

Bridging Centuries

Transforming 18th-Century Data for Modern Analysis

Month	Date	Description	Amount
Jan.	1	to James Edwards	1000
1	to Andrew Kelly	441	
1	to Silvanus D'Alves Pereira	640	
1	to William Bulwer	68	
1	to Abraham Lille	436	
1	to Henry Wise	734	
1	to Thomas Green	271	
1	to William Bowell	504	
1	to Abraham Chitty	139	
1	to Christopher Pragge	512	
1	to John Fawcett	308	
1	to Thomas Fisher	624	
1	to John Bliford	454	
1	to John Bridges	74200	
1	to Peter Bulwer	568	
1	to Walter Glanvill	734	
1	to John Vanhottem	686	
1	to Edward Owen	521	
1	to Anthony Da Costa	7810	
1	to John Tunley	120	
1	to John Bridges	296	
1	to Francis Gaze	69	
1	to John Baker	151	
1	to Joseph Musaphia	193	
1	to Nathaniel Roffey	504	
1	to George Wanley	582	
1	to John Turnycott	696	
1	to John Turner	692	
1	to Col. George Churchill	101,210	
1	to Capt. Robert Midford	187	
1	to Nathaniel Roffey	2600	
1	to John Fernandes Nunes	318	
1	to Abraham Da Costa	120	
1	to George Middleton	484	
1	to Gabriel Lopez	421	
1	to Mathew Medina	252	
1	to Nathaniel Garland	62	
1	to Brook Bridges	800	
1	to Orlando Tunstall	500	
1	to George Middleton	103	
1	to Francis Chamber	150	
1	to Francis Corain	642	
1	to Joseph Capo	124,110	
1	to Isaac Rebow	628	
1	to George Polya Gouyer	296	
1	to Cornelius Backer	29	
1	to Sir Gregory Gaze	528	
1	to Mathew Becker	187	
1	to Richard Hall	312	
1	to Thomas Rawe	206	
1	to Elias Turner	320	
1	to Peter Fabrot	678	
1	to Richard Lockwood	224	
1	to Elias Turner	441	
1	to John Malpole	678	
1	to Francis Leycester	152,830	
1	to Goldsmith	303	
1	to John Gerote	197	
1	to Sir Mathew Becker Bar	188	
1	to Genl. General William Seymour	624	
1	to Elizabeth Anna Legh	622	
1	to William Knight	404	
1	to John Brown Bart	74	
1	to Elias Turner	628	
1	to John Lambe	704	
1	to John	411	
Feb.	1	to James Edwards	1000
1	to Jacob Fernandes Nunes	49	
1	to John Emmett	518	
1	to Sir Henry Shephard his Executrix	252	
1	to Alvaro Da Costa	616	
1	to John Emmett	154	
1	to Elizabeth Shaw	217	
1	to James Colebrook	427	
1	to Thomas Tunstall	143	
1	to Richard Garey	315	
1	to John Leonard D'Orville	482	
1	to Ralph Selby	206	
1	to Alvaro Da Costa	621	
1	to Francis Bullock	124	
1	to Dame Elizabeth Germain her Att ^t	68	
1	to John Cooper	590	
1	to William Keigham	332	
1	to John Baynt	33	
1	to William Bateman	34	
1	to Samuel Sprad	3500	
1	to Sir Gregory Gaze Bart	102,200	
1	to John Walpole	712	
1	to Edward Colston Attorney	140	
1	to Peter Fabrot	222	
1	to Robert Atchins	443	
1	to the R. Con ^r Robert Lord Bingley	68	
1	to John Bridges	65	
1	to Standbrook Cholmley	143	
1	to George Middleton	484	
1	to John Mead	452	
1	to Anne Lane	106	
1	to John Cade	306	
1	to Moses Hart	316	
1	to John Hamilton	221	
1	to Isaac Edlin	6	
1	to Joseph Ashby & William Martin	153	
1	to Benjamin Cowe	128,120	
1	to John Shuckburgh	647	
1	to Robert Atchins	151	
1	to Javes Collier	151	
1	to George Middleton	424	
1	to Elias Turner	670	
1	to Francis Clerk	131	
1	to Benjamin Cowe	153	
1	to John Cox	151	
1	to Robert Jeunot	622	
1	to Elias Turner	678	
1	to John Mead	471	
1	to Cott Francis Charteris	152	
1	to John Gumley	296	
1	to Thomas Snow	642	
to Elias Turner	678		
1	to John Leonard D'Orville	200	
1	to Thomas Duford	209	
1	to Cott Charles Mathew	157,930	
1	to Peter Frontin	459	
1	to Abraham Dela Neuve Maison	265	
1	to Dr. Waller	100	
1	to Robert Liddardale	153	
1	to Joseph Shaw	435	
1	to John Turner	597	
1	to George Massell	633	
1	to Ursula Shatto	506	
1	to Francis Lord Quilford	604	
1	to Olive Mynntency	298	
1	to John Turner	493	
March	1	to James Edwards	1000
1	to Jacob Fernandes Nunes	49	
1	to John Emmett	518	
1	to Alvaro Da Costa	252	
1	to John Emmett	154	
1	to Elizabeth Shaw	217	
1	to James Colebrook	427	
1	to Thomas Tunstall	143	
1	to Richard Garey	315	
1	to John Leonard D'Orville	482	
1	to Ralph Selby	206	
1	to Alvaro Da Costa	621	
1	to Francis Bullock	124	
1	to Dame Elizabeth Germain her Att ^t	68	
1	to John Cooper	590	
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1	to Francis Lord Quilford	604	
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1	to John Turner	493	
April	1	to James Edwards	1000
1	to Jacob Fernandes Nunes	49	
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1	to Elias Turner	678	
1	to John Leonard D'Orville	200	
1	to Thomas Duford	209	
1	to Cott Charles Mathew	157,930	
1	to Peter Frontin	459	
1	to Abraham Dela Neuve Maison	265	
1	to Dr. Waller	100	
1	to Robert Liddardale	153	
1	to Joseph Shaw	435	
1	to John Turner	597	
1	to George Massell	633	
1	to Ursula Shatto	506	
1	to Francis Lord Quilford	604	
1	to Olive Mynntency	298	
1	to John Turner	493	
May	1	to James Edwards	1000
1	to Jacob Fernandes Nunes	49	
1	to John Emmett	518	
1	to Alvaro Da Costa	252	
1	to John Emmett	154	

Project Overview

A project driven by Finance Professors from Tilburg University in the Netherlands, required assistance to:

- collect data from the stock ledgers of an eighteenth century company, and
- accurately recreate it in a modern, user-friendly format for analysis

Start date: November 2015

End date: June 2016



Data

1,500 photographs,
containing:

- 2 handwritten stock ledgers
- records of ±46,400 transactions from the years 1715 to 1723
- information of ±5,050 traders

Tasks

- Identifying every trader and gathering personal information
- Converting amounts to decimals and balancing accounts
- Designing and assigning unique Trader IDs and Transaction IDs

Deliverables

- Transactions dataset with buying and selling side cross-referenced with unique IDs
- Index with trader information

Project Challenges

This project presented a number of unique challenges:

- Volume of data
- 18th century English
- Cursive handwriting
- Archaic shorthand
- Obscured text
- Julian calendar
- Pounds, shillings and pence
- Unstandardised records
- Inconsistent record-keeping
- 250+ years of history

Julian calendar

Challenge

Sorting transactions in date order as the new year started on 25 March before the enactment of the Calendar Act of 1750, which would require 1 January to 24 March to be arranged after 31 December in the same year

([https://en.wikipedia.org/wiki/Calendar_\(New_Style\)_Act_1750](https://en.wikipedia.org/wiki/Calendar_(New_Style)_Act_1750)).

Solution

- Split dates in year, month and day
- Capture the month for January as 13, February as 14, and 1-24 March as 15
- Sort transactions by year, month and then day
- Assign a transaction ID that will retain the sorting order
- Change month 13 to 1, month 14 to 2, and month 15 to 3

Decimilisation

Challenge

Decimalisation of eighteenth century British currency system £sd (Pounds, Shilling and Pence), as well as balancing accounts post-conversion

(<https://en.wikipedia.org/wiki/Decimalisation>).

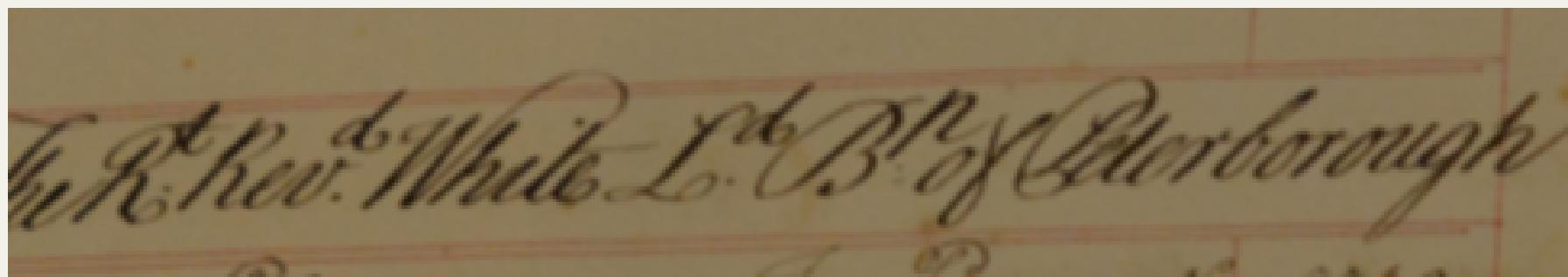
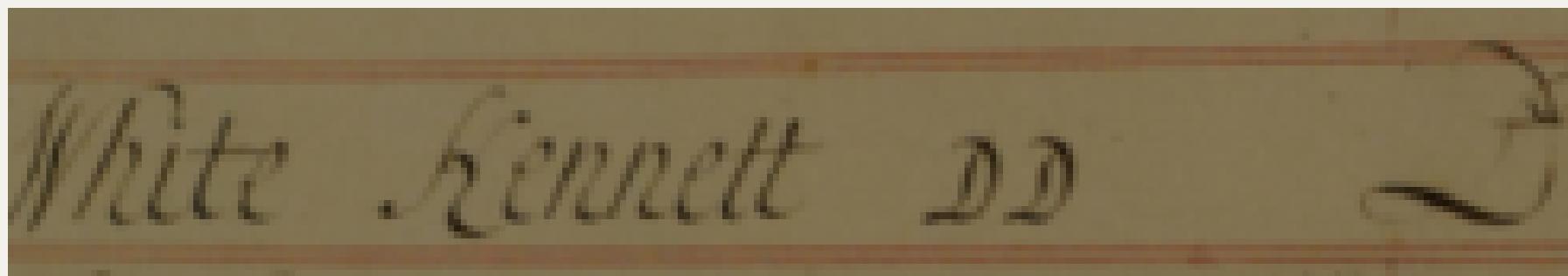
Solution

- Capture amounts in 6 columns: Buy (Pound, Shilling and Pence) and Sell (Pound, Shilling and Pence)
 - Add separate columns for converted Buy and Sell amount
 - Use this formula to convert:
- =ROUND((Pound + Shilling/20 + Pence/240), 2)

300	—	—	—	—	—
26	—	—	—	—	—
196	—	—	—	—	—
124	.6	—	—	—	—
103	12	—	—	—	—
128	11	—	—	—	—
100	—	—	—	—	—
500	—	—	—	—	—
180	—	—	—	—	—
47	15	.4	—	—	—
354	15	.2	—	—	—

Duplicate trader accounts

Different accounts would exist for the same trader, who sold out at some point and started trading again with a different title, surname, suffix or rank



White Kennett, DD (Doctor of Divinity)

**Right Reverend White,
Lord Bishop of Petersborough**

Through research I established that these 2 traders were one and the same person
(https://en.wikipedia.org/wiki/White_Kennett)

Unstandardised records

Honourable Lady Gerdrut d'Oeynhausen
now Countess de la Lippe

was standardised as

Countess Margarete Gertrud of Oeynhausen
now Schaumburg-Lippe

https://en.wikipedia.org/wiki/Albert_Wolfgang,_Count_of_Schaumburg-Lippe
<https://www.unofficialroyalty.com/category/formermonarchies/german/schaumburg-lippe-royals/>



The Hon^{ble} Lady Gerdrut D'Oeynhausen now Countess de la Lippe
30 Febr: 1720 1720 Mar: - 3

Inconsistent record-keeping

Change of title, family name or rank cause uncertainty

Do these trader accounts belong to the same person?

After checking the dates of the transactions against the periods the title was held, it is evident that:

Right Honourable Henry, Earle of Litchfield

belongs to Edward Henry Lee

(https://en.wikipedia.org/wiki/Edward_Lee,_1st_Earl_of_Lichfield)

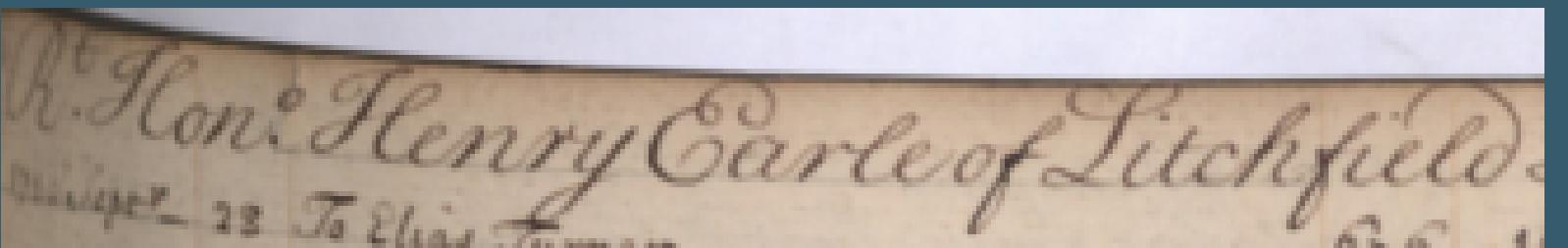
and

Right Honourable George Henry, Earl of Litchfield

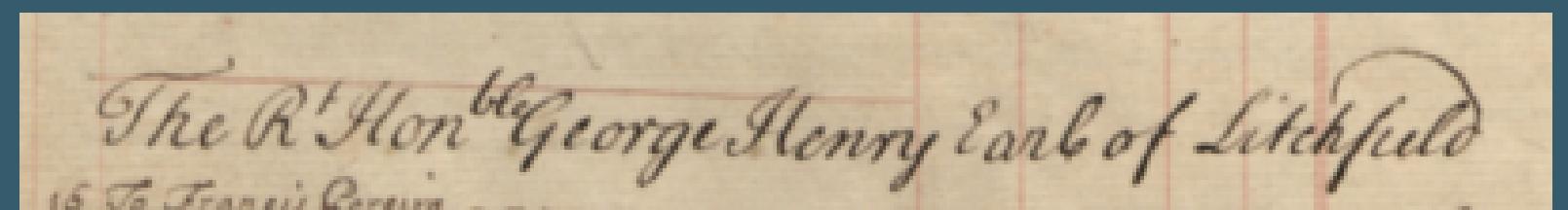
belongs to George Henry Lee

(https://en.wikipedia.org/wiki/George_Lee,_2nd_Earl_of_Lichfield).

Right Honourable Henry, Earle of Litchfield



**Right Honourable George Henry,
Earl of Litchfield**



12	to Robert Wilks	734	500
13	to Walter Glumer	568	1000
14	to John Vanhottem	686	900
15	to Edward Owen	78100	521
16	to Anthony Da Costa	130	4000
17	to John Gumbley	296	4000
18	to Brook Bridges Esq	69	1500
19	to Chineas Cheeke	131	1800
20	to John Baker	35	1000
21	to Ann Delaine	193	500
22	to Joseph Musaphia	504	1000
23	to Nathaniel Roffey	582	500
24	to Georg Wanley	696	1000
25	to John Thornycroft	863	3000
26	to John Turner	675	1000
27	to Cott George Churchill	158	1000
28	to Cap. Robert Midford	101,210	487
29	to Nathaniel Roffey	582	2000
30	to J. Fernandes Vunes	318	2000
31	to Abraham Da Costa	120	1000
32	to George Middleton	484	1000
33	to Gabriel Lopez	442	5000
34	to Moses D. Medina	421	500
35	to Nathaniel Garland	262	2000
36	to Brook Bridges	69	1500
37	to Orlando Gurnfreys	369	1000
38	to George Middleton	484	500
39	to Thomas Chamber	103	500
40	to Francis Chardin	450	3000
41	to Joseph Cereira	642	1500
42	to Isaac Rebow	125	300
43	to Sir Isaac Piesbow	124,110	678
44	to Georg Tobias Guiguer	296	1000
45	to Cornelis Backer	29	1000
46	to Sir Gregory Page	528	2000
47	to Mathew Becker	187	1500
48	to Urban Hall	312	2000
49	to Richard Ducane	206	1000
50	to Elias Hawes	320	3000

March

April

1	b4	Frances Cereira	1000
2	b4	Dame Elizabeth Germain her Att ⁴	221
3	b4	John Rooper	1000
4	b4	William Revham	500
5	b4	John Baynes & C°	332
6	b4	John Baynes & C°	2000
7	b4	John Ballman	33
8	b4	Samuel Strode	34
9	b4	John Cooke of Letter of Attorney	643
10	b4	John Cooke of Letter of Attorney	151
11	b4	Sir Gregory Page Bart	528
12	b4	John Malpda	712
13	b4	Edward Colston Attorney	3920
14	b4	Peter Takrot	146
15	b4	Robert Lucas	223
16	b4	Robert Lord Bingley	445
17	b4	the Rt Honble Robert Lord Bingley	68
18	b4	John Bridges	65
19	b4	Standbrook Cholmley	143
20	b4	George Middleton	484
21	b4	John Mead	471
22	b4	Aene Rane	532
23	b4	John Cudde	166
24	b4	Moses Hart	306
25	b4	John Hamilton	318
26	b4	Isaac Edlin	221
27	b4	Joseph Ashby & William Martin	6
28	b4	Benjamin Cowse	3000
29	b4	John Shuckburgh	155
30	b4	Peter Atkins	643
31	b4	Jakes Collier	51
32	b4	George Middleton	1000
33	b4	Elias Turner	161
34	b4	Frances Clerk	424
35	b4	Benjamin Cowse	676
36	b4	John Cox	3000
37	b4	Peter Seignoret	300
38	b4	Elias Turner	2000
39	b4	John Mead	155
40	b4	Cott Francis Charteris	151
41	b4	John Gumbley	622
42	b4	John Gumbley	678
43	b4	John Mead	2000
44	b4	Cott Francis Charteris	471
45	b4	John Gumbley	1000
46	b4	John Gumbley	112
47	b4	John Gumbley	206
48	b4	John Gumbley	1000
49	b4	John Gumbley	212

March

Example of a Ledger Page

Structured Transaction Dataset

Trader	TransactionNr	Led	Pg	Accl	TransN	Year	Month	Day	Sell	Buy	BalSell	BalBuy	CntPg	CntID	CnrTransNr
AA008	E01603007	E	016	03	007	1715	2	25		200.00			256	JF032	E25605004
AA008	E01603008	E	016	03	008	1715	2	27	500.00			431	PL005	E43105003	
AA008	E01603009	E	016	03	009	1716	4	11		115.00			336	EH010	E33604002
AA008	E01603010	E	016	03	010	1716	4	11		410.00			578	VEN078	E57805002
AA008	E01603011	E	016	03	011	1716	4	11		480.00			578	PR001	E57802002
AA008	E01603012	E	016	03	012	1716	4	12	1,000.00			723	HW006	E72302002	
AA008	E01603013	E	016	03	013	1716	4	16		102.83			033	MB007	E03308002
AA008	E01603014	E	016	03	014	1716	4	26		6.73			573	TR001	E57301002
AA008	E01603015	E	016	03	015	1716	4	28		92.00			427	RL005	E42703002
AA008	E01603016	E	016	03	016	1716	5	3	200.00			694	DV002	E69402002	
AA008	E01603017	E	016	03	017	1716	5	30		10.00			083	TB030	E08303002
AA008	E01603018	E	016	03	018	1716	6	8	16.56			330	PH006	E33002001	
AA008	E01603019	E	016	03	019	1716	9	22		400.00			439	JL033	E43903007
AA008	E01603020	E	016	03	020	1716	10	2		1,000.00			133	RC014	E13307003
AA008	E01603021	E	016	03	021	1716	10	2			1,400.00		017	AA008	E01701001
RA008	E01604001	E	016	04	001	1715	3	15		500.00			109	VEN015	E10903002
RA008	E01604002	E	016	04	002	1716	6	15	500.00			342	JH043	E34201001	
RA008	E01604003	E	016	04	003	1716	11	13		1,000.00			059	JB024	E05901007
RA008	E01604004	E	016	04	004	1716	11	16		1,500.00			304	MH001	E30403051
RA008	E01604005	E	016	04	005	1716	11	20		1,000.00			677	ET009	E67701012
RA008	E01604006	E	016	04	006	1716	1	21	1,000.00			250	MF005	E25001012	
RA008	E01604007	E	016	04	007	1716	1	23	200.00			284	JG020	E28404005	
RA008	E01604008	E	016	04	008	1716	1	23	300.00			080	RB017	E08001001	
RA008	E01604009	E	016	04	009	1716	1	23	500.00			505	GM013	E50507019	
RA008	E01604010	E	016	04	010	1716	2	5		1,000.00			170	AD002	E17002031
RA008	E01604011	E	016	04	011	1716	2	19	1,000.00			579	RR007	E57905001	
RA008	E01604012	E	016	04	012	1716	2	27		1,000.00			582	JR013	E58203057
RA008	E01604013	E	016	04	013	1716	3	4	1,000.00			478	MD008	E47801018	
RA008	E01604014	E	016	04	014	1716	3	7	500.00			701	JW007	E70105005	
RA008	E01604015	E	016	04	015	1716	3	15		500.00			279	EG009	E27901027
RA008	E01604016	E	016	04	016	1717	5	10	1,000.00			281	VEN035	E28105005	
RA008	E01604017	E	016	04	017	1717	5	15		1,000.00			640	RS006	E64001015
RA008	E01604018	E	016	04	018	1717	8	15	1,000.00			640	RS006	E64001166	
RA008	E01604019	E	016	04	019	1717	8	17		1,000.00			124	TC012	E12402015
RA008	E01604020	E	016	04	020	1717	9	13		1,000.00			748	JY001	E74806002
RA008	E01604021	E	016	04	021	1717	9	14		500.00			639	RS006	E63901021
RA008	E01604022	E	016	04	022	1717	9	27		1,000.00			442	JL045	E44207002
RA008	E01604023	E	016	04	023	1717	11	9	1,000.00			651	WT002	E65102009	
RA008	E01604024	E	016	04	024	1717	11	12	1,000.00			253	RF005	E25301006	
RA008	E01604025	E	016	04	025	1717	11	26		1,000.00			639	RS006	E63901129
RA008	E01604026	E	016	04	026	1717	11	28		1,000.00			479	MD008	E47901023
RA008	E01604027	E	016	04	027	1717	12	18	1,000.00			029	RB004	E02906001	
RA008	E01604028	E	016	04	028	1717	2	15			3,000.00		018	RA008	E01804001
WA007	E01605001	E	016	05	001	1715	3	17		500.00			602	JS011	E60204002
WA007	E01605002	E	016	05	002	1716	4	19	500.00			473	NM002	E47301003	
WA007	E01605003	E	016	05	003	1716	5	16		1,000.00			744	AW022	E74405010
WA007	E01605004	E	016	05	004	1716	5	16		1,000.00			310	HH005	E31003002
WA007	E01605005	E	016	05	005	1716	6	6		2,100.00			584	JR015	E58401004
WA007	E01605006	E	016	05	006	1716	6	21		1,000.00			065	RB011	E06503002
WA007	E01605007	E	016	05	007	1716	7	20	1,000.00			410	JL003	E41006004	
WA007	E01605008	E	016	05	008	1716	7	20	1,000.00			582	JR013	E58203029	
WA007	E01605009	E	016	05	009	1716	9	20		500.00			168	EC018	E16809009
WA007	E01605010	E	016	05	010	1716	9	25		300.00			525	DP001	E52501002