

Intro to Python – Lesson 34 and 35

Reports can come in all different shapes and sizes. Some of the most common are detailed reports and exception reports. Detailed reports print a detail line for each item in the file / table. Exception reports only print a detail line if the criteria defined is met – so not all items are displayed in the report.

Use the file called CustExtra.dat to produce the following reports. The file contains customers account information and includes the CustNum, CustName, Phone, BalDue, CredLimit, LastPurDate, LastPurAmt, LastPayDate, LastPayAmt, and the NextPayDateDue. A sample line appears as follows:

123456, John Smith, 709-345-9800, 359.40, 2000.00, 2021-11-12, 287.40, 2021-11-18, 200.00, 2021-12-15

The Customer listing is a **detailed report** that prints information about each customer account. Display the report for each customer with the following format.

```

      1          2          3          4          5          6          7          8
1234567890123456789012345678901234567890123456789012345678901234567890
THE COMPANY NAME
CUSTOMER LISTING

CUSTOMER      CUSTOMER      PHONE      BALANCE      NEXT PAY
NUMBER        NAME          DUE          DATE
=====
XXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXX $#,###.## Mon dd, yyyy
:
:
XXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXX $#,###.## Mon dd, yyyy
=====
Total customers: ###                      $##,###.##
```

The **Over Credit Limit Report** is an **exception report** printed at regular intervals and lists only customers over their credit limit. The information displayed allows the manager to call the customer and explain available options.

```

      1          2          3          4          5          6          7          8
123456789012345678901234567890123456789012345678901234567890123456
THE COMPANY NAME
OVER LIMIT REPORT AS OF MM-DD-YYYY

CUSTOMER      CUSTOMER      PHONE      CREDIT      AMOUNT      NEXT      PAYMENT
NUMBER        NAME          NUMBER     LIMIT       OVER        PAY DATE  DUE
=====
XXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXX $#,###.## $#,###.## XXXXXXXXXX $#,###.##
:
:
XXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXX $#,###.## $#,###.## XXXXXXXXXX $#,###.##
=====
Total customer over limit: ###                      $##,###.##
```

The amount over is calculated as the amount that the customer has exceeded the credit limit. The payment due is calculated as 5% of the credit limit, plus the amount over the credit limit.

Here is another report you can use as practise for the same data file (CustExtras.dat). This shows you that one data file can be used to create many different reports.

```

          1          2          3          4          5          6          7          8          9
12345678901234567890123456789012345678901234567890123456789012345678901234567890
ABC COMPANY
CUSTOMER ANALYSIS AS OF YYYY-MM-DD

CUSTOMER    CUSTOMER    PHONE    BALANCE    MINIMUM    DAYS SINCE    DAYS SINCE    CUSTOMER
NUMBER      NAME          NUMBER    DUE      PAYMENT    LAST PUR     LAST PAY     STATUS
=====
  XXXX XXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXX $#,###.## $#,###.##      ###      ###      XXXXXXXXXXXXXXXX
                                     :
                                     :
  XXXX XXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXX $#,###.## $#,###.##      ###      ###      XXXXXXXXXXXXXXXX
=====
CUSTOMERS LISTED: ###                      $##,###.## $##,###.##
CUSTOMERS OVER LIMIT: ###

```

The minimum payment is 10% of the balance due iff the customer is below the credit limit, and 10% of the credit limit plus the amount over the credit limit otherwise.

The days last purchase and the days last payment is the number of days since the last purchase and the number of days since the last payment.

The Status will be OK if the customer is under the credit limit, CHECK if they are within \$200.00 of the credit limit, and OVER if they are over their credit limit. If the number of days since the last purchase is more than 60 days concatenate the word – PURCH (including the -) to the status. If the number of days since the last payment is more than 30 days add the text – PAY to the status. For a really bad customer the status may read OVER – PURCH – PAY.

How could this be made an exception report – add an if statement before the start of the calculations. Some examples may be:

- Only display customers that are over the credit limit.
- Only display customers who have not made a purchase in 60 days.
- Only display customers who have not made a payment in 30 days.
- Only display customers from NL (Or any province you want) – will need to prompt the user to input the province before you print the report.

Remember that, in some cases, the report may be empty and there are no items that match the criteria. How would you take care of this problem?

BONUS: Design and generate another report that could e used by the company.

See you at 1.