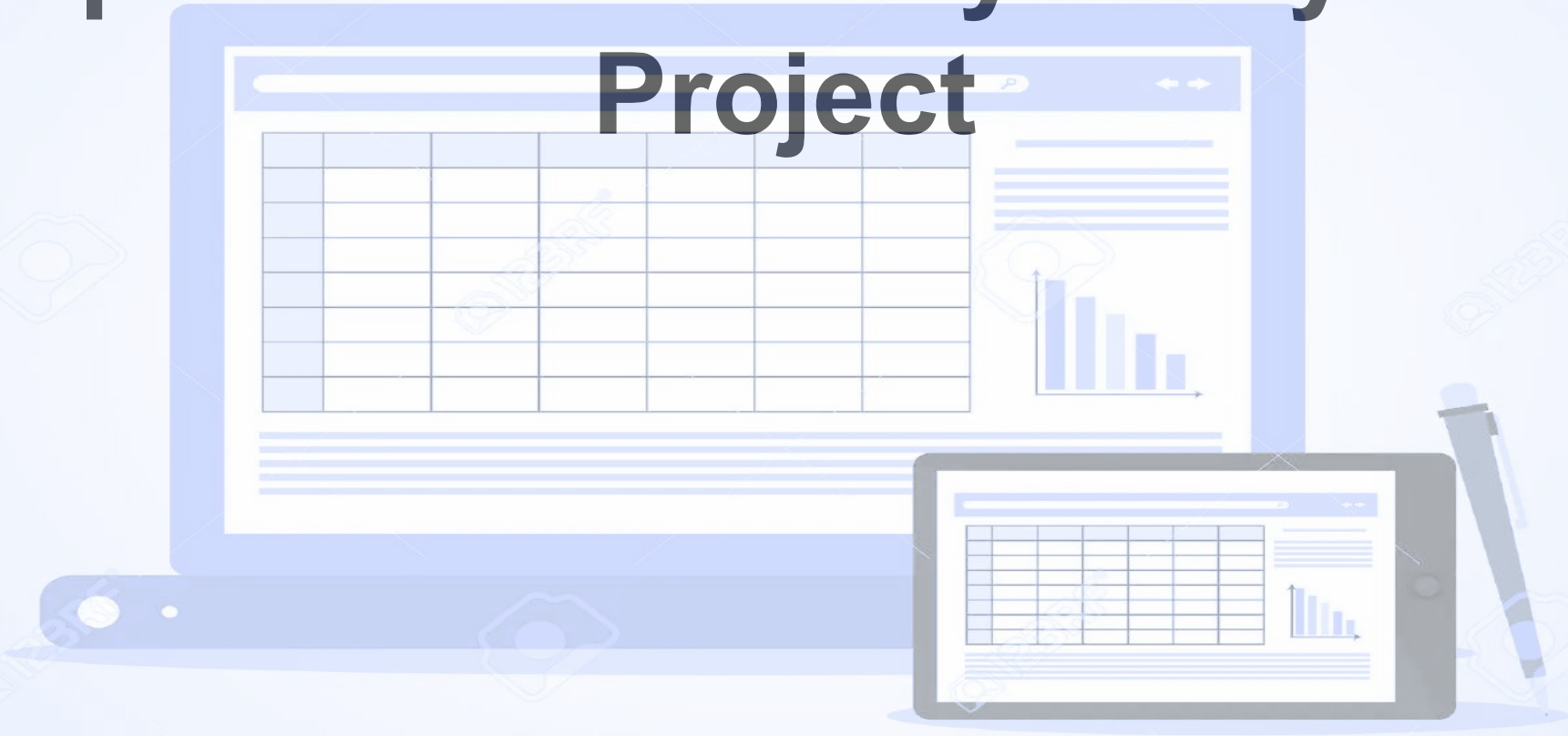
Spreadsheet Analysis Python Project



Required Tasks

Reading Data

The READ_DATA function reads the sales data from the CSV file and returns a list of dictionaries, where each dictionary represents a row of the CSV file. It opens the CSV file using the with statement and the OPEN function. The csv.DICTREADER function reads the CSV data and returns an iterator of dictionaries, where each dictionary corresponds to a row of the CSV file.

Single Listing

-For each row in the CSV file, the code extracts the sales amount as an integer using the INT function and appends it to the sales list.

Total Sales

-After processing all the rows in the CSV file, the code calculates the total sales by summing the values in the sales list using the SUM function. Finally, it prints the total sales using the PRINT function with the FORMAT method to format the output.

-So the output of this code will be the total sales amount for the data in the CSV file.

```python
import csv

def read_data():

    data = []
    with open('sales.csv', 'r') as sales_csv:
        spreadsheet = csv.DictReader(sales_csv)
        for row in spreadsheet:
            data.append(row)
    return data

def run():

    data = read_data()
    sales = []
    for row in data:
        sale = int(row['sales'])
        sales.append(sale)
    total = sum(sales)
    print('Total sales: {}'.format(total))

run()
```

```
Total sales: 45542
```

Extension Projects

For each row in the CSV file, the code extracts the expenditure amount as an integer using the INT function and appends it to the expenditure list.

After processing all the rows in the CSV file, the code calculates the total expenditure by summing the values in the expenditure list using the SUM function.

Finally, the code prints the total expenditure using the print() function with the format() method to format the output.

So the output of this code will be the total expenditure amount for the data in the CSV file

```
def run():
    """
    Reads expenditure data using the `read_data()` function, calculates the total expenditure,
    and prints it to the console.
    """
    data = read_data()
    expenditure = []
    for row in data:
        sale = int(row['expenditure'])
        expenditure.append(sale)
    total = sum(expenditure)
    print('Total expenditure: {}'.format(total))

run()
```

```
Total expenditure: 30159
```

For each row in the CSV file, the code extracts the sales and expenditure values as integers using INT. It then calculates the profit by subtracting expenditure from sales and appends the result to the profits list.

After processing all the rows in the CSV file, the code calculates the total profit by summing the values in the profits list using the sum() function. Finally, it prints the total profit using the print() function with the format() method to format the output with two decimal places.

```
def run():
    """
    Reads sales and expenditure data using the `read_data()` function, calculates the total profits,by
    doing sales - expenditure and prints it to console.
    """
    data = read_data()
    profits = []
    for row in data:
        sales = int(row['sales'])
        expenditure = int(row['expenditure'])
        profit = sales - expenditure
        profits.append(profit)
    total_profit = sum(profits)
    print('Total profit: {}'.format(total_profit))

run()
```

```
Total profit: £ 15383.00
```

Row Labels	Sum of sales	Sum of expenditure
jan	6226	3808
feb	1521	3373
mar	1842	3965
apr	2051	1098
may	1728	3046
jun	2138	2258
jul	7479	2084
aug	4434	2799
sep	3615	1649
oct	5472	1116
nov	7224	1431
dec	1812	3532
Grand Total	**45542**	**30159**

```python
import csv

def read_data():
    data = []

    with open('amazon_product_details.csv', 'r') as data_set:
        spreadsheet = csv.DictReader(data_set)
        for row in spreadsheet:
            data.append(row)

    return data
```

```python
def run():
    data = read_data()

    selling_price = []
    for row in data:
        if row['Selling_Price'] != '':  # this if controls that the value read from Selling_Price is not empty
            price = int(float(row['Selling_Price']))
            selling_price.append(price)

    total = sum(selling_price)
    print('Total price: {}'.format(total))


run()
```

The Project - What Does It DO?

The code analyses data from sales.cvs file by ;

Read the data from the spreadsheet

Collect all of the sales from each month into a single list

Output the total sales across all months

Output total sales and expenditure across all months