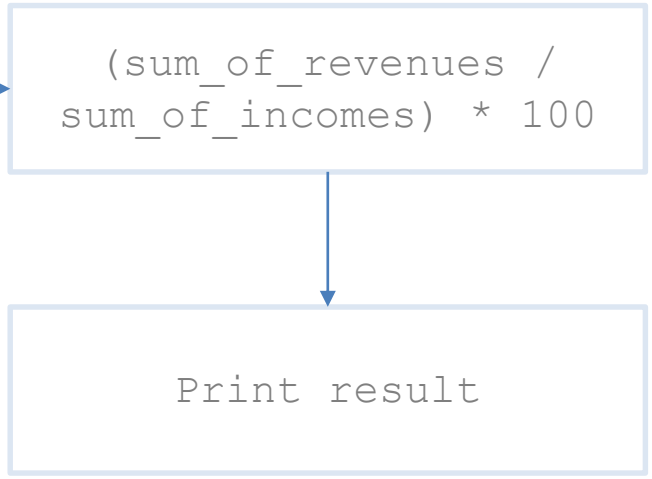

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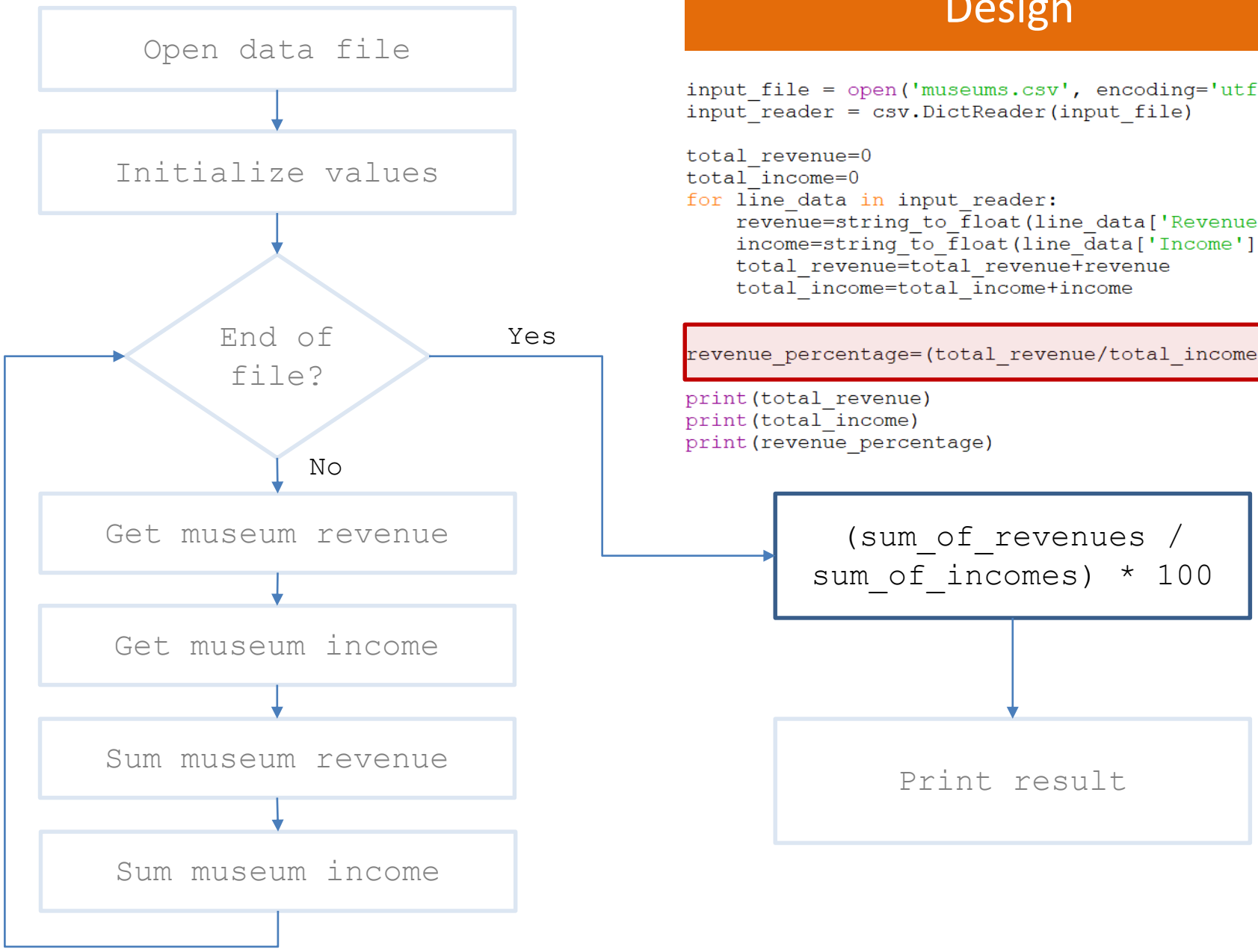


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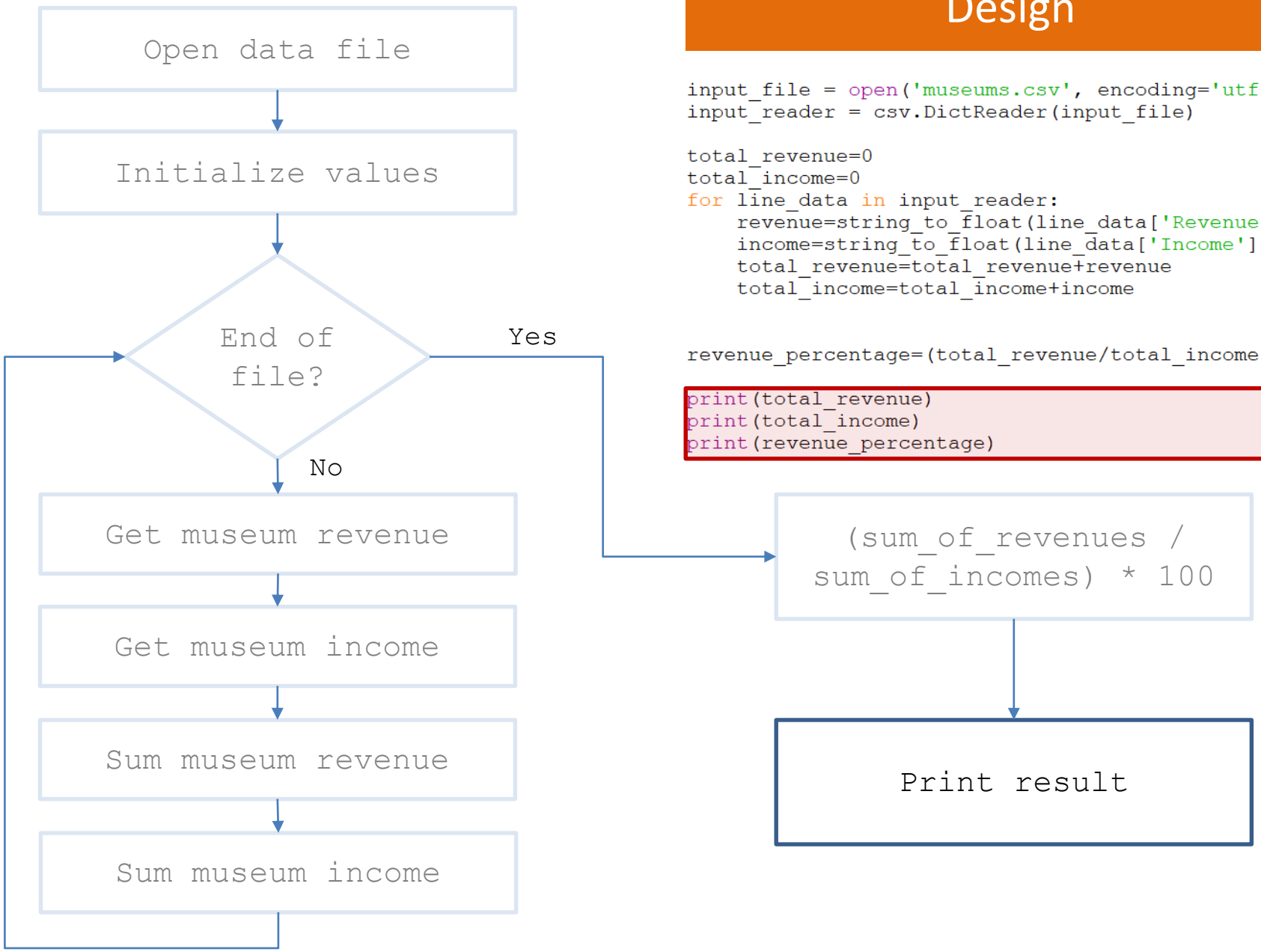


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