#### # Roll no 33140 # Batch L9 # Assignment 5 (2): Data manipulation on retail dataset. > wd = getwd() > setwd(wd) > # install.packages('readxl') > library('readxl') > data = read excel("../../SI-VI DataSets/Online Retail.xlsx") > data # A tibble: 541,909 x 8 Quantity InvoiceDate InvoiceNo StockCode Description UnitPrice CustomerID Country <chr> <chr> <chr> <dbl> <dttm> <dbl> <dbl> <chr> 1 536365 85123A WHITE HANGING HEART T-LIGHT HOLDER 6 2010-12-01 08:26:00 2.55 17 850 United Kingd~ 2 536365 71053 WHITE METAL LANTERN 6 2010-12-01 08:26:00 3.39 17850 Unite d Kingd~ 3 536365 84406B CREAM CUPID HEARTS COAT HANGER 8 2010-12-01 08:26:00 2.75 178 50 United Kingd~ 4 536365 84029G KNITTED UNION FLAG HOT WATER BOTT~ 6 2010-12-01 08:26:00 3.39 17 850 United Kingd~ 5 536365 84029E RED WOOLLY HOTTIE WHITE HEART. 6 2010-12-01 08:26:00 3.39 1785 0 United Kingd~ 6 536365 22752 SET 7 BABUSHKA NESTING BOXES 2 2010-12-01 08:26:00 7.65 <u>17</u>850 U nited Kingd~ 7 536365 21730 GLASS STAR FROSTED T-LIGHT HOLDER 6 2010-12-01 08:26:00 4.25 <u>17</u>85 0 United Kingd~ 8 536366 22633 HAND WARMER UNION JACK 6 2010-12-01 08:28:00 1.85 17850 Un ited Kingd~ 9 536366 22632 HAND WARMER RED POLKA DOT 6 2010-12-01 08:28:00 1.85 17850 United Kingd~ 10 536367 84879 ASSORTED COLOUR BIRD ORNAMENT 32 2010-12-01 08:34:00 1.69 <u>13</u> 047 United Kingd~ # ... with 541,899 more rows

> data\$Quantity <- replace(data\$Quantity,data\$Quantity < 0,0)

> # subset 1 if of 1000 rows, with col no. 1 2 4 and 6

# > subset1 <- data[c(1:1000),c(1,2,4,6)] > subset1 # A tibble: 1,000 x 4 InvoiceNo StockCode Quantity UnitPrice <chr> <chr> <chr> <dbl> <d> <dbl> <dbl>

1 536365 85123A 2.55 6 2 536365 71053 6 3.39 3 536365 84406B 2.75 4 536365 84029G 6 3.39 5 536365 84029E 6 3.39 6 536365 22752 2 7.65 7 536365 21730 4.25 6 8 536366 22633 1.85 9 536366 22632 1.85 32 1.69 10 536367 84879

# ... with 990 more rows

#### > subset1 <- subset1[order(subset1\$Quantity),]

### > t(subset1)

[,1] [,2] [,3] [,4] [,5] [,6] [,7] [,8] [,9] [,10] [,11] InvoiceNo "C536379" "C536383" "C536391" "C55691" "C556

[,12] [,13] [,14] [,15] [,16] [,17] [,18] [,19] [,20] [,21] [,22] [,23] InvoiceNo "536381" "536881" "536881" "536881" "536881" "536881" "536881" "536881" "536881" "536881" "536881" "536881" "536881" "5

[,24] [,25] [,26] [,27] [,28] [,29] [,30] [,31] [,32] [,33] [,34] [,35] InvoiceNo "536385" "536392" "536401" "5

[,36] [,37] [,38] [,40] [,41] [,42] [,43] [,44] [,45] [,46] [,47] InvoiceNo "536401"

[,48] [,49] [,50] [,51] [,52] [,53] [,54] [,55] [,56] [,57] [,58] [,59] InvoiceNo "536401" "5

[,60] [,61] [,62] [,63] [,64] [,65] [,66] [,67] [,68] [,69] [,70] [,71] InvoiceNo "536401" "536409" "556409" "5

[,72] [,73] [,74] [,75] [,76] [,77] [,78] [,79] [,80] [,81] [,82] [,83] InvoiceNo "536409" "556409" "556409" "556409" "556409" "556409" "556409" "556409" "556409" "556409" "556409" "556409" "556409" "556409" "556409" "556409" "556409" "556409" "556409" "556409" "5

[,84] [,85] [,86] [,87] [,88] [,89] [,90] [,91] [,92] [,93] [,94] [,95] InvoiceNo "536409" "556409" "5

- [,96] [,97] [,98] [,99] [,100] [,101] [,102] [,103] [,104] [,105] [,106] [,107] InvoiceNo "536409" "536409" "536409" "536409" "536412" "536412" "536412" "536412" "536412"
- [,108] [,109] [,110] [,111] [,112] [,113] [,114] [,115] [,116] [,117] [,118] [,119] InvoiceNo "536412"
- [,120] [,121] [,122] [,123] [,124] [,125] [,126] [,127] [,128] [,129] [,130] [,131] InvoiceNo "536412"
- [,132] [,133] [,134] [,135] [,136] [,137] [,138] [,139] [,140] [,141] [,142] [,143] InvoiceNo "536412" "536412" "536412" "536412" "536412" "536412" "536415" "536415" "536416" "536464"
- [,144] [,145] [,146] [,147] [,148] [,149] [,150] [,151] [,152] [,153] [,154] [,155] InvoiceNo "536464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556646" "556646" "556666" "55666" "55666" "55666" "55666" "55666" "55666" "55666" "55666" "5566" "5566" "5566" "5566" "5566" "5566" "5566" "5566" "5566
- [,156] [,157] [,158] [,159] [,160] [,161] [,162] [,163] [,164] [,165] [,166] [,167] InvoiceNo "536464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "55646" "55646" "55646" "55666" "55666" "5566" "55666" "5566" "5566" "5566" "5566" "5566" "5566" "5566" "5566" "5566
- [,168] [,169] [,170] [,171] [,172] [,173] [,174] [,175] [,176] [,177] [,178] [,179] InvoiceNo "536464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556646" "55666" "556660" "55666" "55660" "55660" "55660" "55660" "55660" "55660" "55660" "55660" "55660" "55660" "5
- [,180] [,181] [,182] [,183] [,184] [,185] [,186] [,187] [,188] [,189] [,190] [,191] InvoiceNo "536464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "556464" "55646" "55646" "556660" "55666" "55660" "55660" "55660" "55660" "55660" "55660" "55660" "55660" "55660" "55660" "55
- [,192] [,193] [,194] [,195] [,196] [,197] [,198] [,199] [,200] [,201] [,202] [,203] InvoiceNo "536464" "536464" "536464" "536464" "536488" "536488" "536488" "536488" "536488"
- [,204] [,205] [,206] [,207] [,208] [,209] [,210] [,211] [,212] [,213] [,214] [,215] InvoiceNo "536488" "53688" "53688" "536888" "536888" "53688" "536888" "536888" "536888" "536888" "536888" "5
- [,216] [,217] [,218] [,219] [,220] [,221] [,222] [,223] [,224] [,225] [,226] [,227] InvoiceNo "536488" "536488" "536488" "536488" "536520" "556520"
- [,228] [,229] [,230] [,231] [,232] [,233] [,234] [,235] [,236] [,237] [,238] [,239] InvoiceNo "536520" "556520"
- [,240] [,241] [,242] [,243] [,244] [,245] [,246] [,247] [,248] [,249] [,250] [,251] InvoiceNo "536520" "536520" "536520" "536365" "536367" "536373" "536373" "536375" "536375" "536381" "536381"
- [,252] [,253] [,254] [,255] [,256] [,257] [,258] [,259] [,260] [,261] [,262] [,263] InvoiceNo "536381" "536381" "536381" "536381" "536382" "536382" "536384" "536385" "536388" "536389" "536389"

## [,264] [,265] [,266] [,267] [,268] [,269] [,270] [,271] [,272] [,273] [,274] [,275] [reached getOption("max.print") -- omitted 50 rows ]

- > library(reshape2)
- > # sort the dataframe as per Customer ID
- > data <- data[order(data\$CustomerID),]
- > data # inspect the data

# A tibble: 541,909 x 8

InvoiceNo StockCode Description			Quantity InvoiceDate			UnitPrice CustomerID Country					
<chr></chr>	<chr></chr>	<chr></chr>	<(	dbl> <dttm></dttm>		<dbl></dbl>	<dbl> &lt;</dbl>	chr>			
1 541431	23166	MEDIUM	CERAMIC TO	STORAGE J	AR :	<u>74</u> 215 201	1-01-18	10:01:00	1.0	4	<u>12</u>
346 United	d Kingd~	,									
2 C54143	3 23166	6 MEDIUM	CERAMIC TO	P STORAGE	JAR	0 2011-	-01-18 10	:17:00	1.04	<u>12</u>	<u>2</u> 3
46 United	Kingd~										
3 537626	85116	BLACK CA	NDELABRA T-	LIGHT HOLD	)ER	12 2010-	12-07 14:	57:00	2.1	<u>12</u> 3	34
7 Iceland											
4 537626	22375	AIRLINE B	AG VINTAGE	JET SET BRO	WN	4 2010-1	2-07 14:5	7:00	4.25	<u>12</u> 3	4
7 Iceland											
5 537626	71477	COLOUR	GLASS. STAR T	LIGHT HOL	DER	12 2010-	12-07 14:	57:00	3.25	<u>12</u>	34
7 Iceland											
6 537626	22492	MINI PAIN	IT SET VINTA	GE	36 201	0-12-07 1	4:57:00	0.65	<u>12</u> 347	7 Icel	an
d											
7 537626	22771	CLEAR DR	AWER KNOB	ACRYLIC ED\	WARDI~	12 20:	10-12-07	14:57:0	0 1.2	25	<u>1</u>
<u>2</u> 347 Icela	nd										
8 537626	22772	PINK DRA	WER KNOB A	CRYLIC EDW	ARDIAN	12 20	10-12-07	14:57:0	0 1.2	25	<u>1</u>
<u>2</u> 347 Icela	nd										
9 537626	22773	GREEN DR	AWER KNOB	ACRYLIC ED	WARDI <sup>^</sup>	12 20	10-12-07	14:57:0	00 1.	25	<u>1</u>
<u>2</u> 347 Icela	nd										
10 537626	22774	RED DRA	WER KNOB A	CRYLIC EDW	ARDIAN	12 20	)10-12-07	' 14:57:(	00 1.	25	<u>1</u>
<u>2</u> 347 Icela	nd										

- # ... with 541,899 more rows
- > # Melt the subset 1 in long format as per Invoice n quantity
- > melt1 <- melt(subset1, id <- c("InvoiceNo","Quantity"))

#### > melt1

InvoiceNo Quantity variable value

```
6
  C536391
              0 StockCode 21980
```

- C536391 0 StockCode 21484
- C536391 0 StockCode 22557
- C536391 0 StockCode 22553
- 10 C536506 0 StockCode 22960
- 1 StockCode 71270
- 1 StockCode 22262
- 1 StockCode 22637
- 1 StockCode 21166
- 1 StockCode 37444A
- 1 StockCode 37444C
- 1 StockCode 22083
- 1 StockCode 22261
- 1 StockCode 84832
- 1 StockCode 22644
- 1 StockCode 21533
- 1 StockCode 22176
- 1 StockCode 22438
- 1 StockCode 22783
- 1 StockCode 22827
- 1 StockCode 22110
- 1 StockCode 22098
- 1 StockCode 22766
- 1 StockCode 22451
- 1 StockCode 22549
- 1 StockCode 84744
- 1 StockCode 21328
- 1 StockCode 17091A
- 1 StockCode 22473
- 1 StockCode 22768
- 1 StockCode 21463
- 1 StockCode 21464
- 1 StockCode 85150
- 1 StockCode 22117

1 StockCode 48129

1 StockCode 82580

- 1 StockCode 82578
- 1 StockCode 22441
- 1 StockCode 21122
- 1 StockCode 22851
- 1 StockCode 22810
- 1 StockCode 22809

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48 536401 1 StockCode 20963
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- 49 536401 1 StockCode 20961
- 50 536401 1 StockCode 84709B
- 51 536401 1 StockCode 21592
- 52 536401 1 StockCode 22662
- 53 536401 1 StockCode 82483
- 54 536401 1 StockCode 20749
- 55 536401 1 StockCode 20725
- 56 536401 1 StockCode 20726
- 57 536401 1 StockCode 22384
- 58 536401 1 StockCode 22848
- 59 536401 1 StockCode 47570B
- 60 536401 1 StockCode 84030E
- 61 536403 1 StockCode POST
- 62 536409 1 StockCode 21479
- 63 536409 1 StockCode 22111
- 64 536409 1 StockCode 22785
- 65 536409 1 StockCode 22975
- 66 536409 1 StockCode 22972
- 67 536409 1 StockCode 22866
- 68 536409 1 StockCode 22568
- 69 536409 1 StockCode 85116
- 70 536409 1 StockCode 22664
- 71 536409 1 StockCode 21609
- 72 536409 1 StockCode 21866
- 73 536409 1 StockCode 20669
- 74 536409 1 StockCode 90129F
- 75 536409 1 StockCode 90210B
- 76 536409 1 StockCode 90199C
- 77 536409 1 StockCode 21955
- 78 536409 1 StockCode 72802C
- 79 536409 1 StockCode 22109
- 80 536409 1 StockCode 22531
- 81 536409 1 StockCode 21811
- 82 536409 1 StockCode 22183
- 83 536409 1 StockCode 84625A
- 65 550405 1 5tockcode 64025A
- 84 536409 1 StockCode 84906
- 85 536409 1 StockCode 21867
- 86 536409 1 StockCode 22075
- 87 536409 1 StockCode 21866
- 88 536409 1 StockCode 21065
- 89 536409 1 StockCode 22074

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90 536409 1 StockCode 22900
91 536409 1 StockCode 20713
92 536409 1 StockCode 21116
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- 93 536409 1 StockCode 22633
- 95 550409 1 StockCode 22055
- 94 536409 1 StockCode 22866 95 536409 1 StockCode 22198
- 96 536409 1 StockCode 85099F
- 97 536409 1 StockCode 20717
- 98 536409 1 StockCode 20723
- 20 536400 4 St. J. C. J. 22220
- 99 536409 1 StockCode 22900
- 100 536409 1 StockCode 22111
- 101 536409 1 StockCode 22112
- 102 536412 1 StockCode 22326
- 103 536412 1 StockCode 22328
- 104 536412 1 StockCode 22327
- 105 536412 1 StockCode 22630
- 106 536412 1 StockCode 22629
- 107 536412 1 StockCode 21245
- 108 536412 1 StockCode 21244
- 109 536412 1 StockCode 21242
- 110 536412 1 StockCode 21243
- 111 536412 1 StockCode 22327
- 112 536412 1 StockCode 22273
- 113 536412 1 StockCode 22759
- 114 536412 1 StockCode 21738
- 115 536412 1 StockCode 22077
- 116 536412 1 StockCode 22940
- 117 536412 1 StockCode 22749
- 118 536412 1 StockCode 85049E
- 119 536412 1 StockCode 22141
- 120 536412 1 StockCode 21448
- 121 536412 1 StockCode 22243
- 122 536412 1 StockCode 22273
- 123 536412 1 StockCode 22749
- 124 536412 1 StockCode 21034
- 125 536412 1 StockCode 22141
- 126 536412 1 StockCode 22144
- 127 536412 1 StockCode 21448
- 128 536412 1 StockCode 22086
- 129 536412 1 StockCode 21710
- 130 536412 1 StockCode 21708
- 131 536412 1 StockCode 21711

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132 536412
              1 StockCode 21706
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- 536412 1 StockCode 20725 133
- 1 StockCode 85184C 134 536412
- 135 536412 1 StockCode 21708
- 136 536412 1 StockCode 21706
- 137 536412 1 StockCode 85184C
- 138 536412 1 StockCode 20750
- 139 536415 1 StockCode 22470
- 140 536415 1 StockCode 22580
- 141 536415 1 StockCode 22775
- 142 536446 1 StockCode 21156
- 143 536464 1 StockCode 90059C
- 144 536464 1 StockCode 90200C
- 145 536464 1 StockCode 90200A
- 146 536464 1 StockCode 22386
- 147 536464 1 StockCode 85099B
- 148 536464 1 StockCode 22086
- 149 536464 1 StockCode 22737
- 150 536464 1 StockCode 21260
- 151 536464 1 StockCode 21985
- 152 536464 1 StockCode 21980
- 536464 1 StockCode 22988 153
- 1 StockCode 22297 154 536464
- 1 StockCode 22294 155 536464
- 156 536464 1 StockCode 22295
- 157 536464 1 StockCode 21977
- 158 536464 1 StockCode 22619
- 1 StockCode 16258A 159 536464
- 536464 1 StockCode 21992 160
- 536464 1 StockCode 22910 161
- 536464 1 StockCode 21124 162
- 536464

1 StockCode 22810

163

- 164 536464 1 StockCode 22573
- 536464 1 StockCode 22577
- 536464 1 StockCode 22809 166
- 167 536464 1 StockCode 20878
- 1 StockCode 20866 168 536464
- 536464 1 StockCode 85095 169
- 170 536464 1 StockCode 22333
- 536464 1 StockCode 22557 171
- 172 536464 1 StockCode 21584
- 173 536464 1 StockCode 22866

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174 536464
               1 StockCode 22866
175
    536464
               1 StockCode 22956
               1 StockCode 22582
176 536464
177
     536464
               1 StockCode 21212
178
    536464
               1 StockCode 21121
    536464
               1 StockCode 21122
179
180
     536464
               1 StockCode 22759
     536464
181
               1 StockCode 21815
182
     536464
               1 StockCode 22742
    536464
               1 StockCode 21329
183
               1 StockCode 21328
184
    536464
185
    536464
               1 StockCode 21327
186
    536464
               1 StockCode 21992
187
     536464
               1 StockCode 21738
188
     536464
               1 StockCode 48173C
189
    536464
               1 StockCode 85099C
190
    536464
               1 StockCode 22960
191 536464
               1 StockCode 85231G
192 536464
               1 StockCode 22866
193
     536464
               1 StockCode 72818
               1 StockCode 22441
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195
     536464
               1 StockCode 22312
               1 StockCode 22663
196 536464
    536488
               1 StockCode 21621
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198
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               1 StockCode 47563A
199
    536488
               1 StockCode 84558A
200
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               1 StockCode 21592
    536488
               1 StockCode 84347
201
202
    536488
               1 StockCode 84347
203
    536488
               1 StockCode 21577
    536488
               1 StockCode 22909
204
205
    536488
               1 StockCode 22087
206
    536488
               1 StockCode 22910
207
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               1 StockCode 21367
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               1 StockCode 22376
208
               1 StockCode 22961
209
     536488
     536488
               1 StockCode 21895
210
211 536488
               1 StockCode 22468
212 536488
               1 StockCode 21034
    536488
               1 StockCode 22372
213
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214

215

536488

536488

1 StockCode 22867

1 StockCode 22144

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1 StockCode 21190
216 536488
217 536488
               1 StockCode 22940
218 536488
               1 StockCode 70007
219 536488
               1 StockCode 22150
220 536520
               1 StockCode 21794
221 536520
               1 StockCode 20707
222 536520
               1 StockCode 21175
223 536520
               1 StockCode 22926
224 536520
               1 StockCode 21890
225 536520
               1 StockCode 22670
226 536520
               1 StockCode 21867
227 536520
               1 StockCode 22760
228 536520
               1 StockCode 22470
229 536520
               1 StockCode 21486
230 536520
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231 536520
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232 536520
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234 536520
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237 536520
               1 StockCode 22441
238 536520
               1 StockCode 22092
239 536520
               1 StockCode 22469
240 536520
               1 StockCode 22100
241 536520
               1 StockCode 22096
242 536520
               1 StockCode 22583
243 536365
               2 StockCode 22752
244 536367
               2 StockCode 22622
245 536373
               2 StockCode 82483
246 536373
               2 StockCode 22752
247 536375
               2 StockCode 82483
248 536375
               2 StockCode 22752
249 536381
               2 StockCode 82567
250 536381
               2 StockCode 21175
[ reached 'max' / getOption("max.print") -- omitted 1750 rows ]
> # sort the melted data as per quantity and then invoice
> melt1 <- melt1[order(melt1$Quantity,melt1$InvoiceNo),]
> melt1
  InvoiceNo Quantity variable value
   C536379
               0 StockCode
```

0 UnitPrice 27.5

1001 C536379

```
2
    C536383
               0 StockCode 35004C
1002 C536383
                 0 UnitPrice 4.65
    C536391
               0 StockCode 22556
3
4
    C536391
               0 StockCode 21984
5
    C536391
               0 StockCode 21983
    C536391
               0 StockCode 21980
6
7
    C536391
               0 StockCode 21484
8
    C536391
               0 StockCode 22557
9
    C536391
               0 StockCode 22553
1003 C536391
                 0 UnitPrice 1.65
1004 C536391
                 0 UnitPrice 0.29
1005 C536391
                 0 UnitPrice 0.29
1006 C536391
                 0 UnitPrice 0.29
1007 C536391
                 0 UnitPrice 3.45
1008 C536391
                 0 UnitPrice 1.65
1009 C536391
                 0 UnitPrice 1.65
10 C536506
                0 StockCode 22960
1010 C536506
                 0 UnitPrice 4.25
     536381
               1 StockCode 71270
11
12
     536381
               1 StockCode 22262
13
     536381
               1 StockCode 22637
     536381
               1 StockCode 21166
14
               1 StockCode 37444A
15
     536381
               1 StockCode 37444C
16
     536381
17
     536381
               1 StockCode 22083
     536381
               1 StockCode 22261
18
19
     536381
               1 StockCode 84832
               1 StockCode 22644
20
     536381
21
     536381
               1 StockCode 21533
22
     536381
               1 StockCode 22176
23
     536381
               1 StockCode 22438
1011 536381
                1 UnitPrice 1.25
                1 UnitPrice 0.85
1012 536381
1013 536381
                1 UnitPrice 2.55
1014 536381
                1 UnitPrice 1.95
1015 536381
                1 UnitPrice 2.95
1016 536381
                1 UnitPrice 2.95
1017 536381
                1 UnitPrice 2.95
1018 536381
                1 UnitPrice 0.85
1019 536381
                1 UnitPrice 0.85
1020 536381
                1 UnitPrice 1.45
1021 536381
                1 UnitPrice 4.95
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1022 536381
                 1 UnitPrice 2.95
1023 536381
                 1 UnitPrice 1.95
24
     536385
               1 StockCode 22783
1024 536385
                 1 UnitPrice 19.95
25
     536392
               1 StockCode 22827
1025 536392
                 1 UnitPrice 165
26
     536401
               1 StockCode 22110
27
     536401
               1 StockCode 22098
28
     536401
               1 StockCode 22766
29
     536401
               1 StockCode 22451
     536401
               1 StockCode 22549
30
31
     536401
               1 StockCode 84744
32
     536401
               1 StockCode 21328
33
     536401
               1 StockCode 17091A
34
     536401
               1 StockCode 22473
35
     536401
               1 StockCode 22768
     536401
               1 StockCode 21463
36
37
     536401
               1 StockCode 21464
               1 StockCode 85150
38
     536401
39
     536401
               1 StockCode 22117
40
     536401
               1 StockCode 48129
     536401
               1 StockCode 82580
41
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                 1 UnitPrice 1.45
1031
     536401
                 1 UnitPrice 1.25
1032 536401
                 1 UnitPrice 1.65
1033 536401
                 1 UnitPrice 1.25
1034
      536401
                 1 UnitPrice 4.95
1035
     536401
                 1 UnitPrice 9.95
1036 536401
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                 1 UnitPrice 2.55
1039 536401
                 1 UnitPrice 2.95
1040
     536401
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1041
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1042 536401
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1046 536401
                 1 UnitPrice 2.95
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                 1 UnitPrice 2.95
1048
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                 1 UnitPrice 1.25
     536401
1049
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1050 536401
                 1 UnitPrice 5.95
1051 536401
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1052 536401
                 1 UnitPrice 1.65
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                 1 UnitPrice 5.95
1054 536401
                 1 UnitPrice 7.95
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1056 536401
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1057 536401
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61
1061 536403
                 1 UnitPrice
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63
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     536409
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67
     536409
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68
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- 1 StockCode 85116
- 1 StockCode 22664
- 1 StockCode 21609
- 1 StockCode 21866
- 1 StockCode 20669
- 1 StockCode 90129F
- 1 StockCode 90210B
- 1 StockCode 90199C
- 1 StockCode 21955
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- 1 StockCode 21867
- 1 StockCode 22075
- 1 StockCode 21866
- 1 StockCode 21065
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- 1 StockCode 22900
- 1 StockCode 20713
- 1 StockCode 21116
- 1 StockCode 22633
- 1 StockCode 22866
- 1 StockCode 22198
- 1 StockCode 85099F
- 1 StockCode 20717
- 1 StockCode 20723
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- 1 StockCode 22112
- 1062 536409 1 UnitPrice 3.75
- 1 UnitPrice 4.95
- 1 UnitPrice 6.75
- 1 UnitPrice 1.25
- 1066 536409 1 UnitPrice 1.65 1067 536409
- 1 UnitPrice 2.1

1 UnitPrice 3.75

1069 536409 1 UnitPrice 2.1

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1071 536409
                 1 UnitPrice 2.95
1072 536409
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1073 536409
                 1 UnitPrice 1.25
1074 536409
                 1 UnitPrice 2.95
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1076 536409
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1077
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1078 536409
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1082 536409
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1085
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1101
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                1 StockCode 22629
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111
     536412
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                1 StockCode 22749
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127
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                1 StockCode 21448
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     536412
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                1 StockCode 85184C
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1104 536412
                1 UnitPrice 2.95
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1106 536412
                1 UnitPrice 1.95
1107 536412
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1108 536412
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1109 536412
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                1 UnitPrice 1.69
1111 536412
                1 UnitPrice 2.95
1112 536412
                1 UnitPrice 2.95
```

[ reached 'max' / getOption("max.print") -- omitted 1750 rows ]

- > # cast into Wide format
- > melt2 <- dcast(melt1,Quantity + InvoiceNo ~ variable,value.var = "value")
- > melt2

### Quantity InvoiceNo StockCode UnitPrice

2 536460

39	2	536464	16	16
40	2	536488	5	5
41	2	536500	3	3
42	2	536502	1	1
43	2	536520	13	13
44	3	536367	3	3
45	3	536368	3	3
46	3	536369	1	1
47	3	536370	1	1
48	3	536381	3	3
49	3	536384	2	2
50	3	536388	4	4
51	3	536389	1	1
52	3	536401	6	6
53	3	536408	5	5
54	3	536409	4	4
55	3	536412	10	10
56	3	536415	27	27
57	3	536420	1	1
58	3	536425	1	1
59	3	536446	1	1
60	3	536464	5	5
61	3	536488	3	3
62	3	536500	3	3
63	3	536502	1	1
64	3	536520	10	10
65	4	536367	2	2
66	4	536373	1	1
67	4	536375	1	1
68	4	536381	2	2
69	4	536382	2	2
70	4	536384	1	1
71	4	536388	1	1
72	4	536389	3	3
73	4	536392	2	2
74	4	536395	1	1
75	4	536396	1	1
76	4	536398	3	3
77	4	536401	4	4
78	4	536406	2	2
79	4	536408	5	5
80	4	536412	2	2

81	4	536415	4	4
82	4	536416	2	2
83	4	536420	2	2
84	4	536423	1	1
85	4	536425	1	1
86	4	536446	2	2
87	4	536460	1	1
88	4	536464	1	1
89	4	536477	1	1
90	4	536514	1	1
91	4	536520	3	3
92	5	536381	1	1
93	5	536401	1	1
94	5	536409	1	1
95	5	536412	6	6
96	5	536415	6	6
97	5	536446	1	1
98	5	536464	3	3
99	5	536488	2	2
100	5	536520	1	1
101	6	536365	5	5
102	6	536366	2	2
103	6	536367	4	4
104	6	536368	1	1
105	6	536372	2	2
106	6	536373	12	12
107	6	536375	12	12
108	6	536377	2	2
109	6	536378	4	4
110	6	536381	2	2
111	6	536384	3	3
112	6	536385	1	1
113	6	536388	1	1
114	6	536389	3	3
115	6	536392	1	1
116	6	536396	12	12
117	6	536398	3	3
118	6	536399	2	2
119	6	536406	10	10
120	6	536407	2	2
121	6	536408	5	5
122	6	536409	3	3

123	6	536412	2	2
124	6	536415	3	3
125	6	536416	1	1
126	6	536420	4	4
127	6	536423	1	1
128	6	536425	3	3
129	6	536446	5	5
130	6	536460	1	1
131	6	536464	4	4
132	6	536466	1	1
133	6	536500	2	2
134	6	536502	1	1
135	6	536514	1	1
136	6	536520	1	1
137	7	536412	3	3
138	7	536500	1	1
139	8	536365	1	1
140	8	536367	1	1
141	8	536373	1	1
142	8	536375	1	1
143	8	536382	2	2
144	8	536384	1	1
145	8	536389	1	1
146	8	536390	1	1
147	8	536393	1	1
148	8	536395	7	7
149	8	536396	1	1
150	8	536398	2	2
151	8	536406	3	3
152	8	536408	2	2
153	8	536420	2	2
154	8	536423	5	5
155	8	536425	3	3
156	8	536446	1	1
157	8	536460	1	1
158	8	536464	2	2
159	8	536488	1	1
160	9	536398	2	2
161	9	536401	2	2
162	10	536378	7	7
163	10	536381	3	3
164	10	536382	2	2

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      10
      536385
      2
      2

      166
      10
      536404
      3
      3

      249
      40
      536384
      2
      2

      250
      40
      536390
      2
      2
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[ reached 'max' / getOption("max.print") -- omitted 150 rows ]