**“ENGINEERING PROJECTS” project output**

C:\Python27>python Engprojects\_csv.py

PROGRAM reads a csv data file, 'EngProj\_info.csv', and does a few queries on it.

Retrieving data from a csv data file: EngProjInvoices\_info.csv

Retrieved 24 invoices in list

Invoices listed:

Account\_no Inv\_No ProjNo Project\_Name Client Client\_Id Date\_sent Amount

33 15/005 K1201 Bestwood development BESTWOOD SECURITISATION RF (PTY) LTD 13 12/02/2015 216079.59

34 15/014 K1201 Bestwood development BESTWOOD SECURITISATION RF (PTY) LTD 13 18/03/2015 110366.58

35 15/018 K1201 Bestwood development BESTWOOD SECURITISATION RF (PTY) LTD 13 28/03/2015 124639.85

1 15/086 K951 Tambotie development BUNKERHILL INVESTMENTS 376 (PTY) LTD 9 27/11/2015 49191.0

1 15/086 K1154 Sable Home meester OHL VIERFONTEIN PROPERTIES (PTY) LTD 12 27/11/2015 197447.42

1 16/024 K839 Six Fountains, Equestria Uniqon wonings (Pty) Ltd 8 20/04/2016 17100.0

2 16/026 K1154 Sable Home meester OHL VIERFONTEIN PROPERTIES (PTY) LTD 12 11/05/2016 438210.3

1 16/029 K1128 Newmark Estate erf 1 BOULDER PROPERTY INVESTMENTS (PTY) LTD 11 20/05/2016 22800.0

23 16/036 K1403 Kuruman Mall NEMATEX (PTY) LTD 7 13/06/2016 82650.0

1 16/046 K103 Zervas - Rietvalleirand X 45 COSTA ZERVAS PROJECTS 10 08/08/2016 15903.0

7 16/047 K1370 Hazeldean Offices ABLAND (PTY) LTD 1 12/08/2016 17100.0

1 16/057 K1502/3 Hartbeesfontein substation M&T DEVELOPMENT (PTY) LTD 5 30/09/2016 114757.46

2 16/058 K1502/2 Witfontein substation M&T DEVELOPMENT (PTY) LTD 5 30/09/2016 31076.0

1 17/001 K1508 Clayville X74 M&T DEVELOPMENT (PTY) LTD 5 31/01/2017 42390.01

2 17/006 K1449 Brooklyn Student Housing Six Fountains X9 - Uniqon 8 31/01/2017 201531.33

1 17/007 K1502/3 Hartbeesfontein substation M&T DEVELOPMENT (PTY) LTD 5 10/03/2017 216825.21

2 17/013 K1128 Newmark Estate erf 1 BOULDER PROPERTY INVESTMENTS (PTY) LTD 11 20/02/2017 110544.77

7 17/017 K1211 Shalimar Ridge Hostels DGSD Consulting Eng. & Project Managers 6 07/03/2017 108429.68

5 17/018 K1211 Shalimar Ridge Hostels DGSD Consulting Eng. & Project Managers 6 07/03/2017 80071.55

8 17/026 K1233 Wingtip Shopping centre WINGTIP CROSSING SHOPPING (PTY) LTD 4 19/04/2017 44921.61

1 17/027 K1109 Six fountains offices PRICELESS PROPERTIES (PTY) LTD 3 26/04/2017 47253.98

1 17/028 K1230 Groenkloof student centre level 3 UNIVERSITY OF PRETORIA: Facilities 2 26/04/2017 10233.08

10 17/029 K1030 Loftus Park Building ABLAND (PTY) LTD 1 28/04/2017 210366.42 17/030 K1421 Six Fountains X8 Brooklyn Student Housing - Uniqon 8 12/05/2017 1127655.49

Retrieving data from a csv data file: EngProjClients\_info.csv

Retrieved 13 clients in list

Clients listed:

Client\_Id Name Address VAT\_no Contact\_person Email\_address

1 ABLAND (PTY) LTD PO Box 2373, BROOKLYN SQUARE, 0075 4210205367 Hannes Kleinhans hannes.kleinhans@abland.co.za

2 UNIVERSITY OF PRETORIA: Facilities Management Private Bag X20, HATFIELD, PRETORIA, 0075 4610117774 Yzelle van den Berg yzelle.van.denberg@up.ac.za

3 PRICELESS PROPERTIES (PTY) LTD PO Box 568, Groblersdal, 0470 4180203087 Albert Blignaut albert@micawcity.co.za

4 WINGTIP CROSSING SHOPPING CENTRE (PTY) LTD PRIVATE BAG X504, SINOVILLE, 0129 4680265610 Joel Erasmus jdea@stratam.co.za

5 M&T DEVELOPMENT (PTY) LTD P.O. BOX 39727, FAERIE GLEN, 0043 4020160976 Wimpie Van Der Bank wimpie.vandenbank@m-t.co.za

6 DGSD Consulting Engineers & Project Managers PO Box 2821, PRETORIA, 0001 4940157722 Freda Groenewald freda@dgsd.co.za

7 NEMATEX (PTY) LTD P O Box 72689, LYNNWOOD RIDGE, 0040 4610263537 Yolandi yolandiB@moolman.co.za

8 UNIQON WONINGS (EDMS) BPK PO Box 29593, SUNNYSIDE, PRETORIA, 0132 4120182201 Etienne Coetzer ettiennec@uniqon.co.za

9 BUNKERHILL INVESTMENTS 376 (PTY) LTD PO BOX 26028, MONUMENT PARK, 0105 4240190019 Albertus Van Rooyen albertus@bunker.co.za

10 COSTA ZERVAS PROJECTS PO Box 28982, SUNNYSIDE, 0132 4770220574 Costas Zervas Zervas@costazerva.co.za

11 BOULDER PROPERTY INVESTMENTS (PTY) LTD 26 STURDEE AVENUE, ROSEBANK 4090263346

Wally Teichman wallyT@boulder.co.za

12 VIERFONTEIN PROPERTIES (PTY) LTD PRIVATE BAG X51,BRYANSTON, 2021 4240238776

Hendrik Van Zyl henddrik@vierfontein.co.za

13 BESTWOOD SECURITISATION RF (PTY) LTD PO Box 1879, Bellville, 7530 4110260397

Chantel Alberts chantell@bestwood.co.za

Retrieving data from a csv data file: EngProj\_info.csv

Retrieved 18 projects in list

Projects listed:

ProjNo, Project\_Name, Client\_Id, Contract\_Amount, ProfFee

K103 Rietvalleirand X 45 10 265000 11992

K1030 Loftus Park Building 1 33000000 3630000

K1109 Six fountains offices 3 24000000 2640000

K1128 Newmark Estate erf 1 11 23300000 2545000

K1154 Sable Home meester OHL 12 107500 11891

K1201 Bestwood development 13 12000 11992

K1211 Shalimar Ridge 6 23000000 2530000

K1230 Groenkloof student centre level 3 2 108100 11891

K1233 Wingtip Shopping centre 4 5000000 550000

K1370 Hazeldean Offices 1 26500000 2915000

K1403 Kuruman shopping Mall 7 65000000 7150000

K1421 Six Fountains X8 8 4500000 200000

K1449 Brooklyn Student Housing 8 21000500 18000000

K1502/2 Witfontein substation 5 12000000 1320000

K1502/3 Hartbeesfontein substation 5 4500000 495000

K1508 Clayville X4 substation 5 5000000 550000

K839 Six Fountains Equestria 8 4300000 4500

K951 Tambotie development 9 12500000 49500

OUTPUT 1: PRINT rows in Invoices table, amounts decimal (real/float))(first 6).

Acc no Invoice no Project No. Project Name Client Date Invoice Amount

33 15/005 K1201 Bestwood development BESTWOOD SECURITISATION RF (PTY) LTD 12/02/2015 R 216079.59

34 15/014 K1201 Bestwood development BESTWOOD SECURITISATION RF (PTY) LTD 18/03/2015 R 110366.58

35 15/018 K1201 Bestwood development BESTWOOD SECURITISATION RF (PTY) LTD 28/03/2015 R 124639.85

1 15/086 K951 Tambotie development BUNKERHILL INVESTMENTS 376 (PTY) LTD 27/11/2015 R 49191.0

1 15/086 K1154 Sable Home meester OHL VIERFONTEIN PROPERTIES (PTY) LTD 27/11/2015 R 197447.42

1 16/024 K839 Six Fountains, Equestria Uniqon wonings (Pty) Ltd 20/04/2016 R 17100.0

OUTPUT 2: PRINT rows in Clients table (first 6).

Client Name Address VAT\_No Contact person Email address

ABLAND (PTY) LTD PO Box 2373, BROOKLYN SQUARE, 0075 4210205367 Hannes Kleinhans hannes.kleinhans@abland.co.za

UNIVERSITY OF PRETORIA: Facilities Management Private Bag X20, HATFIELD, PRETORIA, 0075 4610117774 Yzelle van den Berg yzelle.van.denberg@up.ac.za

PRICELESS PROPERTIES (PTY) LTD PO Box 568, Groblersdal, 0470 4180203087 Albert Blignaut albert@micawcity.co.za

WINGTIP CROSSING SHOPPING CENTRE (PTY) LTD PRIVATE BAG X504, SINOVILLE, 0129 4680265610 Joel Erasmus jdea@stratam.co.za

M&T DEVELOPMENT (PTY) LTD P.O. BOX 39727, FAERIE GLEN, 0043 4020160976 Wimpie Van Der Bank wimpie.vandenbank@m-t.co.za

DGSD Consulting Engineers & Project Managers PO Box 2821, PRETORIA, 0001 4940157722 Freda Groenewald freda@dgsd.co.za

OUTPUT 3: PRINT rows in Projects info table.

Proj.No ProjectName Contract\_Amount Prof.Fee

K103 Rietvalleirand X 45 R 265000 R 11992

K1030 Loftus Park Building R 33000000 R 3630000

K1109 Six fountains offices R 24000000 R 2640000

K1128 Newmark Estate erf 1 R 23300000 R 2545000

K1154 Sable Home meester OHL R 107500 R 11891

K1201 Bestwood development R 12000 R 11992

K1211 Shalimar Ridge R 23000000 R 2530000

K1230 Groenkloof student centre level 3 R 108100 R 11891

K1233 Wingtip Shopping centre R 5000000 R 550000

K1370 Hazeldean Offices R 26500000 R 2915000

K1403 Kuruman shopping Mall R 65000000 R 7150000

K1421 Six Fountains X8 R 4500000 R 200000

K1449 Brooklyn Student Housing R 21000500 R 18000000

K1502/2 Witfontein substation R 12000000 R 1320000

K1502/3 Hartbeesfontein substation R 4500000 R 495000

K1508 Clayville X4 substation R 5000000 R 550000

K839 Six Fountains Equestria R 4300000 R 4500

K951 Tambotie development R 12500000 R 49500

OUTPUT 4: Print all projects associated with a certain client.

Please enter the client you wish to see the projects from: Abland

ABLAND (PTY) LTD K1030 Loftus Park Building

ABLAND (PTY) LTD K1370 Hazeldean Offices

OUTPUT 5: Print some information from Invoice table, add Client VAT no. extracted from Clients table, and Project's Contract, Prof. Fee amount from ProjInfo table where Prof Fee > R50 000, using COMBINED SQL STATEMENTS.

Invoice no. Amount ProjNo. Client VAT no. ContractAmount Prof.Fee

16/029 R22800.0 K1128 BOULDER PROPERTY INVESTMENTS (PTY) LTD 4090263346

R 23300000 R 2545000

16/036 R82650.0 K1403 NEMATEX (PTY) LTD 4610263537 R 65000000 R 7150000

16/047 R17100.0 K1370 ABLAND (PTY) LTD 4210205367 R 26500000 R 2915000

16/057 R114757.46 K1502/3 M&T DEVELOPMENT (PTY) LTD 4020160976 R 4500000 R 495000

16/058 R31076.0 K1502/2 M&T DEVELOPMENT (PTY) LTD 4020160976 R 12000000 R 1320000

17/001 R42390.01 K1508 M&T DEVELOPMENT (PTY) LTD 4020160976 R 5000000 R 550000

17/006 R201531.33 K1449 UNIQON WONINGS (EDMS) BPK 4120182201 R 21000500 R 18000000

17/007 R216825.21 K1502/3 M&T DEVELOPMENT (PTY) LTD 4020160976 R 4500000 R 495000

17/013 R110544.77 K1128 BOULDER PROPERTY INVESTMENTS (PTY) LTD 4090263346 R 23300000 R 2545000

17/017 R108429.68 K1211 DGSD Consulting Engineers & Project Managers 4940157722 R 23000000 R 2530000

17/018 R80071.55 K1211 DGSD Consulting Engineers & Project Managers 4940157722 R 23000000 R 2530000

17/026 R44921.61 K1233 WINGTIP CROSSING SHOPPING CENTRE (PTY) LTD 4680265610 R 5000000 R 550000

17/027 R47253.98 K1109 PRICELESS PROPERTIES (PTY) LTD 4180203087 R 24000000 R 2640000

17/029 R210366.4 K1030 ABLAND (PTY) LTD 4210205367 R 33000000 R 3630000

17/030 R1127655.49 K1421 UNIQON WONINGS (EDMS) BPK 4120182201 R 4500000 R 200000

OUTPUT 6: Print rows showing the Client, its address, its projects and the associated Invoices.

Please enter the client you wish to see the invoices of: M&T

Client Address ProjNo. Project Invoice no. Amount

M&T DEVELOPMENT (PTY) LTD K1502/3 16/057 R 114757.46

M&T DEVELOPMENT (PTY) LTD K1502/2 16/058 R 31076.00

M&T DEVELOPMENT (PTY) LTD K1508 17/001 R 42390.01

M&T DEVELOPMENT (PTY) LTD K1502/3 17/007 R 216825.21

OUTPUT 7: Print rows project and its associated Invoices.

Please enter the project number you wish to see the invoices of: K1502/3

ProjNo. Project Invoice no. Amount

K1502/3 Hartbeesfontein substation 16/057 R 114757.46

K1502/3 Hartbeesfontein substation 17/007 R 216825.21