

R Notebook

First Level

Second Level

Third Level

This is italics test **This is Bold test**

- Bulleted list item 1
- Item 2
 - Item 2a
 - Item 2b

1. Numbered list item 1

2. Item 2. The numbers are incremented automatically in the output. Tables

First Header	Second Header
Content Cell	Content Cell
Content Cell	Content Cell

`'r d<-5`

```
library(tidyverse)
```

```
## Warning: package 'tidyverse' was built under R version 4.4.3
```

```
## Warning: package 'ggplot2' was built under R version 4.4.3
```

```
## Warning: package 'tibble' was built under R version 4.4.3
```

```
## Warning: package 'tidyr' was built under R version 4.4.3
```

```
## Warning: package 'readr' was built under R version 4.4.3
```

```
## Warning: package 'purrr' was built under R version 4.4.3
```

```
## Warning: package 'dplyr' was built under R version 4.4.3
```

```
## Warning: package 'stringr' was built under R version 4.4.3

## Warning: package 'forcats' was built under R version 4.4.3

## Warning: package 'lubridate' was built under R version 4.4.3

## -- Attaching core tidyverse packages ----- tidyverse 2.0.0 --
## v dplyr      1.1.4      v readr      2.1.5
## v forcats    1.0.0      v stringr   1.5.1
## v ggplot2    3.5.1      v tibble    3.2.1
## v lubridate  1.9.4      v tidyr     1.3.1
## v purrr      1.0.4
## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
data_credit<-read.csv("credit.csv",row.names = NULL,stringsAsFactors = FALSE)
View(data_credit)
duplicate_indicator=duplicated(data_credit$ID)
duplicate_indicator
```

```
##      [1] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##     [13] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##     [25] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##     [37] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##     [49] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##     [61] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##     [73] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##     [85] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##     [97] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##    [109] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##    [121] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##    [133] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##    [145] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##    [157] FALSE FALSE FALSE FALSE FALSE FALSE FALSE  TRUE FALSE FALSE FALSE  TRUE FALSE
##    [169] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE  TRUE FALSE FALSE FALSE
##    [181] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE  TRUE
##    [193] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##    [205] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##    [217] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##    [229] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##    [241] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE  TRUE FALSE FALSE
##    [253] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##    [265] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE  TRUE FALSE FALSE FALSE
##    [277] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##    [289] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##    [301] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##    [313] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE  TRUE FALSE FALSE FALSE
##    [325] FALSE FALSE FALSE FALSE  TRUE FALSE FALSE FALSE FALSE FALSE  TRUE FALSE
##    [337] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE  TRUE FALSE FALSE FALSE
##    [349] FALSE FALSE FALSE  TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
##    [361] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE  TRUE FALSE FALSE
```

```

## [373] FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE
## [385] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [397] FALSE FALSE FALSE FALSE TRUE TRUE FALSE FALSE FALSE FALSE FALSE FALSE TRUE
## [409] TRUE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE FALSE FALSE FALSE
## [421] FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [433] TRUE FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE
## [445] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
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## [469] FALSE FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
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## [493] FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE
## [505] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE
## [517] FALSE FALSE FALSE FALSE FALSE TRUE FALSE FALSE FALSE TRUE FALSE FALSE
## [529] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE FALSE FALSE FALSE
## [541] FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE
## [553] TRUE FALSE FALSE FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE
## [565] FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [577] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE FALSE
## [589] FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE
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## [613] FALSE FALSE FALSE FALSE TRUE FALSE TRUE TRUE FALSE FALSE FALSE TRUE
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## [637] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
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## [673] TRUE FALSE FALSE FALSE FALSE FALSE FALSE TRUE TRUE FALSE FALSE FALSE
## [685] FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE TRUE TRUE FALSE
## [697] FALSE FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [709] FALSE FALSE FALSE TRUE FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE
## [721] FALSE FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE TRUE FALSE
## [733] TRUE FALSE TRUE TRUE FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE
## [745] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [757] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE FALSE FALSE FALSE
## [769] FALSE FALSE FALSE TRUE TRUE FALSE TRUE FALSE FALSE FALSE FALSE FALSE
## [781] TRUE FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [793] FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [805] FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [817] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE FALSE TRUE
## [829] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE FALSE FALSE FALSE
## [841] FALSE FALSE TRUE FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [853] FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [865] FALSE FALSE TRUE FALSE TRUE FALSE TRUE FALSE FALSE FALSE FALSE FALSE
## [877] FALSE FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE TRUE TRUE
## [889] FALSE TRUE FALSE TRUE FALSE FALSE TRUE TRUE TRUE FALSE FALSE FALSE
## [901] TRUE FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [913] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE
## [925] FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE
## [937] FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE TRUE FALSE TRUE
## [949] FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE FALSE FALSE FALSE TRUE
## [961] FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [973] FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE TRUE FALSE FALSE FALSE
## [985] TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [997] TRUE TRUE FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE TRUE FALSE
## [1009] FALSE FALSE TRUE TRUE TRUE FALSE FALSE FALSE FALSE TRUE FALSE FALSE

```

```
## [1021] FALSE FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [1033] TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [1045] TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [1057] FALSE TRUE FALSE FALSE FALSE FALSE FALSE TRUE FALSE FALSE TRUE FALSE
## [1069] FALSE FALSE TRUE FALSE FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE
## [1081] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [1093] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [1105] FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [1117] FALSE FALSE FALSE FALSE FALSE FALSE FALSE
```

```
count<-sum(duplicate_indicator)
duplicated_data<-data_credit$ID[duplicated(data_credit$ID)]
duplicated_data
```

```
## [1] "&00000088" "&00000137" "&00000158" "&00000173" "&00000073" "&00000043"
## [7] "&00000146" "&00000211" "&00000298" "&00000180" "&00000230" "&00000630"
## [13] "&00000265" "&00000109" "&00000354" "&00000355" "&00000783" "&00000361"
## [19] "&00000362" "&00000592" "&00000266" "&00000248" "&00000384" "&00000141"
## [25] "&00000361" "&00000408" "&00000205" "&00000415" "&00000429" "&00000234"
## [31] "&00000486" "&00000455" "&00000214" "&00000328" "&00000472" "&00000054"
## [37] "&00000486" "&00000491" "&00000500" "&00000519" "&00000523" "&00000204"
## [43] "&00000441" "&00000465" "&00000202" "&00000455" "&00000248" "&00000383"
## [49] "&00000557" "&00000317" "&00000171" "&00000584" "&00000587" "&00000592"
## [55] "&00000347" "&00000599" "&00000606" "&00000305" "&00000566" "&00000617"
## [61] "&00000627" "&00000630" "&00000638" "&00000644" "&00000093" "&00000247"
## [67] "&00000647" "&00000612" "&00000569" "&00000783" "&00000208" "&00000136"
## [73] "&00000001" "&00000687" "&00000699" "&00000711" "&00000609" "&00000731"
## [79] "&00000739" "&00000215" "&00000092" "&00000756" "&00000733" "&00000292"
## [85] "&00000424" "&00000119" "&00000219" "&00000783" "&00000461" "&00000785"
## [91] "&00000433" "&00000681" "&00000788" "&00000792" "&00000533" "&00000814"
## [97] "&00000822" "&00000817" "&00000835" "&00000837" "&00000845" "&00000168"
## [103] "&00000425" "&00000861" "&00000576" "&00000362" "&00000685" "&00000882"
## [109] "&00000288" "&00000890" "&00000894" "&00000564" "&00000895" "&00000900"
## [115] "&00000907" "&00000409" "&00000926" "&00000046" "&00000855" "&00000946"
## [121] "&00000889" "&00000451" "&00000983"
```

```
duplicate_output<-data_credit[which(data_credit$ID %in% duplicated_data),]
duplicate_output
```

##	Data_Time	ID	chk_acct	duration
## 1	1/22/18 12:00 AM	&00000001	< 0 DM	6
## 12	11/15/17 12:00 AM	&00000173	0 - 200 DM	24
## 27	4/4/18 12:00 AM	&00000472	< 0 DM	6
## 45	3/14/18 12:00 AM	&00000043	0 - 200 DM	18
## 48	3/5/18 12:00 AM	&00000429	no checking account	9
## 49	7/21/16 12:00 AM	&00000630	no checking account	9
## 50	9/3/17 12:00 AM	&00000046	no checking account	11
## 54	10/23/17 12:00 AM	&00000354	< 0 DM	12
## 59	11/13/18 12:00 AM	&00000054	no checking account	18
## 65	1/31/18 12:00 AM	&00000895	no checking account	18
## 79	9/22/18 12:00 AM	&00000073	< 0 DM	8
## 94	7/11/18 12:00 AM	&00000088	0 - 200 DM	36
## 98	4/4/17 12:00 AM	&00000092	< 0 DM	12

## 99	11/13/17	12:00 AM	&00000093	no checking account	12
## 108	10/22/17	12:00 AM	&00000415	< 0 DM	<NA>
## 111	7/5/18	12:00 AM	&00000894	0 - 200 DM	36
## 114	1/6/18	12:00 AM	&00000361	0 - 200 DM	18
## 118	8/26/17	12:00 AM	&00000109	< 0 DM	24
## 128	7/24/16	12:00 AM	&00000119	< 0 DM	33
## 135	3/18/18	12:00 AM	&00000731	0 - 200 DM	24
## 137	11/9/18	12:00 AM	&00000627	> 200 DM	6
## 147	5/10/17	12:00 AM	&00000647	< 0 DM	30
## 148	7/10/17	12:00 AM	&00000136	no checking account	12
## 149	9/30/16	12:00 AM	&00000137	no checking account	27
## 153	4/19/18	12:00 AM	&00000141	> 200 DM	6
## 154	5/25/18	12:00 AM	&00000711	no checking account	18
## 155	12/30/16	12:00 AM	&00000408	< 0 DM	15
## 157	3/21/19	12:00 AM	&00000523	< 0 DM	48
## 161	9/2/16	12:00 AM	&00000146	0 - 200 DM	48
## 163	4/24/18	12:00 AM	&00000088	0 - 200 DM	36
## 167	11/3/17	12:00 AM	&00000137	no checking account	27
## 173	8/18/18	12:00 AM	&00000557	0 - 200 DM	18
## 176	12/13/18	12:00 AM	&00000158	< 0 DM	12
## 177	8/28/18	12:00 AM	&00000158	< 0 DM	12
## 187	3/14/19	12:00 AM	&00000168	0 - 200 DM	11
## 190	12/27/18	12:00 AM	&00000171	< 0 DM	15
## 192	3/1/17	12:00 AM	&00000173	0 - 200 DM	24
## 199	3/10/18	12:00 AM	&00000180	<NA>	21
## 201	1/21/17	12:00 AM	&00000739	no checking account	6
## 222	3/28/19	12:00 AM	&00000202	< 0 DM	12
## 223	8/10/17	12:00 AM	&00000606	< 0 DM	24
## 225	10/29/16	12:00 AM	&00000204	< 0 DM	12
## 226	1/9/17	12:00 AM	&00000205	no checking account	12
## 229	4/17/16	12:00 AM	&00000208	0 - 200 DM	12
## 232	12/5/18	12:00 AM	&00000211	no checking account	9
## 235	10/18/18	12:00 AM	&00000214	> 200 DM	30
## 236	8/12/17	12:00 AM	&00000215	no checking account	36
## 240	8/4/18	12:00 AM	&00000219	< 0 DM	24
## 247	11/25/17	12:00 AM	&00000362	> 200 DM	12
## 250	5/30/18	12:00 AM	&00000073	< 0 DM	8
## 253	5/28/17	12:00 AM	&00000455	< 0 DM	24
## 254	12/8/16	12:00 AM	&00000230	< 0 DM	24
## 257	12/6/16	12:00 AM	&00000783	0 - 200 DM	12
## 259	3/9/19	12:00 AM	&00000234	<NA>	18
## 263	6/14/17	12:00 AM	&00000644	no checking account	24
## 265	6/5/17	12:00 AM	&00000355	no checking account	10
## 273	2/5/17	12:00 AM	&00000043	0 - 200 DM	18
## 275	4/1/19	12:00 AM	&00000247	no checking account	12
## 276	8/30/16	12:00 AM	&00000519	<NA>	6
## 277	8/16/16	12:00 AM	&00000248	no checking account	6
## 285	8/26/17	12:00 AM	&00000298	no checking account	10
## 289	2/12/19	12:00 AM	&00000861	no checking account	24
## 292	2/15/19	12:00 AM	&00000837	no checking account	12
## 297	6/13/17	12:00 AM	&00000265	no checking account	10
## 298	12/5/18	12:00 AM	&00000266	0 - 200 DM	15
## 313	5/2/16	12:00 AM	&00000638	no checking account	60
## 321	2/23/17	12:00 AM	&00000146	0 - 200 DM	48

## 322	4/20/16	12:00 AM	&00000288	0 - 200 DM	48
## 323	11/23/16	12:00 AM	&00000788	no checking account	48
## 327	8/26/18	12:00 AM	&00000292	0 - 200 DM	36
## 329	12/3/18	12:00 AM	&00000211	no checking account	9
## 331	6/17/16	12:00 AM	&00000384	> 200 DM	12
## 335	10/22/17	12:00 AM	&00000298	no checking account	10
## 342	2/28/19	12:00 AM	&00000305	no checking account	48
## 345	8/7/16	12:00 AM	&00000180	<NA>	21
## 352	10/24/18	12:00 AM	&00000230	< 0 DM	24
## 356	10/9/16	12:00 AM	&00000317	< 0 DM	12
## 360	4/8/19	12:00 AM	&00000592	0 - 200 DM	24
## 366	4/28/18	12:00 AM	&00000946	0 - 200 DM	48
## 369	10/19/16	12:00 AM	&00000328	no checking account	24
## 370	4/12/19	12:00 AM	&00000630	no checking account	9
## 372	12/26/17	12:00 AM	&00000491	no checking account	12
## 376	10/12/17	12:00 AM	&00000265	no checking account	10
## 384	5/18/16	12:00 AM	&00000109	< 0 DM	24
## 389	7/30/17	12:00 AM	&00000486	0 - 200 DM	6
## 393	6/20/17	12:00 AM	&00000347	0 - 200 DM	13
## 396	9/22/18	12:00 AM	&00000926	< 0 DM	12
## 401	1/4/19	12:00 AM	&00000354	< 0 DM	12
## 402	3/9/18	12:00 AM	&00000355	no checking account	10
## 408	5/5/16	12:00 AM	&00000783	0 - 200 DM	12
## 409	7/28/17	12:00 AM	&00000361	0 - 200 DM	18
## 410	7/8/18	12:00 AM	&00000362	> 200 DM	12
## 416	4/16/17	12:00 AM	&00000792	no checking account	24
## 417	11/26/18	12:00 AM	&00000592	0 - 200 DM	24
## 422	3/15/18	12:00 AM	&00000266	0 - 200 DM	15
## 423	12/7/18	12:00 AM	&00000599	no checking account	18
## 433	2/11/17	12:00 AM	&00000248	no checking account	6
## 436	8/27/18	12:00 AM	&00000383	no checking account	22
## 437	8/19/16	12:00 AM	&00000384	> 200 DM	12
## 444	7/14/18	12:00 AM	&00000141	> 200 DM	6
## 456	8/27/16	12:00 AM	&00000756	< 0 DM	24
## 462	3/4/19	12:00 AM	&00000361	0 - 200 DM	18
## 464	2/7/18	12:00 AM	&00000408	< 0 DM	15
## 465	2/6/17	12:00 AM	&00000882	no checking account	24
## 466	4/14/17	12:00 AM	&00000409	no checking account	24
## 467	4/20/17	12:00 AM	&00000205	no checking account	12
## 473	12/10/16	12:00 AM	&00000415	< 0 DM	<NA>
## 482	8/2/17	12:00 AM	&00000424	no checking account	21
## 483	12/14/18	12:00 AM	&00000425	0 - 200 DM	12
## 484	6/14/17	12:00 AM	&00000500	> 200 DM	6
## 488	10/18/18	12:00 AM	&00000429	no checking account	9
## 492	9/13/16	12:00 AM	&00000433	< 0 DM	6
## 494	5/11/18	12:00 AM	&00000234	<NA>	18
## 501	1/2/17	12:00 AM	&00000441	no checking account	12
## 504	3/15/17	12:00 AM	&00000486	0 - 200 DM	6
## 512	8/7/17	12:00 AM	&00000451	no checking account	36
## 516	5/26/18	12:00 AM	&00000455	< 0 DM	24
## 520	1/21/19	12:00 AM	&00000845	no checking account	18
## 522	7/2/17	12:00 AM	&00000214	> 200 DM	30
## 524	11/28/17	12:00 AM	&00000461	< 0 DM	36
## 526	2/21/19	12:00 AM	&00000328	no checking account	24

## 528	3/11/18	12:00 AM	&00000907	< 0 DM	21
## 530	1/21/17	12:00 AM	&00000465	no checking account	18
## 537	7/2/17	12:00 AM	&00000472	< 0 DM	6
## 548	11/11/17	12:00 AM	&00000054	no checking account	18
## 550	1/6/17	12:00 AM	&00000584	0 - 200 DM	36
## 553	2/9/17	12:00 AM	&00000486	0 - 200 DM	6
## 555	9/12/17	12:00 AM	&00000617	0 - 200 DM	60
## 559	1/8/18	12:00 AM	&00000491	no checking account	12
## 568	8/25/17	12:00 AM	&00000500	> 200 DM	6
## 587	9/15/18	12:00 AM	&00000519	<NA>	6
## 588	2/13/19	12:00 AM	&00000900	< 0 DM	18
## 592	1/30/19	12:00 AM	&00000523	< 0 DM	48
## 596	11/20/16	12:00 AM	&00000890	no checking account	28
## 600	2/28/17	12:00 AM	&00000204	< 0 DM	12
## 604	2/25/17	12:00 AM	&00000533	no checking account	12
## 610	2/15/17	12:00 AM	&00000587	< 0 DM	9
## 617	3/5/18	12:00 AM	&00000441	no checking account	12
## 619	5/1/16	12:00 AM	&00000465	no checking account	18
## 620	12/28/18	12:00 AM	&00000202	< 0 DM	12
## 624	3/28/19	12:00 AM	&00000455	< 0 DM	24
## 626	5/22/16	12:00 AM	&00000248	no checking account	6
## 628	5/31/18	12:00 AM	&00000383	no checking account	22
## 635	5/15/18	12:00 AM	&00000557	0 - 200 DM	18
## 642	3/3/18	12:00 AM	&00000564	0 - 200 DM	36
## 644	10/21/17	12:00 AM	&00000566	0 - 200 DM	<NA>
## 647	6/29/16	12:00 AM	&00000569	0 - 200 DM	48
## 649	4/15/17	12:00 AM	&00000317	< 0 DM	12
## 655	10/27/17	12:00 AM	&00000576	no checking account	15
## 657	10/6/17	12:00 AM	&00000171	< 0 DM	15
## 659	1/5/17	12:00 AM	&00000835	> 200 DM	15
## 665	1/14/19	12:00 AM	&00000584	0 - 200 DM	36
## 668	2/10/18	12:00 AM	&00000587	< 0 DM	9
## 673	1/14/18	12:00 AM	&00000592	0 - 200 DM	24
## 680	8/20/16	12:00 AM	&00000347	0 - 200 DM	13
## 681	8/15/18	12:00 AM	&00000599	no checking account	18
## 688	8/4/18	12:00 AM	&00000606	< 0 DM	24
## 691	7/20/16	12:00 AM	&00000609	no checking account	18
## 694	3/29/18	12:00 AM	&00000305	no checking account	48
## 695	7/20/16	12:00 AM	&00000566	0 - 200 DM	<NA>
## 696	9/18/17	12:00 AM	&00000612	> 200 DM	10
## 701	3/22/17	12:00 AM	&00000617	0 - 200 DM	60
## 707	11/29/16	12:00 AM	&00000814	< 0 DM	48
## 712	5/23/16	12:00 AM	&00000627	> 200 DM	6
## 715	1/11/17	12:00 AM	&00000630	no checking account	9
## 716	5/5/18	12:00 AM	&00000687	> 200 DM	10
## 720	2/24/19	12:00 AM	&00000983	> 200 DM	21
## 725	7/12/18	12:00 AM	&00000638	no checking account	60
## 731	3/27/19	12:00 AM	&00000644	no checking account	24
## 733	10/29/17	12:00 AM	&00000093	no checking account	12
## 735	4/21/16	12:00 AM	&00000247	no checking account	12
## 736	7/26/16	12:00 AM	&00000647	< 0 DM	30
## 738	2/1/19	12:00 AM	&00000699	no checking account	18
## 740	8/22/18	12:00 AM	&00000612	> 200 DM	10
## 765	2/28/19	12:00 AM	&00000569	0 - 200 DM	48

## 772	10/1/17	12:00 AM	&00000783	0 - 200 DM	12
## 773	3/21/17	12:00 AM	&00000208	0 - 200 DM	12
## 775	2/27/18	12:00 AM	&00000136	no checking account	12
## 776	11/14/18	12:00 AM	&00000681	no checking account	6
## 780	11/16/16	12:00 AM	&00000685	0 - 200 DM	36
## 781	5/3/16	12:00 AM	&00000001	< 0 DM	6
## 783	7/13/16	12:00 AM	&00000687	> 200 DM	10
## 795	1/4/17	12:00 AM	&00000699	no checking account	18
## 807	7/14/16	12:00 AM	&00000711	no checking account	18
## 826	1/19/19	12:00 AM	&00000609	no checking account	18
## 828	10/20/16	12:00 AM	&00000731	0 - 200 DM	24
## 830	2/2/19	12:00 AM	&00000733	0 - 200 DM	8
## 835	12/12/17	12:00 AM	&00000822	> 200 DM	12
## 837	3/25/17	12:00 AM	&00000739	no checking account	6
## 843	2/26/19	12:00 AM	&00000215	no checking account	36
## 845	3/23/18	12:00 AM	&00000092	< 0 DM	12
## 856	12/9/18	12:00 AM	&00000756	< 0 DM	24
## 867	1/12/18	12:00 AM	&00000733	0 - 200 DM	8
## 869	3/28/17	12:00 AM	&00000292	0 - 200 DM	36
## 871	11/24/17	12:00 AM	&00000424	no checking account	21
## 881	4/24/16	12:00 AM	&00000119	< 0 DM	33
## 887	2/23/17	12:00 AM	&00000219	< 0 DM	24
## 888	2/18/18	12:00 AM	&00000783	0 - 200 DM	12
## 889	2/19/19	12:00 AM	&00000785	0 - 200 DM	20
## 890	1/24/18	12:00 AM	&00000461	< 0 DM	36
## 892	9/24/17	12:00 AM	&00000785	0 - 200 DM	20
## 895	12/16/18	12:00 AM	&00000433	< 0 DM	6
## 896	10/12/17	12:00 AM	&00000681	no checking account	6
## 897	4/24/16	12:00 AM	&00000788	no checking account	48
## 901	11/3/17	12:00 AM	&00000792	no checking account	24
## 905	12/21/16	12:00 AM	&00000533	no checking account	12
## 924	1/12/19	12:00 AM	&00000814	< 0 DM	48
## 927	10/25/18	12:00 AM	&00000817	no checking account	6
## 932	11/5/17	12:00 AM	&00000822	> 200 DM	12
## 940	4/11/17	12:00 AM	&00000817	no checking account	6
## 946	3/18/18	12:00 AM	&00000835	> 200 DM	15
## 948	1/11/19	12:00 AM	&00000837	no checking account	12
## 956	10/23/18	12:00 AM	&00000845	no checking account	18
## 960	1/9/19	12:00 AM	&00000168	0 - 200 DM	11
## 963	2/13/18	12:00 AM	&00000425	0 - 200 DM	12
## 968	10/12/16	12:00 AM	&00000855	no checking account	36
## 974	1/8/18	12:00 AM	&00000861	no checking account	24
## 981	2/3/17	12:00 AM	&00000576	no checking account	15
## 985	7/17/17	12:00 AM	&00000362	> 200 DM	12
## 997	9/18/17	12:00 AM	&00000685	0 - 200 DM	36
## 998	2/8/17	12:00 AM	&00000882	no checking account	24
## 1001	7/29/17	12:00 AM	&00000288	0 - 200 DM	48
## 1006	5/9/16	12:00 AM	&00000889	no checking account	36
## 1007	1/14/18	12:00 AM	&00000890	no checking account	28
## 1011	8/29/17	12:00 AM	&00000894	0 - 200 DM	36
## 1012	11/4/18	12:00 AM	&00000564	0 - 200 DM	36
## 1013	10/16/17	12:00 AM	&00000895	no checking account	18
## 1018	5/2/17	12:00 AM	&00000900	< 0 DM	18
## 1025	3/22/19	12:00 AM	&00000907	< 0 DM	21

## 1033	2/21/19 12:00 AM	&00000409 no checking account	24
## 1045	3/26/17 12:00 AM	&00000926 < 0 DM	12
## 1058	8/10/17 12:00 AM	&00000046 no checking account	11
## 1064	9/19/18 12:00 AM	&00000855 no checking account	36
## 1067	9/11/18 12:00 AM	&00000946 0 - 200 DM	48
## 1071	2/16/19 12:00 AM	&00000889 no checking account	36
## 1074	11/21/16 12:00 AM	&00000451 no checking account	36
## 1106	2/11/19 12:00 AM	&00000983 > 200 DM	21
##		credit_his	
## 1	critical account / other credits existing (not at this bank)		
## 12	delay in paying off in the past		
## 27	existing credits paid back duly till now		
## 45	delay in paying off in the past		
## 48	existing credits paid back duly till now		
## 49	existing credits paid back duly till now		
## 50	critical account / other credits existing (not at this bank)		
## 54	no credits taken / all credits paid back duly		
## 59	existing credits paid back duly till now		
## 65	critical account / other credits existing (not at this bank)		
## 79	critical account / other credits existing (not at this bank)		
## 94	existing credits paid back duly till now		
## 98	critical account / other credits existing (not at this bank)		
## 99	critical account / other credits existing (not at this bank)		
## 108	existing credits paid back duly till now		
## 111	critical account / other credits existing (not at this bank)		
## 114	existing credits paid back duly till now		
## 118	existing credits paid back duly till now		
## 128	critical account / other credits existing (not at this bank)		
## 135	delay in paying off in the past		
## 137	existing credits paid back duly till now		
## 147	no credits taken / all credits paid back duly		
## 148	critical account / other credits existing (not at this bank)		
## 149	delay in paying off in the past		
## 153	existing credits paid back duly till now		
## 154	critical account / other credits existing (not at this bank)		
## 155	existing credits paid back duly till now		
## 157	no credits taken / all credits paid back duly		
## 161	all credits at this bank paid back duly		
## 163	existing credits paid back duly till now		
## 167	delay in paying off in the past		
## 173	no credits taken / all credits paid back duly		
## 176	all credits at this bank paid back duly		
## 177	all credits at this bank paid back duly		
## 187	existing credits paid back duly till now		
## 190	no credits taken / all credits paid back duly		
## 192	delay in paying off in the past		
## 199	critical account / other credits existing (not at this bank)		
## 201	critical account / other credits existing (not at this bank)		
## 222	existing credits paid back duly till now		
## 223	all credits at this bank paid back duly		
## 225	existing credits paid back duly till now		
## 226	critical account / other credits existing (not at this bank)		
## 229	critical account / other credits existing (not at this bank)		
## 232	critical account / other credits existing (not at this bank)		

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## 235                delay in paying off in the past
## 236 critical account / other credits existing (not at this bank)
## 240                existing credits paid back duly till now
## 247                existing credits paid back duly till now
## 250 critical account / other credits existing (not at this bank)
## 253                existing credits paid back duly till now
## 254                existing credits paid back duly till now
## 257                no credits taken / all credits paid back duly
## 259                existing credits paid back duly till now
## 263 critical account / other credits existing (not at this bank)
## 265                existing credits paid back duly till now
## 273                delay in paying off in the past
## 275 critical account / other credits existing (not at this bank)
## 276                existing credits paid back duly till now
## 277                no credits taken / all credits paid back duly
## 285                existing credits paid back duly till now
## 289 critical account / other credits existing (not at this bank)
## 292                existing credits paid back duly till now
## 297 critical account / other credits existing (not at this bank)
## 298                existing credits paid back duly till now
## 313                delay in paying off in the past
## 321                all credits at this bank paid back duly
## 322                delay in paying off in the past
## 323 critical account / other credits existing (not at this bank)
## 327                existing credits paid back duly till now
## 329 critical account / other credits existing (not at this bank)
## 331                existing credits paid back duly till now
## 335                existing credits paid back duly till now
## 342 critical account / other credits existing (not at this bank)
## 345 critical account / other credits existing (not at this bank)
## 352                existing credits paid back duly till now
## 356                existing credits paid back duly till now
## 360                delay in paying off in the past
## 366                no credits taken / all credits paid back duly
## 369                existing credits paid back duly till now
## 370                existing credits paid back duly till now
## 372 critical account / other credits existing (not at this bank)
## 376 critical account / other credits existing (not at this bank)
## 384                existing credits paid back duly till now
## 389                delay in paying off in the past
## 393 critical account / other credits existing (not at this bank)
## 396                all credits at this bank paid back duly
## 401                no credits taken / all credits paid back duly
## 402                existing credits paid back duly till now
## 408                no credits taken / all credits paid back duly
## 409                existing credits paid back duly till now
## 410                existing credits paid back duly till now
## 416                existing credits paid back duly till now
## 417                delay in paying off in the past
## 422                existing credits paid back duly till now
## 423 critical account / other credits existing (not at this bank)
## 433                no credits taken / all credits paid back duly
## 436                existing credits paid back duly till now
## 437                existing credits paid back duly till now

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## 444             existing credits paid back duly till now
## 456             existing credits paid back duly till now
## 462             existing credits paid back duly till now
## 464             existing credits paid back duly till now
## 465             existing credits paid back duly till now
## 466             existing credits paid back duly till now
## 467 critical account / other credits existing (not at this bank)
## 473             existing credits paid back duly till now
## 482             delay in paying off in the past
## 483             existing credits paid back duly till now
## 484             <NA>
## 488             existing credits paid back duly till now
## 492 critical account / other credits existing (not at this bank)
## 494             existing credits paid back duly till now
## 501             existing credits paid back duly till now
## 504             delay in paying off in the past
## 512 critical account / other credits existing (not at this bank)
## 516             existing credits paid back duly till now
## 520             existing credits paid back duly till now
## 522             delay in paying off in the past
## 524             existing credits paid back duly till now
## 526             existing credits paid back duly till now
## 528             existing credits paid back duly till now
## 530             existing credits paid back duly till now
## 537             existing credits paid back duly till now
## 548             existing credits paid back duly till now
## 550             <NA>
## 553             delay in paying off in the past
## 555             delay in paying off in the past
## 559 critical account / other credits existing (not at this bank)
## 568             <NA>
## 587             existing credits paid back duly till now
## 588             existing credits paid back duly till now
## 592             no credits taken / all credits paid back duly
## 596             all credits at this bank paid back duly
## 600             existing credits paid back duly till now
## 604             delay in paying off in the past
## 610 critical account / other credits existing (not at this bank)
## 617             existing credits paid back duly till now
## 619             existing credits paid back duly till now
## 620             existing credits paid back duly till now
## 624             existing credits paid back duly till now
## 626             no credits taken / all credits paid back duly
## 628             existing credits paid back duly till now
## 635             no credits taken / all credits paid back duly
## 642             existing credits paid back duly till now
## 644             delay in paying off in the past
## 647             existing credits paid back duly till now
## 649             existing credits paid back duly till now
## 655 critical account / other credits existing (not at this bank)
## 657             no credits taken / all credits paid back duly
## 659             existing credits paid back duly till now
## 665             <NA>
## 668 critical account / other credits existing (not at this bank)

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## 673                delay in paying off in the past
## 680 critical account / other credits existing (not at this bank)
## 681 critical account / other credits existing (not at this bank)
## 688                all credits at this bank paid back duly
## 691                existing credits paid back duly till now
## 694 critical account / other credits existing (not at this bank)
## 695                delay in paying off in the past
## 696                existing credits paid back duly till now
## 701                delay in paying off in the past
## 707                existing credits paid back duly till now
## 712                existing credits paid back duly till now
## 715                existing credits paid back duly till now
## 716 critical account / other credits existing (not at this bank)
## 720                existing credits paid back duly till now
## 725                delay in paying off in the past
## 731 critical account / other credits existing (not at this bank)
## 733 critical account / other credits existing (not at this bank)
## 735 critical account / other credits existing (not at this bank)
## 736                no credits taken / all credits paid back duly
## 738 critical account / other credits existing (not at this bank)
## 740                existing credits paid back duly till now
## 765                existing credits paid back duly till now
## 772                no credits taken / all credits paid back duly
## 773 critical account / other credits existing (not at this bank)
## 775 critical account / other credits existing (not at this bank)
## 776                existing credits paid back duly till now
## 780                delay in paying off in the past
## 781 critical account / other credits existing (not at this bank)
## 783 critical account / other credits existing (not at this bank)
## 795 critical account / other credits existing (not at this bank)
## 807 critical account / other credits existing (not at this bank)
## 826                existing credits paid back duly till now
## 828                delay in paying off in the past
## 830                existing credits paid back duly till now
## 835                existing credits paid back duly till now
## 837 critical account / other credits existing (not at this bank)
## 843 critical account / other credits existing (not at this bank)
## 845 critical account / other credits existing (not at this bank)
## 856                existing credits paid back duly till now
## 867                existing credits paid back duly till now
## 869                existing credits paid back duly till now
## 871                delay in paying off in the past
## 881 critical account / other credits existing (not at this bank)
## 887                existing credits paid back duly till now
## 888                no credits taken / all credits paid back duly
## 889                existing credits paid back duly till now
## 890                existing credits paid back duly till now
## 892                existing credits paid back duly till now
## 895 critical account / other credits existing (not at this bank)
## 896                existing credits paid back duly till now
## 897 critical account / other credits existing (not at this bank)
## 901                existing credits paid back duly till now
## 905                delay in paying off in the past
## 924                existing credits paid back duly till now

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## 927             existing credits paid back duly till now
## 932             existing credits paid back duly till now
## 940             existing credits paid back duly till now
## 946             existing credits paid back duly till now
## 948             existing credits paid back duly till now
## 956             existing credits paid back duly till now
## 960             existing credits paid back duly till now
## 963             existing credits paid back duly till now
## 968             delay in paying off in the past
## 974 critical account / other credits existing (not at this bank)
## 981 critical account / other credits existing (not at this bank)
## 985             existing credits paid back duly till now
## 997             delay in paying off in the past
## 998             existing credits paid back duly till now
## 1001            delay in paying off in the past
## 1006 critical account / other credits existing (not at this bank)
## 1007            all credits at this bank paid back duly
## 1011 critical account / other credits existing (not at this bank)
## 1012            existing credits paid back duly till now
## 1013 critical account / other credits existing (not at this bank)
## 1018            existing credits paid back duly till now
## 1025            existing credits paid back duly till now
## 1033            existing credits paid back duly till now
## 1045            all credits at this bank paid back duly
## 1058 critical account / other credits existing (not at this bank)
## 1064            delay in paying off in the past
## 1067            no credits taken / all credits paid back duly
## 1071 critical account / other credits existing (not at this bank)
## 1074 critical account / other credits existing (not at this bank)
## 1106            existing credits paid back duly till now
##           purpose amount             saving_acct present_emp
## 1      radio/television  1169 unknown / no savings account  > 7 years
## 12     furniture/equipment  2064             < 100 DM unemployed
## 27             education    448             < 100 DM  < 1 year
## 45             <NA>        6204             < 100 DM 1 - 4 years
## 48     furniture/equipment  1313             < 100 DM  > 7 years
## 49             education  3832 unknown / no savings account  > 7 years
## 50             car (new)   1393             < 100 DM  < 1 year
## 54      radio/television  6199             < 100 DM 1 - 4 years
## 59             car (used)  3378 unknown / no savings account 1 - 4 years
## 65      radio/television  1169 unknown / no savings account 1 - 4 years
## 79             others     1164             < 100 DM  > 7 years
## 94             education  12612            100 - 500 DM 1 - 4 years
## 98             car (used)  1409             < 100 DM  > 7 years
## 99      radio/television   797 unknown / no savings account  > 7 years
## 108            car (new)   1381 unknown / no savings account 1 - 4 years
## 111            car (used)  5800             < 100 DM 1 - 4 years
## 114            education  1239 unknown / no savings account 1 - 4 years
## 118     furniture/equipment  7721 unknown / no savings account  < 1 year
## 128     furniture/equipment  4281            501 - 1000 DM 1 - 4 years
## 135      radio/television  6403             < 100 DM      <NA>
## 137     furniture/equipment  2116             < 100 DM 1 - 4 years
## 147     furniture/equipment  4583             < 100 DM 1 - 4 years
## 148      radio/television  1240 unknown / no savings account  > 7 years

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## 149	car (used)	8613	> 1000 DM	1 - 4 years
## 153	car (new)	709	> 1000 DM	< 1 year
## 154	radio/television	629	501 - 1000 DM	> 7 years
## 155	radio/television	1053	< 100 DM	< 1 year
## 157	furniture/equipment	7119	< 100 DM	1 - 4 years
## 161	business	3566	100 - 500 DM	5 - 7 years
## 163	education	12612	100 - 500 DM	1 - 4 years
## 167	car (used)	8613	> 1000 DM	1 - 4 years
## 173	car (new)	2278	100 - 500 DM	< 1 year
## 176	retraining	339	< 100 DM	> 7 years
## 177	retraining	339	< 100 DM	> 7 years
## 187	furniture/equipment	1577	> 1000 DM	< 1 year
## 190	car (new)	950	< 100 DM	> 7 years
## 192	furniture/equipment	2064	< 100 DM	unemployed
## 199	car (new)	571	< 100 DM	> 7 years
## 201	car (new)	6761	< 100 DM	5 - 7 years
## 222	car (new)	NA	< 100 DM	1 - 4 years
## 223	furniture/equipment	2828	501 - 1000 DM	1 - 4 years
## 225	retraining	902	<NA>	5 - 7 years
## 226	car (new)	1495	< 100 DM	> 7 years
## 229	domestic appliances	1424	< 100 DM	5 - 7 years
## 232	radio/television	3074	unknown / no savings account	1 - 4 years
## 235	business	1908	< 100 DM	> 7 years
## 236	radio/television	3342	unknown / no savings account	<NA>
## 240	furniture/equipment	3021	< 100 DM	1 - 4 years
## 247	radio/television	3399	unknown / no savings account	> 7 years
## 250	others	1164	< 100 DM	> 7 years
## 253	car (new)	4817	< 100 DM	5 - 7 years
## 254	furniture/equipment	3149	< 100 DM	< 1 year
## 257	retraining	1410	< 100 DM	1 - 4 years
## 259	radio/television	866	< 100 DM	1 - 4 years
## 263	radio/television	1851	< 100 DM	5 - 7 years
## 265	education	727	501 - 1000 DM	> 7 years
## 273	<NA>	6204	< 100 DM	1 - 4 years
## 275	radio/television	717	< 100 DM	> 7 years
## 276	car (new)	1203	100 - 500 DM	> 7 years
## 277	car (new)	1204	100 - 500 DM	1 - 4 years
## 285	car (new)	1287	unknown / no savings account	> 7 years
## 289	car (used)	5804	> 1000 DM	1 - 4 years
## 292	radio/television	886	unknown / no savings account	1 - 4 years
## 297	car (new)	1231	< 100 DM	> 7 years
## 298	radio/television	802	< 100 DM	> 7 years
## 313	radio/television	15653	< 100 DM	5 - 7 years
## 321	business	3566	100 - 500 DM	5 - 7 years
## 322	others	7582	100 - 500 DM	unemployed
## 323	car (used)	2751	unknown / no savings account	> 7 years
## 327	car (used)	9398	< 100 DM	< 1 year
## 329	radio/television	3074	unknown / no savings account	1 - 4 years
## 331	car (new)	1330	< 100 DM	< 1 year
## 335	car (new)	1287	unknown / no savings account	> 7 years
## 342	car (new)	10127	501 - 1000 DM	1 - 4 years
## 345	car (new)	571	< 100 DM	> 7 years
## 352	furniture/equipment	3149	< 100 DM	< 1 year
## 356	furniture/equipment	708	< 100 DM	1 - 4 years

## 360	car (new)	1965	unknown / no savings account	1 - 4 years
## 366	car (new)	8358	501 - 1000 DM	< 1 year
## 369	car (new)	1525	> 1000 DM	5 - 7 years
## 370	education	3832	unknown / no savings account	> 7 years
## 372	radio/television	1934	< 100 DM	> 7 years
## 376	car (new)	1231	< 100 DM	> 7 years
## 384	furniture/equipment	7721	unknown / no savings account	< 1 year
## 389	car (new)	NA	< 100 DM	unemployed
## 393	radio/television	882	< 100 DM	< 1 year
## 396	car (new)	697	< 100 DM	< 1 year
## 401	radio/television	6199	< 100 DM	1 - 4 years
## 402	education	727	501 - 1000 DM	> 7 years
## 408	retraining	1410	< 100 DM	1 - 4 years
## 409	education	1239	unknown / no savings account	1 - 4 years
## 410	radio/television	3399	unknown / no savings account	> 7 years
## 416	car (used)	6313	unknown / no savings account	> 7 years
## 417	car (new)	1965	unknown / no savings account	1 - 4 years
## 422	radio/television	802	< 100 DM	> 7 years
## 423	car (new)	2775	< 100 DM	5 - 7 years
## 433	car (new)	1204	100 - 500 DM	1 - 4 years
## 436	car (new)	1283	unknown / no savings account	5 - 7 years
## 437	car (new)	1330	< 100 DM	< 1 year
## 444	car (new)	709	> 1000 DM	< 1 year
## 456	car (new)	1285	unknown / no savings account	5 - 7 years
## 462	education	1239	unknown / no savings account	1 - 4 years
## 464	radio/television	1053	< 100 DM	< 1 year
## 465	car (used)	9277	<NA>	1 - 4 years
## 466	radio/television	3235	501 - 1000 DM	> 7 years
## 467	car (new)	1495	< 100 DM	> 7 years
## 473	car (new)	1381	unknown / no savings account	1 - 4 years
## 482	furniture/equipment	1591	100 - 500 DM	5 - 7 years
## 483	furniture/equipment	2762	unknown / no savings account	> 7 years
## 484	car (new)	1323	100 - 500 DM	> 7 years
## 488	furniture/equipment	1313	< 100 DM	> 7 years
## 492	furniture/equipment	1872	< 100 DM	unemployed
## 494	radio/television	866	< 100 DM	1 - 4 years
## 501	car (new)	1884	< 100 DM	> 7 years
## 504	car (new)	NA	< 100 DM	unemployed
## 512	car (used)	11054	<NA>	1 - 4 years
## 516	car (new)	4817	< 100 DM	5 - 7 years
## 520	<NA>	3422	< 100 DM	> 7 years
## 522	business	1908	< 100 DM	> 7 years
## 524	furniture/equipment	3620	< 100 DM	1 - 4 years
## 526	car (new)	1525	> 1000 DM	5 - 7 years
## 528	car (new)	3763	unknown / no savings account	5 - 7 years
## 530	business	1950	< 100 DM	5 - 7 years
## 537	education	448	< 100 DM	< 1 year
## 548	car (used)	3378	unknown / no savings account	1 - 4 years
## 550	repairs	2384	< 100 DM	< 1 year
## 553	car (new)	NA	< 100 DM	unemployed
## 555	radio/television	9157	unknown / no savings account	1 - 4 years
## 559	radio/television	1934	< 100 DM	> 7 years
## 568	car (new)	1323	100 - 500 DM	> 7 years
## 587	car (new)	1203	100 - 500 DM	> 7 years

## 588	furniture/equipment	4153		< 100 DM	1 - 4 years
## 592	furniture/equipment	7119		< 100 DM	1 - 4 years
## 596	car (used)	7824	unknown / no savings account		< 1 year
## 600	retraining	902		<NA>	5 - 7 years
## 604	car (used)	NA		< 100 DM	1 - 4 years
## 610	car (new)	2799		< 100 DM	1 - 4 years
## 617	car (new)	1884		< 100 DM	> 7 years
## 619	business	1950		< 100 DM	5 - 7 years
## 620	car (new)	NA		< 100 DM	1 - 4 years
## 624	car (new)	4817		< 100 DM	5 - 7 years
## 626	car (new)	1204		100 - 500 DM	1 - 4 years
## 628	car (new)	1283	unknown / no savings account		5 - 7 years
## 635	car (new)	2278		100 - 500 DM	< 1 year
## 642	car (new)	12389	unknown / no savings account		1 - 4 years
## 644	radio/television	1553		100 - 500 DM	5 - 7 years
## 647	radio/television	3979	unknown / no savings account		5 - 7 years
## 649	furniture/equipment	708		< 100 DM	1 - 4 years
## 655	furniture/equipment	2788		< 100 DM	5 - 7 years
## 657	car (new)	950		< 100 DM	> 7 years
## 659	radio/television	2327		< 100 DM	< 1 year
## 665	repairs	2384		< 100 DM	< 1 year
## 668	car (new)	2799		< 100 DM	1 - 4 years
## 673	car (new)	1965	unknown / no savings account		1 - 4 years
## 680	radio/television	882		< 100 DM	< 1 year
## 681	car (new)	2775		< 100 DM	5 - 7 years
## 688	furniture/equipment	2828		501 - 1000 DM	1 - 4 years
## 691	radio/television	2051		< 100 DM	< 1 year
## 694	car (new)	10127		501 - 1000 DM	1 - 4 years
## 695	radio/television	1553		100 - 500 DM	5 - 7 years
## 696	car (new)	1240		100 - 500 DM	> 7 years
## 701	radio/television	9157	unknown / no savings account		1 - 4 years
## 707	domestic appliances	NA		< 100 DM	<NA>
## 712	furniture/equipment	2116		< 100 DM	1 - 4 years
## 715	education	3832	unknown / no savings account		> 7 years
## 716	radio/television	1347	unknown / no savings account		5 - 7 years
## 720	car (new)	2923		100 - 500 DM	1 - 4 years
## 725	radio/television	15653		< 100 DM	5 - 7 years
## 731	radio/television	1851		< 100 DM	5 - 7 years
## 733	radio/television	797	unknown / no savings account		> 7 years
## 735	radio/television	717		< 100 DM	> 7 years
## 736	furniture/equipment	4583		< 100 DM	1 - 4 years
## 738	<NA>	1800		< 100 DM	1 - 4 years
## 740	car (new)	1240		100 - 500 DM	> 7 years
## 765	radio/television	3979	unknown / no savings account		5 - 7 years
## 772	retraining	1410		< 100 DM	1 - 4 years
## 773	domestic appliances	1424		< 100 DM	5 - 7 years
## 775	radio/television	1240	unknown / no savings account		> 7 years
## 776	education	1538		< 100 DM	< 1 year
## 780	business	9857		100 - 500 DM	5 - 7 years
## 781	radio/television	1169	unknown / no savings account		> 7 years
## 783	radio/television	1347	unknown / no savings account		5 - 7 years
## 795	<NA>	1800		< 100 DM	1 - 4 years
## 807	radio/television	629		501 - 1000 DM	> 7 years
## 826	radio/television	2051		< 100 DM	< 1 year

## 828	radio/television	6403	< 100 DM	<NA>
## 830	radio/television	760	< 100 DM	5 - 7 years
## 835	radio/television	NA	< 100 DM	1 - 4 years
## 837	car (new)	6761	< 100 DM	5 - 7 years
## 843	radio/television	3342	unknown / no savings account	<NA>
## 845	car (used)	1409	< 100 DM	> 7 years
## 856	car (new)	1285	unknown / no savings account	5 - 7 years
## 867	radio/television	760	< 100 DM	5 - 7 years
## 869	car (used)	9398	< 100 DM	< 1 year
## 871	furniture/equipment	1591	100 - 500 DM	5 - 7 years
## 881	furniture/equipment	4281	501 - 1000 DM	1 - 4 years
## 887	furniture/equipment	3021	< 100 DM	1 - 4 years
## 888	retraining	1410	< 100 DM	1 - 4 years
## 889	car (used)	6468	unknown / no savings account	unemployed
## 890	furniture/equipment	3620	< 100 DM	1 - 4 years
## 892	car (used)	6468	unknown / no savings account	unemployed
## 895	furniture/equipment	1872	< 100 DM	unemployed
## 896	education	1538	< 100 DM	< 1 year
## 897	car (used)	2751	unknown / no savings account	> 7 years
## 901	car (used)	6313	unknown / no savings account	> 7 years
## 905	car (used)	NA	< 100 DM	1 - 4 years
## 924	domestic appliances	NA	< 100 DM	<NA>
## 927	<NA>	1338	501 - 1000 DM	1 - 4 years
## 932	radio/television	NA	< 100 DM	1 - 4 years
## 940	<NA>	1338	501 - 1000 DM	1 - 4 years
## 946	radio/television	2327	< 100 DM	< 1 year
## 948	radio/television	886	unknown / no savings account	1 - 4 years
## 956	<NA>	3422	< 100 DM	> 7 years
## 960	furniture/equipment	1577	> 1000 DM	< 1 year
## 963	furniture/equipment	2762	unknown / no savings account	> 7 years
## 968	car (new)	10875	< 100 DM	> 7 years
## 974	car (used)	5804	> 1000 DM	1 - 4 years
## 981	furniture/equipment	2788	< 100 DM	5 - 7 years
## 985	radio/television	3399	unknown / no savings account	> 7 years
## 997	business	9857	100 - 500 DM	5 - 7 years
## 998	car (used)	9277	<NA>	1 - 4 years
## 1001	others	7582	100 - 500 DM	unemployed
## 1006	car (new)	6614	< 100 DM	> 7 years
## 1007	car (used)	7824	unknown / no savings account	< 1 year
## 1011	car (used)	5800	< 100 DM	1 - 4 years
## 1012	car (new)	12389	unknown / no savings account	1 - 4 years
## 1013	radio/television	1169	unknown / no savings account	1 - 4 years
## 1018	furniture/equipment	4153	< 100 DM	1 - 4 years
## 1025	car (new)	3763	unknown / no savings account	5 - 7 years
## 1033	radio/television	3235	501 - 1000 DM	> 7 years
## 1045	car (new)	697	< 100 DM	< 1 year
## 1058	car (new)	1393	< 100 DM	< 1 year
## 1064	car (new)	10875	< 100 DM	> 7 years
## 1067	car (new)	8358	501 - 1000 DM	< 1 year
## 1071	car (new)	6614	< 100 DM	> 7 years
## 1074	car (used)	11054	<NA>	1 - 4 years
## 1106	car (new)	2923	100 - 500 DM	1 - 4 years
##	installment_rate		sex	other_debtor
## 1	4		male - single	none

## 12	3 female - divorced/separated/married	none
## 27	4 female - divorced/separated/married	none
## 45	2 male - single	none
## 48	1 male - single	none
## 49	1 male - single	none
## 50	4 female - divorced/separated/married	none
## 54	4 male - single	none
## 59	2 male - single	none
## 65	4 male - single	none
## 79	3 male - single	none
## 94	1 male - single	none
## 98	4 male - single	none
## 99	4 female - divorced/separated/married	none
## 108	4 female - divorced/separated/married	none
## 111	3 male - single	none
## 114	4 male - single	none
## 118	1 female - divorced/separated/married	none
## 128	1 female - divorced/separated/married	none
## 135	1 male - single	none
## 137	2 male - single	none
## 147	2 male - divorced/separated	guarantor
## 148	NA female - divorced/separated/married	none
## 149	2 male - single	none
## 153	2 male - married/widowed	none
## 154	4 male - single	none
## 155	4 male - married/widowed	none
## 157	3 male - single	none
## 161	4 male - single	none
## 163	1 male - single	none
## 167	2 male - single	none
## 173	3 female - divorced/separated/married	none
## 176	4 male - married/widowed	none
## 177	4 male - married/widowed	none
## 187	4 female - divorced/separated/married	none
## 190	4 male - single	none
## 192	3 female - divorced/separated/married	none
## 199	4 male - single	none
## 201	1 male - single	none
## 222	4 male - married/widowed	none
## 223	4 male - single	none
## 225	4 male - married/widowed	none
## 226	4 male - single	none
## 229	4 male - single	none
## 232	1 male - single	none
## 235	4 male - single	none
## 236	4 male - single	none
## 240	2 male - divorced/separated	none
## 247	2 male - single	none
## 250	3 male - single	none
## 253	2 male - single	co-applicant
## 254	4 male - single	none
## 257	2 male - single	none
## 259	4 male - married/widowed	guarantor
## 263	4 male - married/widowed	guarantor

## 265	4	male - single	none
## 273	2	male - single	none
## 275	4	male - single	none
## 276	3	male - single	none
## 277	4	male - single	none
## 285	4	male - single	co-applicant
## 289	4	male - single	none
## 292	4	female - divorced/separated/married	<NA>
## 297	3	male - single	none
## 298	4	male - single	none
## 313	2	male - single	none
## 321	4	male - single	none
## 322	2	male - single	none
## 323	4	male - single	<NA>
## 327	1	<NA>	none
## 329	1	male - single	none
## 331	4	male - single	none
## 335	4	male - single	co-applicant
## 342	2	male - single	none
## 345	4	male - single	none
## 352	4	male - single	none
## 356	2	male - single	guarantor
## 360	4	female - divorced/separated/married	none
## 366	NA	female - divorced/separated/married	none
## 369	4	female - divorced/separated/married	none
## 370	1	male - single	none
## 372	2	male - single	none
## 376	3	male - single	none
## 384	1	female - divorced/separated/married	none
## 389	4	male - single	none
## 393	4	male - single	guarantor
## 396	4	male - single	none
## 401	4	male - single	none
## 402	4	male - single	none
## 408	2	male - single	none
## 409	4	male - single	none
## 410	2	male - single	none
## 416	3	male - single	none
## 417	4	female - divorced/separated/married	none
## 422	4	male - single	none
## 423	2	male - single	none
## 433	4	male - single	none
## 436	4	female - divorced/separated/married	none
## 437	4	male - single	none
## 444	2	male - married/widowed	none
## 456	4	female - divorced/separated/married	none
## 462	4	male - single	none
## 464	4	male - married/widowed	none
## 465	2	male - divorced/separated	none
## 466	3	male - divorced/separated	none
## 467	4	male - single	none
## 473	4	female - divorced/separated/married	none
## 482	4	male - single	none
## 483	1	female - divorced/separated/married	none

## 484	2	male - divorced/separated	none
## 488	1	male - single	none
## 492	4	male - single	none
## 494	4	male - married/widowed	guarantor
## 501	4	male - single	none
## 504	4	male - single	none
## 512	4	male - single	none
## 516	2	male - single	co-applicant
## 520	4	male - single	none
## 522	4	male - single	none
## 524	1	male - single	guarantor
## 526	4	female - divorced/separated/married	none
## 528	2	male - single	co-applicant
## 530	4	male - single	none
## 537	4	female - divorced/separated/married	none
## 548	2	male - single	none
## 550	4	male - single	none
## 553	4	male - single	none
## 555	2	male - single	none
## 559	2	male - single	none
## 568	2	male - divorced/separated	none
## 587	3	male - single	none
## 588	2	male - single	co-applicant
## 592	3	male - single	none
## 596	NA	male - single	guarantor
## 600	4	male - married/widowed	none
## 604	4	male - married/widowed	none
## 610	2	male - single	none
## 617	4	male - single	none
## 619	4	male - single	none
## 620	4	male - married/widowed	none
## 624	2	male - single	co-applicant
## 626	4	male - single	none
## 628	4	female - divorced/separated/married	none
## 635	3	female - divorced/separated/married	none
## 642	1	<NA>	none
## 644	3	female - divorced/separated/married	none
## 647	4	male - single	none
## 649	2	male - single	guarantor
## 655	2	female - divorced/separated/married	co-applicant
## 657	4	male - single	none
## 659	2	female - divorced/separated/married	none
## 665	4	male - single	none
## 668	2	male - single	none
## 673	4	female - divorced/separated/married	none
## 680	4	male - single	guarantor
## 681	2	male - single	none
## 688	4	male - single	none
## 691	4	<NA>	none
## 694	2	male - single	none
## 695	3	female - divorced/separated/married	none
## 696	1	female - divorced/separated/married	none
## 701	2	male - single	none
## 707	3	male - single	none

## 712	2	male - single	none
## 715	1	male - single	none
## 716	4	male - single	none
## 720	1	female - divorced/separated/married	none
## 725	2	male - single	none
## 731	4	male - married/widowed	guarantor
## 733	4	female - divorced/separated/married	none
## 735	4	male - single	none
## 736	2	male - divorced/separated	guarantor
## 738	4	male - single	none
## 740	1	female - divorced/separated/married	none
## 765	4	male - single	none
## 772	2	male - single	none
## 773	4	male - single	none
## 775	NA	female - divorced/separated/married	none
## 776	1	female - divorced/separated/married	none
## 780	1	male - single	none
## 781	4	male - single	none
## 783	4	male - single	none
## 795	4	male - single	none
## 807	4	male - single	none
## 826	4	<NA>	none
## 828	1	male - single	none
## 830	4	female - divorced/separated/married	guarantor
## 835	3	male - married/widowed	none
## 837	1	male - single	none
## 843	4	male - single	none
## 845	4	male - single	none
## 856	4	female - divorced/separated/married	none
## 867	4	female - divorced/separated/married	guarantor
## 869	1	<NA>	none
## 871	4	male - single	none
## 881	1	female - divorced/separated/married	none
## 887	2	male - divorced/separated	none
## 888	2	male - single	none
## 889	1	male - divorced/separated	none
## 890	1	male - single	guarantor
## 892	1	male - divorced/separated	none
## 895	4	male - single	none
## 896	1	female - divorced/separated/married	none
## 897	4	male - single	<NA>
## 901	3	male - single	none
## 905	4	male - married/widowed	none
## 924	3	male - single	none
## 927	1	male - divorced/separated	none
## 932	3	male - married/widowed	none
## 940	1	male - divorced/separated	none
## 946	2	female - divorced/separated/married	none
## 948	4	female - divorced/separated/married	<NA>
## 956	4	male - single	none
## 960	4	female - divorced/separated/married	none
## 963	1	female - divorced/separated/married	none
## 968	2	male - single	none
## 974	4	male - single	none

## 981	2	female - divorced/separated/married	co-applicant
## 985	2	male - single	none
## 997	1	male - single	none
## 998	2	male - divorced/separated	none
## 1001	2	male - single	none
## 1006	4	male - single	none
## 1007	NA	male - single	guarantor
## 1011	3	male - single	none
## 1012	1	<NA>	none
## 1013	4	male - single	none
## 1018	2	male - single	co-applicant
## 1025	2	male - single	co-applicant
## 1033	3	male - divorced/separated	none
## 1045	4	male - single	none
## 1058	4	female - divorced/separated/married	none
## 1064	2	male - single	none
## 1067	NA	female - divorced/separated/married	none
## 1071	4	male - single	none
## 1074	4	male - single	none
## 1106	1	female - divorced/separated/married	none
##	present_resid		property age
## 1	4		real estate 67
## 12	2	building society savings agreement / life insurance	34
## 27	4	building society savings agreement / life insurance	23
## 45	4		real estate 44
## 48	4		car or other 20
## 49	4		real estate NA
## 50	4		car or other 35
## 54	2	building society savings agreement / life insurance	28
## 59	1	building society savings agreement / life insurance	31
## 65	3	building society savings agreement / life insurance	29
## 79	4	unknown / no property	51
## 94	4	unknown / no property	47
## 98	3		real estate 54
## 99	3	building society savings agreement / life insurance	NA
## 108	2	building society savings agreement / life insurance	35
## 111	4		car or other 34
## 114	4	unknown / no property	61
## 118	2	building society savings agreement / life insurance	30
## 128	4		car or other 23
## 135	2		car or other 33
## 137	2		real estate 41
## 147	2		real estate 32
## 148	2		real estate 38
## 149	2		car or other 27
## 153	2		real estate 27
## 154	3	building society savings agreement / life insurance	32
## 155	2		real estate 27
## 157	4	unknown / no property	53
## 161	2		car or other 30
## 163	4	unknown / no property	47
## 167	2		car or other 27
## 173	3		car or other 28
## 176	1		car or other 45

## 177	1	car or other	45
## 187	1	real estate	20
## 190	3	car or other	33
## 192	2	building society savings agreement / life insurance	34
## 199	4	real estate	65
## 201	3	unknown / no property	45
## 222	3	real estate	27
## 223	4	real estate	22
## 225	4	building society savings agreement / life insurance	21
## 226	1	real estate	38
## 229	3	building society savings agreement / life insurance	26
## 232	2	real estate	33
## 235	4	real estate	66
## 236	2	car or other	51
## 240	2	real estate	24
## 247	3	car or other	37
## 250	4	unknown / no property	51
## 253	3	building society savings agreement / life insurance	31
## 254	1	unknown / no property	22
## 257	2	real estate	31
## 259	2	real estate	25
## 263	2	<NA>	33
## 265	4	unknown / no property	46
## 273	4	real estate	44
## 275	4	real estate	52
## 276	2	building society savings agreement / life insurance	43
## 277	1	unknown / no property	35
## 285	2	building society savings agreement / life insurance	45
## 289	2	real estate	27
## 292	2	car or other	21
## 297	4	real estate	32
## 298	3	car or other	37
## 313	4	car or other	21
## 321	2	car or other	30
## 322	4	unknown / no property	NA
## 323	3	<NA>	38
## 327	4	car or other	28
## 329	2	real estate	33
## 331	1	<NA>	26
## 335	2	building society savings agreement / life insurance	45
## 342	2	unknown / no property	44
## 345	4	real estate	65
## 352	1	unknown / no property	22
## 356	3	building society savings agreement / life insurance	38
## 360	4	car or other	42
## 366	1	car or other	30
## 369	3	<NA>	34
## 370	4	real estate	NA
## 372	2	unknown / no property	26
## 376	4	real estate	32
## 384	2	building society savings agreement / life insurance	30
## 389	4	building society savings agreement / life insurance	47
## 393	4	real estate	23
## 396	2	car or other	46

## 401	2	building society savings agreement / life insurance	28
## 402	4	unknown / no property	46
## 408	2	real estate	31
## 409	4	unknown / no property	61
## 410	3	car or other	37
## 416	4	car or other	41
## 417	4	car or other	42
## 422	3	car or other	37
## 423	2	building society savings agreement / life insurance	31
## 433	1	unknown / no property	35
## 436	4	building society savings agreement / life insurance	25
## 437	1	<NA>	26
## 444	2	real estate	27
## 456	4	unknown / no property	32
## 462	4	unknown / no property	61
## 464	2	real estate	27
## 465	4	unknown / no property	48
## 466	2	car or other	NA
## 467	1	real estate	38
## 473	2	building society savings agreement / life insurance	35
## 482	3	real estate	34
## 483	2	building society savings agreement / life insurance	25
## 484	4	car or other	28
## 488	4	car or other	20
## 492	4	unknown / no property	36
## 494	2	real estate	25
## 501	4	car or other	39
## 504	4	building society savings agreement / life insurance	47
## 512	2	car or other	30
## 516	3	building society savings agreement / life insurance	31
## 520	4	building society savings agreement / life insurance	47
## 522	4	real estate	66
## 524	2	building society savings agreement / life insurance	37
## 526	3	<NA>	34
## 528	2	real estate	24
## 530	1	car or other	34
## 537	4	building society savings agreement / life insurance	23
## 548	1	building society savings agreement / life insurance	31
## 550	1	unknown / no property	33
## 553	4	building society savings agreement / life insurance	47
## 555	2	unknown / no property	27
## 559	2	unknown / no property	26
## 568	4	car or other	28
## 587	2	building society savings agreement / life insurance	43
## 588	3	car or other	42
## 592	4	unknown / no property	53
## 596	4	real estate	40
## 600	4	building society savings agreement / life insurance	21
## 604	4	real estate	41
## 610	2	real estate	36
## 617	4	car or other	39
## 619	1	car or other	34
## 620	3	real estate	27
## 624	3	building society savings agreement / life insurance	31

## 626	1	unknown / no property	35
## 628	4	building society savings agreement / life insurance	25
## 635	3	car or other	28
## 642	4	unknown / no property	37
## 644	2	building society savings agreement / life insurance	23
## 647	1	car or other	41
## 649	3	building society savings agreement / life insurance	38
## 655	3	car or other	24
## 657	3	car or other	33
## 659	3	real estate	25
## 665	1	unknown / no property	33
## 668	2	real estate	36
## 673	4	car or other	42
## 680	4	real estate	23
## 681	2	building society savings agreement / life insurance	31
## 688	4	real estate	22
## 691	1	real estate	33
## 694	2	unknown / no property	44
## 695	2	building society savings agreement / life insurance	23
## 696	4	unknown / no property	48
## 701	2	unknown / no property	27
## 707	4	car or other	54
## 712	2	real estate	41
## 715	4	real estate	NA
## 716	NA	building society savings agreement / life insurance	27
## 720	1	car or other	28
## 725	4	car or other	21
## 731	2	<NA>	33
## 733	3	building society savings agreement / life insurance	NA
## 735	4	real estate	52
## 736	2	real estate	32
## 738	2	car or other	24
## 740	4	unknown / no property	48
## 765	1	car or other	41
## 772	2	real estate	31
## 773	3	building society savings agreement / life insurance	26
## 775	2	real estate	38
## 776	NA	unknown / no property	56
## 780	3	building society savings agreement / life insurance	31
## 781	4	real estate	67
## 783	NA	building society savings agreement / life insurance	27
## 795	2	car or other	24
## 807	3	building society savings agreement / life insurance	32
## 826	1	real estate	33
## 828	2	car or other	33
## 830	2	real estate	44
## 835	1	car or other	24
## 837	3	unknown / no property	45
## 843	2	car or other	51
## 845	3	real estate	54
## 856	4	unknown / no property	32
## 867	2	real estate	44
## 869	4	car or other	28
## 871	3	real estate	34

## 881	4		car or other	23
## 887	2		real estate	24
## 888	2		real estate	31
## 889	4		real estate	60
## 890	2	building society savings agreement /	life insurance	37
## 892	4		real estate	60
## 895	4		unknown / no property	36
## 896	NA		unknown / no property	56
## 897	3		<NA>	38
## 901	4		car or other	41
## 905	4		real estate	41
## 924	4		car or other	54
## 927	4		real estate	62
## 932	1		car or other	24
## 940	4		real estate	62
## 946	3		real estate	25
## 948	2		car or other	21
## 956	4	building society savings agreement /	life insurance	47
## 960	1		real estate	20
## 963	2	building society savings agreement /	life insurance	25
## 968	2		car or other	45
## 974	2		real estate	27
## 981	3		car or other	24
## 985	3		car or other	37
## 997	3	building society savings agreement /	life insurance	31
## 998	4		unknown / no property	48
## 1001	4		unknown / no property	NA
## 1006	4		car or other	34
## 1007	4		real estate	40
## 1011	4		car or other	34
## 1012	4		unknown / no property	37
## 1013	3	building society savings agreement /	life insurance	29
## 1018	3		car or other	42
## 1025	2		real estate	24
## 1033	2		car or other	NA
## 1045	2		car or other	46
## 1058	4		car or other	35
## 1064	2		car or other	45
## 1067	1		car or other	30
## 1071	4		car or other	34
## 1074	2		car or other	30
## 1106	1		car or other	28
##	other_install	housing	n_credits	job
## 1	none	own	2	skilled employee / official
## 12	none	own	1	management/ self-employed/ officer
## 27	none	own	1	skilled employee / official
## 45	none	own	1	unskilled - resident
## 48	none	own	NA	skilled employee / official
## 49	none	own	1	unskilled - resident
## 50	none	own	2	management/ self-employed/ officer
## 54	none	rent	2	skilled employee / official
## 59	none	own	1	skilled employee / official
## 65	none	own	2	skilled employee / official
## 79	bank	for free	2	management/ self-employed/ officer

## 94	none	for free	1	skilled employee / official
## 98	none	own	1	skilled employee / official
## 99	bank	own	1	unskilled - resident
## 108	none	<NA>	1	skilled employee / official
## 111	none	own	2	skilled employee / official
## 114	none	for free	1	<NA>
## 118	none	own	1	skilled employee / official
## 128	none	own	2	skilled employee / official
## 135	none	own	1	skilled employee / official
## 137	none	own	1	skilled employee / official
## 147	none	own	2	skilled employee / official
## 148	none	own	2	skilled employee / official
## 149	none	own	2	skilled employee / official
## 153	none	own	1	unemployed/ unskilled - non-resident
## 154	bank	own	2	management/ self-employed/ officer
## 155	none	own	1	skilled employee / official
## 157	none	for free	2	skilled employee / official
## 161	none	own	1	skilled employee / official
## 163	none	for free	1	skilled employee / official
## 167	none	own	2	skilled employee / official
## 173	none	own	2	skilled employee / official
## 176	bank	own	1	unskilled - resident
## 177	bank	own	1	unskilled - resident
## 187	none	own	1	skilled employee / official
## 190	none	rent	2	skilled employee / official
## 192	none	own	1	management/ self-employed/ officer
## 199	none	own	2	skilled employee / official
## 201	none	own	2	management/ self-employed/ officer
## 222	none	own	1	unskilled - resident
## 223	stores	own	1	skilled employee / official
## 225	none	rent	1	skilled employee / official
## 226	none	own	2	unskilled - resident
## 229	none	own	1	skilled employee / official
## 232	none	own	2	skilled employee / official
## 235	none	own	1	management/ self-employed/ officer
## 236	none	own	1	skilled employee / official
## 240	none	rent	NA	unskilled - resident
## 247	none	own	1	management/ self-employed/ officer
## 250	bank	for free	2	management/ self-employed/ officer
## 253	none	own	1	skilled employee / official
## 254	bank	for free	1	skilled employee / official
## 257	none	own	1	unskilled - resident
## 259	none	own	1	unskilled - resident
## 263	none	<NA>	2	skilled employee / official
## 265	none	for free	1	skilled employee / official
## 273	none	own	1	unskilled - resident
## 275	none	own	3	skilled employee / official
## 276	none	own	1	skilled employee / official
## 277	bank	rent	1	skilled employee / official
## 285	none	own	1	<NA>
## 289	none	own	2	skilled employee / official
## 292	none	own	1	skilled employee / official
## 297	none	own	2	<NA>
## 298	none	own	1	skilled employee / official

## 313	<NA>	own	2	skilled employee / official
## 321	none	own	1	skilled employee / official
## 322	none	for free	1	management/ self-employed/ officer
## 323	none	own	2	<NA>
## 327	none	rent	1	management/ self-employed/ officer
## 329	none	own	2	skilled employee / official
## 331	none	own	1	skilled employee / official
## 335	none	own	1	<NA>
## 342	bank	for free	NA	skilled employee / official
## 345	none	own	2	skilled employee / official
## 352	bank	for free	1	skilled employee / official
## 356	none	own	1	unskilled - resident
## 360	none	rent	2	skilled employee / official
## 366	none	own	2	skilled employee / official
## 369	none	own	1	skilled employee / official
## 370	none	own	1	unskilled - resident
## 372	none	own	2	skilled employee / official
## 376	none	own	2	<NA>
## 384	none	own	1	skilled employee / official
## 389	none	own	1	management/ self-employed/ officer
## 393	none	own	2	skilled employee / official
## 396	bank	own	2	skilled employee / official
## 401	none	rent	2	skilled employee / official
## 402	none	for free	1	skilled employee / official
## 408	none	own	1	unskilled - resident
## 409	none	for free	1	<NA>
## 410	none	own	1	management/ self-employed/ officer
## 416	none	own	1	management/ self-employed/ officer
## 417	none	rent	2	skilled employee / official
## 422	none	own	1	skilled employee / official
## 423	bank	<NA>	2	skilled employee / official
## 433	bank	rent	1	skilled employee / official
## 436	none	rent	1	skilled employee / official
## 437	none	own	1	skilled employee / official
## 444	none	own	1	unemployed/ unskilled - non-resident
## 456	none	rent	1	skilled employee / official
## 462	none	for free	1	<NA>
## 464	none	own	1	skilled employee / official
## 465	none	for free	1	skilled employee / official
## 466	none	own	1	management/ self-employed/ officer
## 467	none	own	2	unskilled - resident
## 473	none	<NA>	1	skilled employee / official
## 482	none	own	2	management/ self-employed/ officer
## 483	<NA>	own	1	skilled employee / official
## 484	none	own	2	skilled employee / official
## 488	none	own	NA	skilled employee / official
## 492	none	for free	3	management/ self-employed/ officer
## 494	none	own	1	unskilled - resident
## 501	none	own	1	management/ self-employed/ officer
## 504	none	own	1	management/ self-employed/ officer
## 512	none	own	1	management/ self-employed/ officer
## 516	none	own	1	skilled employee / official
## 520	<NA>	own	3	<NA>
## 522	none	own	1	management/ self-employed/ officer

## 524	none	own	1	skilled employee / official
## 526	none	own	1	skilled employee / official
## 528	none	own	1	unskilled - resident
## 530	stores	own	2	skilled employee / official
## 537	none	own	1	skilled employee / official
## 548	none	own	1	skilled employee / official
## 550	none	rent	1	unskilled - resident
## 553	none	own	1	management/ self-employed/ officer
## 555	none	<NA>	1	management/ self-employed/ officer
## 559	none	own	2	skilled employee / official
## 568	none	own	2	skilled employee / official
## 587	none	own	1	skilled employee / official
## 588	none	own	1	skilled employee / official
## 592	none for free		2	skilled employee / official
## 596	bank	rent	2	skilled employee / official
## 600	none	rent	1	skilled employee / official
## 604	none	rent	1	skilled employee / official
## 610	none	rent	2	skilled employee / official
## 617	none	own	1	management/ self-employed/ officer
## 619	stores	own	2	skilled employee / official
## 620	none	own	1	unskilled - resident
## 624	none	own	1	skilled employee / official
## 626	bank	rent	1	skilled employee / official
## 628	none	rent	1	skilled employee / official
## 635	none	own	2	skilled employee / official
## 642	none for free		1	skilled employee / official
## 644	none	rent	2	skilled employee / official
## 647	none	own	2	skilled employee / official
## 649	none	own	1	unskilled - resident
## 655	bank	own	NA	skilled employee / official
## 657	none	rent	2	skilled employee / official
## 659	none	own	1	unskilled - resident
## 665	none	rent	1	unskilled - resident
## 668	none	rent	2	skilled employee / official
## 673	none	rent	2	skilled employee / official
## 680	none	own	2	skilled employee / official
## 681	bank	<NA>	2	skilled employee / official
## 688	stores	own	1	skilled employee / official
## 691	none	own	1	<NA>
## 694	bank for free		NA	skilled employee / official
## 695	none	rent	2	skilled employee / official
## 696	none for free		1	unskilled - resident
## 701	none	<NA>	1	management/ self-employed/ officer
## 707	none	own	1	skilled employee / official
## 712	none	own	1	skilled employee / official
## 715	none	own	1	unskilled - resident
## 716	none	own	2	skilled employee / official
## 720	bank	own	1	management/ self-employed/ officer
## 725	<NA>	own	2	skilled employee / official
## 731	none	<NA>	2	skilled employee / official
## 733	bank	own	1	unskilled - resident
## 735	none	own	3	skilled employee / official
## 736	none	own	2	skilled employee / official
## 738	<NA>	own	2	skilled employee / official

## 740	none for free	1	unskilled - resident
## 765	none own	2	skilled employee / official
## 772	none own	1	unskilled - resident
## 773	none own	1	skilled employee / official
## 775	none own	2	skilled employee / official
## 776	none own	1	skilled employee / official
## 780	none own	2	unskilled - resident
## 781	none own	2	skilled employee / official
## 783	none own	2	skilled employee / official
## 795	<NA> own	2	skilled employee / official
## 807	bank own	2	management/ self-employed/ officer
## 826	none own	1	<NA>
## 828	none own	1	skilled employee / official
## 830	none own	1	unskilled - resident
## 835	none own	1	skilled employee / official
## 837	none own	2	management/ self-employed/ officer
## 843	none own	1	skilled employee / official
## 845	none own	1	skilled employee / official
## 856	none rent	1	skilled employee / official
## 867	none own	1	unskilled - resident
## 869	none rent	1	management/ self-employed/ officer
## 871	none own	2	management/ self-employed/ officer
## 881	none own	2	skilled employee / official
## 887	none rent	NA	unskilled - resident
## 888	none own	1	unskilled - resident
## 889	none own	NA	management/ self-employed/ officer
## 890	none own	1	skilled employee / official
## 892	none own	NA	management/ self-employed/ officer
## 895	none for free	3	management/ self-employed/ officer
## 896	none own	1	skilled employee / official
## 897	none own	2	<NA>
## 901	none own	1	management/ self-employed/ officer
## 905	none rent	1	skilled employee / official
## 924	none own	1	skilled employee / official
## 927	none own	1	skilled employee / official
## 932	none own	1	skilled employee / official
## 940	none own	1	skilled employee / official
## 946	none own	1	unskilled - resident
## 948	none own	1	skilled employee / official
## 956	<NA> own	3	<NA>
## 960	none own	1	skilled employee / official
## 963	<NA> own	1	skilled employee / official
## 968	none own	2	skilled employee / official
## 974	none own	2	skilled employee / official
## 981	bank own	NA	skilled employee / official
## 985	none own	1	management/ self-employed/ officer
## 997	none own	2	unskilled - resident
## 998	none for free	1	skilled employee / official
## 1001	none for free	1	management/ self-employed/ officer
## 1006	none own	2	management/ self-employed/ officer
## 1007	bank rent	2	skilled employee / official
## 1011	none own	2	skilled employee / official
## 1012	none for free	1	skilled employee / official
## 1013	none own	2	skilled employee / official

## 1018	none	own	1	skilled employee / official
## 1025	none	own	1	unskilled - resident
## 1033	none	own	1	management/ self-employed/ officer
## 1045	bank	own	2	skilled employee / official
## 1058	none	own	2	management/ self-employed/ officer
## 1064	none	own	2	skilled employee / official
## 1067	none	own	2	skilled employee / official
## 1071	none	own	2	management/ self-employed/ officer
## 1074	none	own	1	management/ self-employed/ officer
## 1106	bank	own	1	management/ self-employed/ officer
##	n_people	telephone	foreign	response
## 1	1	yes	yes	0
## 12	1	yes	yes	1
## 27	1	none	yes	1
## 45	2	yes	yes	0
## 48	1	none	yes	0
## 49	1	none	yes	0
## 50	1	none	yes	0
## 54	1	yes	yes	1
## 59	1	yes	yes	0
## 65	1	yes	yes	0
## 79	2	yes	yes	0
## 94	2	<NA>	yes	1
## 98	1	none	yes	0
## 99	2	none	yes	1
## 108	1	none	yes	1
## 111	1	yes	yes	0
## 114	1	none	yes	0
## 118	1	yes	no	0
## 128	1	none	yes	1
## 135	1	none	yes	0
## 137	1	yes	yes	0
## 147	1	none	yes	0
## 148	1	yes	yes	0
## 149	1	none	yes	0
## 153	1	none	no	0
## 154	1	yes	yes	0
## 155	1	none	no	0
## 157	2	none	yes	1
## 161	1	none	yes	0
## 163	2	<NA>	yes	1
## 167	1	none	yes	0
## 173	1	none	yes	1
## 176	1	none	yes	0
## 177	1	none	yes	0
## 187	1	none	yes	0
## 190	2	none	yes	1
## 192	1	yes	yes	1
## 199	1	none	yes	0
## 201	2	yes	yes	0
## 222	1	none	yes	0
## 223	1	yes	yes	0
## 225	1	none	yes	1
## 226	2	none	yes	0

## 229	1	none	yes	0
## 232	2	none	yes	0
## 235	NA	yes	yes	1
## 236	1	yes	yes	0
## 240	1	none	yes	0
## 247	1	none	yes	0
## 250	2	yes	yes	0
## 253	1	yes	yes	1
## 254	1	none	yes	0
## 257	1	yes	yes	0
## 259	1	none	yes	0
## 263	1	yes	yes	0
## 265	1	yes	yes	0
## 273	2	yes	yes	0
## 275	1	none	yes	0
## 276	1	yes	yes	0
## 277	1	none	no	0
## 285	1	none	no	0
## 289	1	none	yes	0
## 292	1	none	yes	0
## 297	2	none	no	0
## 298	2	none	yes	1
## 313	1	yes	yes	0
## 321	1	none	yes	0
## 322	1	yes	yes	0
## 323	2	yes	yes	0
## 327	1	yes	yes	1
## 329	2	none	yes	0
## 331	1	none	yes	0
## 335	1	none	no	0
## 342	1	<NA>	yes	1
## 345	1	none	yes	0
## 352	1	none	yes	0
## 356	2	none	yes	0
## 360	1	yes	yes	0
## 366	1	none	yes	0
## 369	2	<NA>	yes	0
## 370	1	none	yes	0
## 372	1	none	yes	0
## 376	2	none	no	0
## 384	1	yes	no	0
## 389	1	yes	yes	1
## 393	1	none	yes	0
## 396	1	yes	yes	1
## 401	1	yes	yes	1
## 402	1	yes	yes	0
## 408	1	yes	yes	0
## 409	1	none	yes	0
## 410	1	none	yes	0
## 416	2	yes	yes	0
## 417	1	yes	yes	0
## 422	2	none	yes	1
## 423	1	none	yes	1
## 433	1	none	no	0

## 436	1	none	yes	0
## 437	1	none	yes	0
## 444	1	none	no	0
## 456	1	none	yes	1
## 462	1	none	yes	0
## 464	1	none	no	0
## 465	1	yes	yes	0
## 466	1	yes	<NA>	0
## 467	2	none	yes	0
## 473	1	none	yes	1
## 482	NA	none	yes	0
## 483	1	yes	yes	1
## 484	2	yes	yes	0
## 488	1	none	yes	0
## 492	1	yes	yes	0
## 494	1	none	yes	0
## 501	1	yes	yes	0
## 504	1	yes	yes	1
## 512	1	yes	yes	0
## 516	1	yes	yes	1
## 520	2	yes	yes	0
## 522	NA	yes	yes	1
## 524	2	none	yes	0
## 526	2	<NA>	yes	0
## 528	1	none	no	0
## 530	1	yes	yes	0
## 537	1	none	yes	1
## 548	1	yes	yes	0
## 550	1	none	yes	1
## 553	1	yes	yes	1
## 555	1	none	yes	0
## 559	1	none	yes	0
## 568	2	yes	yes	0
## 587	1	yes	yes	0
## 588	1	none	yes	1
## 592	2	none	yes	1
## 596	2	yes	yes	0
## 600	1	none	yes	1
## 604	1	none	yes	0
## 610	2	none	yes	0
## 617	1	yes	yes	0
## 619	1	yes	yes	0
## 620	1	none	yes	0
## 624	1	yes	yes	1
## 626	1	none	no	0
## 628	1	none	yes	0
## 635	1	none	yes	1
## 642	1	yes	yes	1
## 644	1	yes	yes	0
## 647	2	yes	yes	0
## 649	2	none	yes	0
## 655	1	none	yes	0
## 657	2	none	yes	1
## 659	1	none	yes	1

## 665	1	none	yes	1
## 668	2	none	yes	0
## 673	1	yes	yes	0
## 680	1	none	yes	0
## 681	1	none	yes	1
## 688	1	yes	yes	0
## 691	1	none	yes	0
## 694	1	<NA>	yes	1
## 695	1	yes	yes	0
## 696	2	none	yes	1
## 701	1	none	yes	0
## 707	1	none	yes	1
## 712	1	yes	yes	0
## 715	1	none	yes	0
## 716	1	yes	<NA>	0
## 720	1	yes	yes	0
## 725	1	yes	yes	0
## 731	1	yes	yes	0
## 733	2	none	yes	1
## 735	1	none	yes	0
## 736	1	none	yes	0
## 738	1	none	yes	0
## 740	2	none	yes	1
## 765	2	yes	yes	0
## 772	1	yes	yes	0
## 773	1	none	yes	0
## 775	1	yes	yes	0
## 776	1	none	yes	0
## 780	2	yes	yes	0
## 781	1	yes	yes	0
## 783	1	yes	<NA>	0
## 795	1	none	yes	0
## 807	1	yes	yes	0
## 826	1	none	yes	0
## 828	1	none	yes	0
## 830	1	none	<NA>	0
## 835	1	none	yes	0
## 837	2	yes	yes	0
## 843	1	yes	yes	0
## 845	1	none	yes	0
## 856	1	none	yes	1
## 867	1	none	<NA>	0
## 869	1	yes	yes	1
## 871	NA	none	yes	0
## 881	1	none	yes	1
## 887	1	none	yes	0
## 888	1	yes	yes	0
## 889	1	yes	yes	0
## 890	2	none	yes	0
## 892	1	yes	yes	0
## 895	1	yes	yes	0
## 896	1	none	yes	0
## 897	2	yes	yes	0
## 901	2	yes	yes	0

```
## 905      1      none      yes      0
## 924      1      none      yes      1
## 927      1      none      yes      0
## 932      1      none      yes      0
## 940      1      none      yes      0
## 946      1      none      yes      1
## 948      1      none      yes      0
## 956      2        yes      yes      0
## 960      1      none      yes      0
## 963      1        yes      yes      1
## 968      2        yes      yes      0
## 974      1      none      yes      0
## 981      1      none      yes      0
## 985      1      none      yes      0
## 997      2        yes      yes      0
## 998      1        yes      yes      0
## 1001     1        yes      yes      0
## 1006     1        yes      yes      0
## 1007     2        yes      yes      0
## 1011     1        yes      yes      0
## 1012     1        yes      yes      1
## 1013     1        yes      yes      0
## 1018     1      none      yes      1
## 1025     1      none      no       0
## 1033     1        yes      <NA>     0
## 1045     1        yes      yes      1
## 1058     1      none      yes      0
## 1064     2        yes      yes      0
## 1067     1      none      yes      0
## 1071     1        yes      yes      0
## 1074     1        yes      yes      0
## 1106     1        yes      yes      0
```

```
rm_dup<-data_credit[!duplicated(data_credit$ID),]
```

```
Name <- c("Steve", "John", NA)
Sex <- c("men", "men", "women")
Age <- c(45, 53, NA)
my_data<-data.frame(Name,Sex,Age)
any(is.na(my_data))
```

```
## [1] TRUE
```

```
any(is.na(my_data$Name))
```

```
## [1] TRUE
```

```
any(is.na(my_data$Sex))
```

```
## [1] FALSE
```

```
any(is.na(my_data$Age))
```

```
## [1] TRUE
```

```
my_data[is.na(my_data)]<-0
my_data[is.na(my_data)]<-" "
my_data[is.na(my_data$Name)]<-"Jaime"
my_data[is.na(my_data$Sex)]<-"F"
my_data[is.na(my_data$Age), "AGE"]<-"50"
print(my_data)
```

```
##      Name    Sex Age  AGE
## 1 Steve   men  45 <NA>
## 2 John   men  53 <NA>
## 3      0 women    0 <NA>
```

```
my_data[is.na(my_data$Age)] <- 37
my_data[is.na(my_data$Name), "Name"] <- "Jasmine"
my_data
```

```
##      Name    Sex Age  AGE
## 1 Steve   men  45 <NA>
## 2 John   men  53 <NA>
## 3      0 women    0 <NA>
```

```
employee <- c('John Doe', 'Peter Smith', 'Julie Hope')
salary <- c(61000, 43400, 76800)
startdate <- as.Date(c('2010-11-1', '2008-3-25', '2007-3-14'))
pin<-paste(employee,salary,startdate,sep= " ")
pin
```

```
## [1] "John Doe 61000 2010-11-01"      "Peter Smith 43400 2008-03-25"
## [3] "Julie Hope 76800 2007-03-14"
```

```
employee.data<-data.frame(pin,employee,salary,startdate)
employee.data
```

```
##              pin      employee salary  startdate
## 1 John Doe 61000 2010-11-01 John Doe  61000 2010-11-01
## 2 Peter Smith 43400 2008-03-25 Peter Smith  43400 2008-03-25
## 3 Julie Hope 76800 2007-03-14 Julie Hope  76800 2007-03-14
```

Add a new chunk by clicking the *Insert Chunk* button on the toolbar or by pressing *Ctrl+Alt+I*.

When you save the notebook, an HTML file containing the code and output will be saved alongside it (click the *Preview* button or press *Ctrl+Shift+K* to preview the HTML file).

The preview shows you a rendered HTML copy of the contents of the editor. Consequently, unlike *Knit*, *Preview* does not run any R code chunks. Instead, the output of the chunk when it was last run in the editor is displayed.