

Exercise 2

Assignments 2: Data Integration

1. Combine the data from the **custdata2i** and **custdata3i** files through the identifying entity to the same “customer id” attribute. Ignore observations that do not contain complete attribute information.
2. Create a new data set for **male** customers with a **salary greater than 7000 dollars** and also contain information for the following attributes:
state.of.res, custid, marital.stat, housing.type, num.vehicles, sex, income
3. Show the data for each customer in the form of an ascending salary order.
4. Suppose new information is known as follows:
5. Add the new observation information in your data set.
6. Suppose you know new attribute information (personal loan) for each customer (newinfo file), combine the new attribute information with your data set.

```
custdata2i = read.csv('./Data/custdata2i.csv')
custdata3i = read.table('./Data/custdata3i.txt')
newinfo = read.table('./Data/newinfo.txt')
```

```
colnames(custdata2i)
```

```
## [1] "X"           "state.of.res" "ID.Customer"  "sex"          "Working"
## [6] "marital.stat" "ins.health"   "Home.Status"  "recent.move"
```

```
colnames(custdata3i)
```

```
## [1] "custid"      "income"      "num.vehicles" "age"
## [5] "is.employed.fix1" "age.normalized" "Median.Income" "income.norm"
## [9] "gp"          "income.lt.30K" "age.range"
```

```
data = merge(custdata2i, custdata3i, by.x='ID.Customer', by.y='custid')
colnames(data)
```

```
## [1] "ID.Customer"      "X"           "state.of.res"  "sex"
## [5] "Working"          "marital.stat" "ins.health"    "Home.Status"
## [9] "recent.move"      "income"      "num.vehicles"  "age"
## [13] "is.employed.fix1" "age.normalized" "Median.Income" "income.norm"
## [17] "gp"              "income.lt.30K" "age.range"
```

```
data = na.omit(data)
colnames(data)
```

```
## [1] "ID.Customer"      "X"           "state.of.res"  "sex"
## [5] "Working"          "marital.stat" "ins.health"    "Home.Status"
## [9] "recent.move"      "income"      "num.vehicles"  "age"
## [13] "is.employed.fix1" "age.normalized" "Median.Income" "income.norm"
## [17] "gp"              "income.lt.30K" "age.range"
```

```
data = subset(data, data$sex=='M' & data$income > 7000,
              select=c(state.of.res, ID.Customer, marital.stat, Home.Status,
                        num.vehicles, sex, income))
data
```

##	state.of.res	ID.Customer	marital.stat	Home.Status
## 2	New York	5641	Never Married	Occupied with no rent
## 8	Texas	22295	Married	Homeowner free and clear
## 9	California	26355	Never Married	Homeowner with mortgage/loan
## 10	Michigan	36825	Married	Rented
## 11	Michigan	37224	Married	Homeowner with mortgage/loan
## 17	Iowa	69062	Married	Homeowner free and clear
## 19	Missouri	77312	Married	Homeowner free and clear
## 20	Michigan	79069	Married	Rented
## 23	California	90863	Married	Homeowner with mortgage/loan
## 24	Pennsylvania	96964	Married	Homeowner with mortgage/loan
## 27	New Jersey	106726	Married	Rented
## 28	Florida	111870	Married	Homeowner with mortgage/loan
## 29	California	146457	Never Married	Rented
## 35	Ohio	167498	Married	Homeowner with mortgage/loan
## 38	Nevada	181754	Married	Rented
## 40	California	199788	Never Married	Homeowner free and clear
## 45	Arkansas	253015	Married	Homeowner with mortgage/loan
## 51	New York	298205	Married	Homeowner with mortgage/loan
## 55	Maryland	332292	Never Married	Homeowner with mortgage/loan
## 56	Texas	335080	Married	Rented
## 62	Texas	395888	Married	Rented
## 63	North Carolina	403690	Divorced/Separated	Homeowner with mortgage/loan
## 66	South Carolina	423279	Never Married	Rented
## 68	Ohio	445985	Married	Homeowner with mortgage/loan
## 71	Alabama	467335	Never Married	Rented
## 80	New York	506042	Divorced/Separated	Homeowner with mortgage/loan
## 85	Ohio	520030	Never Married	Homeowner with mortgage/loan
## 86	Missouri	532940	Married	Homeowner with mortgage/loan
## 90	Missouri	551584	Married	Homeowner free and clear
## 99	Georgia	592496	Divorced/Separated	Rented
## 101	Pennsylvania	604839	Never Married	Rented
## 103	New Jersey	606307	Married	Homeowner with mortgage/loan
## 105	Utah	612775	Married	Homeowner with mortgage/loan
## 108	South Carolina	635574	Never Married	Rented
## 109	Pennsylvania	646808	Married	Rented
## 114	Kansas	685624	Married	Homeowner with mortgage/loan
## 118	Louisiana	712409	Married	Homeowner with mortgage/loan
## 119	Tennessee	716518	Married	Homeowner with mortgage/loan
## 120	Indiana	723040	Married	Homeowner free and clear
## 122	Mississippi	728498	Married	Homeowner with mortgage/loan
## 124	Pennsylvania	761380	Married	Rented
## 125	Mississippi	789913	Married	Rented
## 127	New Hampshire	809267	Married	Homeowner with mortgage/loan
## 129	New Jersey	820384	Married	Rented
## 134	Massachusetts	832435	Married	Homeowner free and clear
## 137	Colorado	841342	Married	Homeowner with mortgage/loan
## 138	Illinois	847699	Never Married	Homeowner with mortgage/loan

## 139	New York	860763		Married	Homeowner with mortgage/loan
## 142	New Hampshire	868481		Married	Homeowner with mortgage/loan
## 143	New York	869997	Never	Married	Homeowner with mortgage/loan
## 144	California	878882		Married	Homeowner with mortgage/loan
## 146	New Jersey	898396		Married	Homeowner free and clear
## 149	Ohio	913398		Married	Homeowner with mortgage/loan
## 150	Pennsylvania	925421		Married	Homeowner with mortgage/loan
## 151	Indiana	926808		Married	Rented
## 154	Florida	934426		Married	Homeowner with mortgage/loan
## 156	Connecticut	948494		Married	Homeowner with mortgage/loan
## 158	Colorado	973386		Married	Homeowner with mortgage/loan
## 159	Iowa	979736		Married	Homeowner with mortgage/loan
## 166	California	999444		Married	Rented
## 169	Massachusetts	1029778		Married	Homeowner with mortgage/loan
## 170	Ohio	1031473		Widowed	Homeowner with mortgage/loan
## 175	North Dakota	1052064	Never	Married	Rented
## 180	Mississippi	1090019		Married	Rented
## 183	North Carolina	1111699	Never	Married	Rented
## 185	Wyoming	1117486		Married	Homeowner free and clear
## 189	Maine	1150024		Married	Rented
## 190	California	1159665		Married	Homeowner with mortgage/loan
## 191	Massachusetts	1159904		Married	Homeowner with mortgage/loan
## 193	California	1169067		Married	Homeowner with mortgage/loan
## 194	Minnesota	1171408		Married	Homeowner with mortgage/loan
## 197	New Jersey	1181596		Married	Homeowner with mortgage/loan
## 201	Maine	1213106		Married	Homeowner free and clear
## 205	Kentucky	1239496		Married	Homeowner with mortgage/loan
## 206	Pennsylvania	1241975		Married	Homeowner with mortgage/loan
## 213	Indiana	1267710	Divorced/Separated		Homeowner with mortgage/loan
## 215	Colorado	1274592		Widowed	Homeowner free and clear
## 222	Virginia	1335632	Divorced/Separated		Homeowner with mortgage/loan
## 228	Massachusetts	1386114		Married	Rented
## 229	Colorado	1390506		Married	Homeowner with mortgage/loan
## 232	New Jersey	1393413	Never	Married	Occupied with no rent
## 235	Mississippi	1402550		Married	Homeowner with mortgage/loan
##	num.vehicles	sex	income		
## 2	0	M	20000		
## 8	3	M	14400		
## 9	1	M	80000		
## 10	2	M	17500		
## 11	2	M	25800		
## 17	4	M	120300		
## 19	2	M	37200		
## 20	1	M	30000		
## 23	3	M	285020		
## 24	2	M	266200		
## 27	1	M	39000		
## 28	1	M	26000		
## 29	2	M	49000		
## 35	1	M	45000		
## 38	4	M	34200		
## 40	2	M	43500		
## 45	3	M	30000		
## 51	2	M	110450		

## 55	3	M	61000
## 56	2	M	10000
## 62	1	M	10800
## 63	2	M	34020
## 66	3	M	24000
## 68	1	M	43000
## 71	1	M	42600
## 80	1	M	130100
## 85	1	M	49000
## 86	2	M	62000
## 90	1	M	20000
## 99	1	M	10700
## 101	2	M	150000
## 103	2	M	120000
## 105	2	M	150000
## 108	2	M	70000
## 109	0	M	36000
## 114	2	M	16000
## 118	4	M	35000
## 119	3	M	35050
## 120	2	M	120190
## 122	1	M	120000
## 124	2	M	71800
## 125	2	M	30300
## 127	2	M	91500
## 129	2	M	165050
## 134	3	M	55001
## 137	3	M	85050
## 138	4	M	26300
## 139	3	M	66000
## 142	3	M	30000
## 143	1	M	62000
## 144	0	M	76000
## 146	3	M	45000
## 149	1	M	29000
## 150	2	M	35600
## 151	2	M	17000
## 154	3	M	28000
## 156	2	M	385000
## 158	2	M	45800
## 159	3	M	32000
## 166	2	M	24000
## 169	2	M	11200
## 170	4	M	259300
## 175	1	M	100000
## 180	2	M	34000
## 183	4	M	117200
## 185	1	M	33700
## 189	2	M	36000
## 190	4	M	37000
## 191	3	M	100000
## 193	4	M	165100
## 194	3	M	9000
## 197	2	M	57000

```
## 201      2   M  60000
## 205      2   M 104000
## 206      2   M  35400
## 213      2   M  68000
## 215      2   M 224000
## 222      1   M  28500
## 228      2   M  40000
## 229      2   M  76000
## 232      1   M   9100
## 235      2   M 200000
```

```
# sorting data using base R
data[order(data$state.of.res), ]
```

##	state.of.res	ID.Customer	marital.stat	Home.Status
## 71	Alabama	467335	Never Married	Rented
## 45	Arkansas	253015	Married Homeowner with mortgage/loan	
## 9	California	26355	Never Married Homeowner with mortgage/loan	
## 23	California	90863	Married Homeowner with mortgage/loan	
## 29	California	146457	Never Married	Rented
## 40	California	199788	Never Married Homeowner free and clear	
## 144	California	878882	Married Homeowner with mortgage/loan	
## 166	California	999444	Married	Rented
## 190	California	1159665	Married Homeowner with mortgage/loan	
## 193	California	1169067	Married Homeowner with mortgage/loan	
## 137	Colorado	841342	Married Homeowner with mortgage/loan	
## 158	Colorado	973386	Married Homeowner with mortgage/loan	
## 215	Colorado	1274592	Widowed Homeowner free and clear	
## 229	Colorado	1390506	Married Homeowner with mortgage/loan	
## 156	Connecticut	948494	Married Homeowner with mortgage/loan	
## 28	Florida	111870	Married Homeowner with mortgage/loan	
## 154	Florida	934426	Married Homeowner with mortgage/loan	
## 99	Georgia	592496	Divorced/Separated	Rented
## 138	Illinois	847699	Never Married Homeowner with mortgage/loan	
## 120	Indiana	723040	Married Homeowner free and clear	
## 151	Indiana	926808	Married	Rented
## 213	Indiana	1267710	Divorced/Separated Homeowner with mortgage/loan	
## 17	Iowa	69062	Married Homeowner free and clear	
## 159	Iowa	979736	Married Homeowner with mortgage/loan	
## 114	Kansas	685624	Married Homeowner with mortgage/loan	
## 205	Kentucky	1239496	Married Homeowner with mortgage/loan	
## 118	Louisiana	712409	Married Homeowner with mortgage/loan	
## 189	Maine	1150024	Married	Rented
## 201	Maine	1213106	Married Homeowner free and clear	
## 55	Maryland	332292	Never Married Homeowner with mortgage/loan	
## 134	Massachusetts	832435	Married Homeowner free and clear	
## 169	Massachusetts	1029778	Married Homeowner with mortgage/loan	
## 191	Massachusetts	1159904	Married Homeowner with mortgage/loan	
## 228	Massachusetts	1386114	Married	Rented
## 10	Michigan	36825	Married	Rented
## 11	Michigan	37224	Married Homeowner with mortgage/loan	
## 20	Michigan	79069	Married	Rented
## 194	Minnesota	1171408	Married Homeowner with mortgage/loan	
## 122	Mississippi	728498	Married Homeowner with mortgage/loan	

## 125	Mississippi	789913	Married	Rented
## 180	Mississippi	1090019	Married	Rented
## 235	Mississippi	1402550	Married Homeowner with mortgage/loan	
## 19	Missouri	77312	Married Homeowner free and clear	
## 86	Missouri	532940	Married Homeowner with mortgage/loan	
## 90	Missouri	551584	Married Homeowner free and clear	
## 38	Nevada	181754	Married	Rented
## 127	New Hampshire	809267	Married Homeowner with mortgage/loan	
## 142	New Hampshire	868481	Married Homeowner with mortgage/loan	
## 27	New Jersey	106726	Married	Rented
## 103	New Jersey	606307	Married Homeowner with mortgage/loan	
## 129	New Jersey	820384	Married	Rented
## 146	New Jersey	898396	Married Homeowner free and clear	
## 197	New Jersey	1181596	Married Homeowner with mortgage/loan	
## 232	New Jersey	1393413	Never Married Occupied with no rent	
## 2	New York	5641	Never Married Occupied with no rent	
## 51	New York	298205	Married Homeowner with mortgage/loan	
## 80	New York	506042	Divorced/Separated Homeowner with mortgage/loan	
## 139	New York	860763	Married Homeowner with mortgage/loan	
## 143	New York	869997	Never Married Homeowner with mortgage/loan	
## 63	North Carolina	403690	Divorced/Separated Homeowner with mortgage/loan	
## 183	North Carolina	1111699	Never Married	Rented
## 175	North Dakota	1052064	Never Married	Rented
## 35	Ohio	167498	Married Homeowner with mortgage/loan	
## 68	Ohio	445985	Married Homeowner with mortgage/loan	
## 85	Ohio	520030	Never Married Homeowner with mortgage/loan	
## 149	Ohio	913398	Married Homeowner with mortgage/loan	
## 170	Ohio	1031473	Widowed Homeowner with mortgage/loan	
## 24	Pennsylvania	96964	Married Homeowner with mortgage/loan	
## 101	Pennsylvania	604839	Never Married	Rented
## 109	Pennsylvania	646808	Married	Rented
## 124	Pennsylvania	761380	Married	Rented
## 150	Pennsylvania	925421	Married Homeowner with mortgage/loan	
## 206	Pennsylvania	1241975	Married Homeowner with mortgage/loan	
## 66	South Carolina	423279	Never Married	Rented
## 108	South Carolina	635574	Never Married	Rented
## 119	Tennessee	716518	Married Homeowner with mortgage/loan	
## 8	Texas	22295	Married Homeowner free and clear	
## 56	Texas	335080	Married	Rented
## 62	Texas	395888	Married	Rented
## 105	Utah	612775	Married Homeowner with mortgage/loan	
## 222	Virginia	1335632	Divorced/Separated Homeowner with mortgage/loan	
## 185	Wyoming	1117486	Married Homeowner free and clear	
##	num.vehicles	sex	income	
## 71	1	M	42600	
## 45	3	M	30000	
## 9	1	M	80000	
## 23	3	M	285020	
## 29	2	M	49000	
## 40	2	M	43500	
## 144	0	M	76000	
## 166	2	M	24000	
## 190	4	M	37000	
## 193	4	M	165100	

## 137	3	M	85050
## 158	2	M	45800
## 215	2	M	224000
## 229	2	M	76000
## 156	2	M	385000
## 28	1	M	26000
## 154	3	M	28000
## 99	1	M	10700
## 138	4	M	26300
## 120	2	M	120190
## 151	2	M	17000
## 213	2	M	68000
## 17	4	M	120300
## 159	3	M	32000
## 114	2	M	16000
## 205	2	M	104000
## 118	4	M	35000
## 189	2	M	36000
## 201	2	M	60000
## 55	3	M	61000
## 134	3	M	55001
## 169	2	M	11200
## 191	3	M	100000
## 228	2	M	40000
## 10	2	M	17500
## 11	2	M	25800
## 20	1	M	30000
## 194	3	M	9000
## 122	1	M	120000
## 125	2	M	30300
## 180	2	M	34000
## 235	2	M	200000
## 19	2	M	37200
## 86	2	M	62000
## 90	1	M	20000
## 38	4	M	34200
## 127	2	M	91500
## 142	3	M	30000
## 27	1	M	39000
## 103	2	M	120000
## 129	2	M	165050
## 146	3	M	45000
## 197	2	M	57000
## 232	1	M	9100
## 2	0	M	20000
## 51	2	M	110450
## 80	1	M	130100
## 139	3	M	66000
## 143	1	M	62000
## 63	2	M	34020
## 183	4	M	117200
## 175	1	M	100000
## 35	1	M	45000
## 68	1	M	43000

```
## 85          1  M  49000
## 149         1  M  29000
## 170         4  M 259300
## 24          2  M 266200
## 101         2  M 150000
## 109         0  M  36000
## 124         2  M  71800
## 150         2  M  35600
## 206         2  M  35400
## 66          3  M  24000
## 108         2  M  70000
## 119         3  M  35050
## 8           3  M  14400
## 56          2  M  10000
## 62          1  M  10800
## 105         2  M 150000
## 222         1  M  28500
## 185         1  M  33700
```

```
# sorting data using dplyr package
library(dplyr)
```

```
##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##   filter, lag

## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union
```

```
data %>% arrange(state.of.res)
```

##	state.of.res	ID.Customer	marital.stat	Home.Status
## 1	Alabama	467335	Never Married	Rented
## 2	Arkansas	253015	Married Homeowner with mortgage/loan	
## 3	California	26355	Never Married Homeowner with mortgage/loan	
## 4	California	90863	Married Homeowner with mortgage/loan	
## 5	California	146457	Never Married	Rented
## 6	California	199788	Never Married Homeowner free and clear	
## 7	California	878882	Married Homeowner with mortgage/loan	
## 8	California	999444	Married	Rented
## 9	California	1159665	Married Homeowner with mortgage/loan	
## 10	California	1169067	Married Homeowner with mortgage/loan	
## 11	Colorado	841342	Married Homeowner with mortgage/loan	
## 12	Colorado	973386	Married Homeowner with mortgage/loan	
## 13	Colorado	1274592	Widowed Homeowner free and clear	
## 14	Colorado	1390506	Married Homeowner with mortgage/loan	
## 15	Connecticut	948494	Married Homeowner with mortgage/loan	
## 16	Florida	111870	Married Homeowner with mortgage/loan	

## 17	Florida	934426	Married	Homeowner with mortgage/loan
## 18	Georgia	592496	Divorced/Separated	Rented
## 19	Illinois	847699	Never Married	Homeowner with mortgage/loan
## 20	Indiana	723040	Married	Homeowner free and clear
## 21	Indiana	926808	Married	Rented
## 22	Indiana	1267710	Divorced/Separated	Homeowner with mortgage/loan
## 23	Iowa	69062	Married	Homeowner free and clear
## 24	Iowa	979736	Married	Homeowner with mortgage/loan
## 25	Kansas	685624	Married	Homeowner with mortgage/loan
## 26	Kentucky	1239496	Married	Homeowner with mortgage/loan
## 27	Louisiana	712409	Married	Homeowner with mortgage/loan
## 28	Maine	1150024	Married	Rented
## 29	Maine	1213106	Married	Homeowner free and clear
## 30	Maryland	332292	Never Married	Homeowner with mortgage/loan
## 31	Massachusetts	832435	Married	Homeowner free and clear
## 32	Massachusetts	1029778	Married	Homeowner with mortgage/loan
## 33	Massachusetts	1159904	Married	Homeowner with mortgage/loan
## 34	Massachusetts	1386114	Married	Rented
## 35	Michigan	36825	Married	Rented
## 36	Michigan	37224	Married	Homeowner with mortgage/loan
## 37	Michigan	79069	Married	Rented
## 38	Minnesota	1171408	Married	Homeowner with mortgage/loan
## 39	Mississippi	728498	Married	Homeowner with mortgage/loan
## 40	Mississippi	789913	Married	Rented
## 41	Mississippi	1090019	Married	Rented
## 42	Mississippi	1402550	Married	Homeowner with mortgage/loan
## 43	Missouri	77312	Married	Homeowner free and clear
## 44	Missouri	532940	Married	Homeowner with mortgage/loan
## 45	Missouri	551584	Married	Homeowner free and clear
## 46	Nevada	181754	Married	Rented
## 47	New Hampshire	809267	Married	Homeowner with mortgage/loan
## 48	New Hampshire	868481	Married	Homeowner with mortgage/loan
## 49	New Jersey	106726	Married	Rented
## 50	New Jersey	606307	Married	Homeowner with mortgage/loan
## 51	New Jersey	820384	Married	Rented
## 52	New Jersey	898396	Married	Homeowner free and clear
## 53	New Jersey	1181596	Married	Homeowner with mortgage/loan
## 54	New Jersey	1393413	Never Married	Occupied with no rent
## 55	New York	5641	Never Married	Occupied with no rent
## 56	New York	298205	Married	Homeowner with mortgage/loan
## 57	New York	506042	Divorced/Separated	Homeowner with mortgage/loan
## 58	New York	860763	Married	Homeowner with mortgage/loan
## 59	New York	869997	Never Married	Homeowner with mortgage/loan
## 60	North Carolina	403690	Divorced/Separated	Homeowner with mortgage/loan
## 61	North Carolina	1111699	Never Married	Rented
## 62	North Dakota	1052064	Never Married	Rented
## 63	Ohio	167498	Married	Homeowner with mortgage/loan
## 64	Ohio	445985	Married	Homeowner with mortgage/loan
## 65	Ohio	520030	Never Married	Homeowner with mortgage/loan
## 66	Ohio	913398	Married	Homeowner with mortgage/loan
## 67	Ohio	1031473	Widowed	Homeowner with mortgage/loan
## 68	Pennsylvania	96964	Married	Homeowner with mortgage/loan
## 69	Pennsylvania	604839	Never Married	Rented
## 70	Pennsylvania	646808	Married	Rented

## 71	Pennsylvania	761380		Married	Rented
## 72	Pennsylvania	925421		Married Homeowner with mortgage/loan	
## 73	Pennsylvania	1241975		Married Homeowner with mortgage/loan	
## 74	South Carolina	423279	Never	Married	Rented
## 75	South Carolina	635574	Never	Married	Rented
## 76	Tennessee	716518		Married Homeowner with mortgage/loan	
## 77	Texas	22295		Married Homeowner free and clear	
## 78	Texas	335080		Married	Rented
## 79	Texas	395888		Married	Rented
## 80	Utah	612775		Married Homeowner with mortgage/loan	
## 81	Virginia	1335632	Divorced/Separated	Homeowner with mortgage/loan	
## 82	Wyoming	1117486		Married Homeowner free and clear	
##	num.vehicles	sex	income		
## 1		1 M	42600		
## 2		3 M	30000		
## 3		1 M	80000		
## 4		3 M	285020		
## 5		2 M	49000		
## 6		2 M	43500		
## 7		0 M	76000		
## 8		2 M	24000		
## 9		4 M	37000		
## 10		4 M	165100		
## 11		3 M	85050		
## 12		2 M	45800		
## 13		2 M	224000		
## 14		2 M	76000		
## 15		2 M	385000		
## 16		1 M	26000		
## 17		3 M	28000		
## 18		1 M	10700		
## 19		4 M	26300		
## 20		2 M	120190		
## 21		2 M	17000		
## 22		2 M	68000		
## 23		4 M	120300		
## 24		3 M	32000		
## 25		2 M	16000		
## 26		2 M	104000		
## 27		4 M	35000		
## 28		2 M	36000		
## 29		2 M	60000		
## 30		3 M	61000		
## 31		3 M	55001		
## 32		2 M	11200		
## 33		3 M	100000		
## 34		2 M	40000		
## 35		2 M	17500		
## 36		2 M	25800		
## 37		1 M	30000		
## 38		3 M	9000		
## 39		1 M	120000		
## 40		2 M	30300		
## 41		2 M	34000		

```

## 42      2  M 200000
## 43      2  M  37200
## 44      2  M  62000
## 45      1  M  20000
## 46      4  M  34200
## 47      2  M  91500
## 48      3  M  30000
## 49      1  M  39000
## 50      2  M 120000
## 51      2  M 165050
## 52      3  M  45000
## 53      2  M  57000
## 54      1  M   9100
## 55      0  M  20000
## 56      2  M 110450
## 57      1  M 130100
## 58      3  M  66000
## 59      1  M  62000
## 60      2  M  34020
## 61      4  M 117200
## 62      1  M 100000
## 63      1  M  45000
## 64      1  M  43000
## 65      1  M  49000
## 66      1  M  29000
## 67      4  M 259300
## 68      2  M 266200
## 69      2  M 150000
## 70      0  M  36000
## 71      2  M  71800
## 72      2  M  35600
## 73      2  M  35400
## 74      3  M  24000
## 75      2  M  70000
## 76      3  M  35050
## 77      3  M  14400
## 78      2  M  10000
## 79      1  M  10800
## 80      2  M 150000
## 81      1  M  28500
## 82      1  M  33700

```

```

state.of.res = c('Alabama', 'Louisiana', 'New York')
ID.Customer = c(567891, 33421, 21134)
marital.stat = c('Married', 'Never Married', 'Divorced/Separated')
ins.health = c(TRUE, FALSE, TRUE)
Home.Status = c('Rented', NA, 'Homeowner with mortgage/loan')
num.vehicles = c(2,1,2)
sex = c('M', 'M', 'M')
is.employed = c(TRUE, FALSE, TRUE)
income = c(99200, NA, 150341)

```