

haridas DSBDA1

March 6, 2025

```
[5]: import pandas as pd
```

```
[52]: hari = pd.read_csv('customers-100.csv')
```

```
[53]: hari.columns
```

```
[53]: Index(['Index', 'Customer Id', 'First Name', 'Last Name', 'Company', 'City',  
        'Country', 'Phone 1', 'Phone 2', 'Email', 'Subscription Date',  
        'Website'],  
        dtype='object')
```

```
[66]: bankar=hari.head(60)
```

```
[67]: bankar
```

```
[67]:
```

	Index	Customer Id	First Name	Last Name	\
0	1	DD37Cf93aecA6Dc	Sheryl	Baxter	
1	2	1Ef7b82A4CAAD10	Preston	Lozano	
2	3	6F94879bDAfE5a6	Roy	Berry	
3	4	5Cef8BFA16c5e3c	Linda	Olsen	
4	5	053d585Ab6b3159	Joanna	Bender	
5	6	2d08FB17EE273F4	Aimee	Downs	
6	7	EA4d384DfDbBf77	Darren	Peck	
7	8	0e04AFde9f225dE	Brett	Mullen	
8	9	C2dE4dEEc489ae0	Sheryl	Meyers	
9	10	8C2811a503C7c5a	Michelle	Gallagher	
10	11	216E205d6eBb815	Carl	Schroeder	
11	12	CEDec94deE6d69B	Jenna	Dodson	
12	13	e35426EbDEceaFF	Tracey	Mata	
13	14	A08A8aF8BE9FaD4	Kristine	Cox	
14	15	6fEaA1b7cab7B6C	Faith	Lutz	
15	16	8cad0b4CBceaec	Miranda	Beasley	
16	17	a5DC21AE3a21eaA	Caroline	Foley	
17	18	F8Aa9d6DfcBeeF8	Greg	Mata	
18	19	F160f5Db3EfE973	Clifford	Jacobson	
19	20	0F60FF3DdCd7aB0	Joanna	Kirk	
20	21	9F9AdB7B8A6f7F2	Maxwell	Frye	
21	22	FBd0Ded4F02a742	Kiara	Houston	

22	23	2FB0FAA1d429421	Colleen	Howard
23	24	010468dAA11382c	Janet	Valenzuela
24	25	eC1927Ca84E033e	Shane	Wilcox
25	26	09D7D7C8Fe09aea	Marcus	Moody
26	27	aBdfcF2c50b0bfD	Dakota	Poole
27	28	b92EBfdF8a3f0E6	Frederick	Harper
28	29	3B5dAAFA41AFa22	Stefanie	Fitzpatrick
29	30	EDA69ca7a6e96a2	Kent	Bradshaw
30	31	64DCcDFaB9DFd4e	Jack	Tate
31	32	679c6c83DD872d6	Tom	Trujillo
32	33	7Ce381e4Afa4ba9	Gabriel	Mejia
33	34	A09AEc6E3bF70eE	Kaitlyn	Santana
34	35	aA9BAFfBc3710fe	Faith	Moon
35	36	E11dfb2DB8C9f72	Tammie	Haley
36	37	889eCf90f68c5Da	Nicholas	Sosa
37	38	7a1Ee69F4fF4B4D	Jordan	Gay
38	39	dca4f1D0A0fc5c9	Bruce	Esparza
39	40	17aD8e2dB3df03D	Sherry	Garza
40	41	2f79Cd309624Abb	Natalie	Gentry
41	42	6e5ad5a5e2bB5Ca	Bryan	Dunn
42	43	7E441b6B228DBcA	Wayne	Simpson
43	44	D3fC11A9C235Dc6	Luis	Greer
44	45	30Dfa48fe5Ede78	Rhonda	Frost
45	46	fD780ED8dbEae7B	Joanne	Montes
46	47	300A40d3ce24bBA	Geoffrey	Guzman
47	48	283DFCD0DbA40aF	Gloria	Mccall
48	49	F4Fc91fEAEad286	Brady	Cohen
49	50	80F33Fd2AcebF05	Latoya	Mccann
50	51	Aa20BDe68eAb0e9	Gerald	Hawkins
51	52	e898eEB1B9FE22b	Samuel	Crawford
52	53	faCEF517ae7D8eB	Patricia	Goodwin
53	54	c09952De6Cda8aA	Stacie	Richard
54	55	f3BEf3Be028166f	Robin	West
55	56	C6F2Fc6a7948a4e	Ralph	Haas
56	57	c8FE57cBBdCDcb2	Phyllis	Maldonado
57	58	B5acdFC982124F2	Danny	Parrish
58	59	8c7DdF10798bCC3	Kathy	Hill
59	60	C681dDd0cc422f7	Kelli	Hardy

	Company	City \
0	Rasmussen Group	East Leonard
1	Vega-Gentry	East Jimmychester
2	Murillo-Perry	Isabelborough
3	Dominguez, Mcmillan and Donovan	Bensonview
4	Martin, Lang and Andrade	West Priscilla
5	Steele Group	Chavezborough
6	Lester, Woodard and Mitchell	Lake Ana

7	Sanford, Davenport and Giles	Kimport
8	Browning-Simon	Robersonstad
9	Beck-Hendrix	Elaineberg
10	Oconnell, Meza and Everett	Shannonville
11	Hoffman, Reed and McClain	East Andrea
12	Graham-Francis	South Joannamouth
13	Carpenter-Cook	Jodyberg
14	Carter-Hancock	Burchbury
15	Singleton and Sons	Desireeshire
16	Winters-Mendoza	West Adriennestad
17	Valentine LLC	Lake Leslie
18	Simon LLC	Harmonview
19	Mays-Mccormick	Jamesshire
20	Patterson Inc	East Carly
21	Manning, Hester and Arroyo	South Alvin
22	Greer and Sons	Brittanyview
23	Watts-Donaldson	Veronicamouth
24	Tucker LLC	Bryanville
25	Giles Ltd	Kaitlyntown
26	Simmons Group	Michealshire
27	Hinton, Chaney and Stokes	South Marissatown
28	Santana-Duran	Acevedoville
29	Sawyer PLC	North Harold
30	Acosta, Petersen and Morrow	West Samuel
31	Mcgee Group	Cunninghamborough
32	Adkins-Salinas	Port Annatown
33	Herrera Group	New Kaitlyn
34	Waters, Chase and Aguilar	West Marthaburgh
35	Palmer, Barnes and Houston	East Teresa
36	Jordan Ltd	South Hunter
37	Glover and Sons	South Walter
38	Huerta-Mclean	Poolefurt
39	Anderson Ltd	West John
40	Monroe PLC	West Darius
41	Kaufman and Sons	North Jimstad
42	Perkins-Trevino	East Rebekahborough
43	Cross PLC	North Drew
44	Herrera, Shepherd and Underwood	Lake Lindaburgh
45	Price, Sexton and Mcdaniel	Gwendolynview
46	Short-Wiggins	Zimmermanland
47	Brennan, Acosta and Ramos	North Kerriton
48	Osborne-Erickson	North Eileenville
49	Hobbs, Garrett and Sanford	Port Sergiofort
50	Phelps, Forbes and Koch	New Alberttown
51	May, Goodwin and Martin	South Jasmine
52	Christian, Winters and Ellis	Cowanfort
53	Byrd Inc	New Deborah

54	Nixon, Blackwell and Sosa	Wallstown
55	Montes PLC	Lake Ellenchester
56	Costa PLC	Lake Whitney
57	Novak LLC	East Jaredbury
58	Moore, Mccoy and Glass	Selenabury
59	Petty Ltd	Huangfort

	Country	Phone 1 \
0	Chile	229.077.5154
1	Djibouti	5153435776
2	Antigua and Barbuda	+1-539-402-0259
3	Dominican Republic	001-808-617-6467x12895
4	Slovakia (Slovak Republic)	001-234-203-0635x76146
5	Bosnia and Herzegovina	(283)437-3886x88321
6	Pitcairn Islands	(496)452-6181x3291
7	Bulgaria	001-583-352-7197x297
8	Cyprus	854-138-4911x5772
9	Timor-Leste	739.218.2516x459
10	Guernsey	637-854-0256x825
11	Vietnam	(041)737-3846
12	Togo	001-949-844-8787
13	Sri Lanka	786-284-3358x62152
14	Singapore	(781)861-7180x8306
15	Oman	540.085.3135x185
16	Western Sahara	936.222.4746x9924
17	Mozambique	(701)087-2415
18	South Georgia and the South Sandwich Islands	001-151-330-3524x0469
19	French Polynesia	(266)131-7001x711
20	Malta	423.262.3059
21	Netherlands	001-274-040-3582x10611
22	Paraguay	1935085151
23	Lao People's Democratic Republic	354.259.5062x7538
24	Albania	(429)005-9030x11004
25	Panama	674-677-8623
26	Belarus	(371)987-8576x4720
27	Switzerland	+1-077-121-1558x0687
28	Saint Vincent and the Grenadines	(752)776-3286
29	Tanzania	+1-472-143-5037x884
30	Zimbabwe	965-108-4406x20714
31	Denmark	416-338-3758
32	Liechtenstein	4077245425
33	United States of America	6303643286
34	Bahamas	+1-586-217-0359x6317
35	Belize	001-276-734-4113x6087
36	Uruguay	(661)425-6042
37	Solomon Islands	7208417020
38	Montenegro	559-529-4424

39		Poland	001-067-713-6440x158
40		Dominican Republic	830.996.8238
41		Burkina Faso	001-710-802-5565
42		Bolivia	(344)156-8632x1869
43		Bulgaria	001-336-025-6849x701
44		Monaco	(127)081-9339
45		Palau	(897)726-7952
46		Uzbekistan	975.235.8921x269
47		Ghana	445-603-6729
48		United Arab Emirates	741.849.0139x524
49		Belarus	(530)287-4548x29481
50		Canada	+1-323-239-1456x96168
51		Algeria	802-242-7457
52		Swaziland	322.549.7139x70040
53		Madagascar	001-622-948-3641x24810
54		Ecuador	698.303.4267
55		Palestinian Territory	2239271999
56		Saint Barthelemy	4500370767
57		United Arab Emirates	(669)384-8597x8794
58	South Georgia and the	South Sandwich Islands	001-171-716-2175x310
59		Sao Tome and Principe	020.324.2191x2022

	Phone 2	Email \
0	397.884.0519x718	zunigavanessa@smith.info
1	686-620-1820x944	vmata@colon.com
2	(496)978-3969x58947	beckycarr@hogan.com
3	+1-813-324-8756	stanleyblackwell@benson.org
4	001-199-446-3860x3486	colinalvarado@miles.net
5	999-728-1637	louis27@gilbert.com
6	+1-247-266-0963x4995	tgates@cantrell.com
7	001-333-145-0369	asnow@colon.com
8	+1-448-910-2276x729	mariokhan@ryan-pope.org
9	001-054-401-0347x617	mdyer@escobar.net
10	114.336.0784x788	kirksalas@webb.com
11	+1-556-888-3485x42608	mark42@robbins.com
12	(855)713-8773	alex56@walls.org
13	+1-315-627-1796x8074	holdenmiranda@clarke.com
14	207-185-3665	cassieparrish@blevins-chapman.net
15	+1-600-462-6432x21881	vduncan@parks-hardy.com
16	001-469-948-6341x359	holtgwendolyn@watson-davenport.com
17	(195)156-1861x26241	jaredjuarez@carroll.org
18	(748)477-7174	joseph26@jacobson.com
19	(283)312-5579x11543	tuckerangie@salazar.net
20	202-880-0688x7491	fgibson@drake-webb.com
21	+1-528-175-0973x4684	blanchardbob@wallace-shannon.com
22	(947)115-7711x5488	rsingleton@ryan-cherry.com
23	500.433.2022	stefanie71@spence.com

24	541-116-4501	mariah88@santos.com
25	909-277-5485x566	donnamullins@norris-barrett.org
26	071-152-1376	stacey67@fields.org
27	264.742.7149	jacobkhan@bright.biz
28	+1-472-021-4814x85074	wterrell@clark.com
29	126.922.6153	qjimenez@boyd.com
30	046.906.1442x6784	gfigueroa@boone-zavala.com
31	(775)890-7209	tapiagreg@beard.info
32	646.044.0696x66800	coleolson@jennings.net
33	447-710-6202x07313	georgeross@miles.org
34	+1-818-199-1403	willistonya@randolph-baker.com
35	(430)300-8770	harrisisaiah@jenkins.com
36	975-998-1519	fwolfe@dorsey.com
37	8035336772	tiffanydavies@harris-mcfarland.org
38	001-625-000-7132x0367	preese@frye-vega.com
39	(978)289-8785x5766	ann48@miller.com
40	499.122.5415	tcummings@fitzpatrick-ashley.com
41	078.699.8982x13881	woodwardandres@phelps.com
42	463-445-3702x38463	barbarapittman@holder.com
43	684.698.2911x6092	bstuart@williamson-mcclure.com
44	+1-431-028-3337x3492	zkrueger@wolf-chavez.net
45	(467)886-9467x5721	juan80@henson.net
46	(983)188-6873	bauercrystal@gay.com
47	001-395-959-4736x4524	bartlettjenna@zuniga-moss.biz
48	+1-028-691-7497x0894	mccalltyrone@durham-rose.biz
49	162-234-0249x32790	bobhammond@barry.biz
50	(092)508-0269	uwarner@steele-arias.com
51	626.116.9535x8578	xpittman@ritter-carney.net
52	(111)741-4173	vaughanchristy@lara.biz
53	001-731-168-2893x8891	clinton85@colon-arias.org
54	001-683-837-7651x525	greenemiranda@zimmerman.com
55	001-962-434-0867x649	goodmancesar@figueroa.biz
56	001-508-064-6725x017	yhanson@warner-diaz.org
57	506.731.5952x571	howelldarren@house-cohen.com
58	888.625.0654	ncamacho@boone-simmons.org
59	424-157-8216	kristopher62@oliver.com

	Subscription Date	Website
0	2020-08-24	http://www.stephenson.com/
1	2021-04-23	http://www.hobbs.com/
2	2020-03-25	http://www.lawrence.com/
3	2020-06-02	http://www.good-lyons.com/
4	2021-04-17	https://goodwin-ingram.com/
5	2020-02-25	http://www.berger.net/
6	2021-08-24	https://www.le.com/
7	2021-04-12	https://hammond-ramsey.com/
8	2020-01-13	https://www.bullock.net/

9	2021-11-08	https://arias.com/
10	2021-10-20	https://simmons-hurley.com/
11	2020-11-29	http://www.douglas.net/
12	2021-12-02	http://www.beck.com/
13	2021-02-08	https://www.brandt.com/
14	2022-01-26	http://stevenson.org/
15	2022-04-12	http://acosta.org/
16	2021-03-10	http://www.benson-roth.com/
17	2022-03-26	http://pitts-cherry.com/
18	2020-09-24	https://mcconnell.com/
19	2021-09-24	https://www.camacho.net/
20	2022-01-12	http://www.roberts.com/
21	2020-09-15	https://www.reid-potts.com/
22	2020-08-19	http://paul.biz/
23	2020-09-08	https://moreno.biz/
24	2021-04-06	https://www.ramos.com/
25	2022-05-24	https://www.curry.com/
26	2022-02-20	https://sanford-wilcox.biz/
27	2022-05-26	https://callahan.org/
28	2020-07-30	https://meyers.com/
29	2020-04-26	http://maynard-ho.com/
30	2021-09-15	http://www.hawkins-ramsey.com/
31	2022-01-13	http://www.daniels-klein.com/
32	2021-04-24	https://patel-hanson.info/
33	2021-09-21	http://pham.com/
34	2021-11-03	https://spencer-charles.info/
35	2022-01-04	http://evans-simon.com/
36	2021-08-10	https://www.fleming-richards.com/
37	2021-02-24	http://www.lee.org/
38	2021-10-22	http://www.farley.org/
39	2021-11-01	http://spence.com/
40	2020-10-10	http://www.dorsey.biz/
41	2021-09-08	http://www.butler.com/
42	2020-12-13	https://gillespie-holder.com/
43	2022-05-15	https://fletcher-nielsen.com/
44	2021-12-06	http://www.khan.com/
45	2020-07-01	http://ochoa.com/
46	2020-04-23	https://decker-kline.com/
47	2022-03-11	http://burgess-frank.com/
48	2022-03-10	http://hammond-barron.com/
49	2021-12-02	https://www.burton.com/
50	2021-03-19	https://valenzuela.com/
51	2021-03-27	https://guerrero.org/
52	2021-03-08	http://clark.info/
53	2020-10-15	https://kim.com/
54	2022-01-13	https://www.mora.com/
55	2020-05-25	http://may.com/

56	2021-01-25	http://www.bernard.com/
57	2021-03-17	http://www.parsons-hudson.com/
58	2020-11-15	http://hayden.com/
59	2020-12-20	http://www.kidd.com/

[68]: bankar.iloc[0:5]

[68]:

	Index	Customer Id	First Name	Last Name	\
0	1	DD37Cf93aecA6Dc	Sheryl	Baxter	
1	2	1Ef7b82A4CAAD10	Preston	Lozano	
2	3	6F94879bDAfE5a6	Roy	Berry	
3	4	5Cef8BFA16c5e3c	Linda	Olsen	
4	5	053d585Ab6b3159	Joanna	Bender	

		Company	City	\
0		Rasmussen Group	East Leonard	
1		Vega-Gentry	East Jimmychester	
2		Murillo-Perry	Isabelborough	
3	Dominguez, Mcmillan and Donovan		Bensonview	
4	Martin, Lang and Andrade		West Priscilla	

		Country	Phone 1	Phone 2	\
0		Chile	229.077.5154	397.884.0519x718	
1		Djibouti	5153435776	686-620-1820x944	
2	Antigua and Barbuda		+1-539-402-0259	(496)978-3969x58947	
3	Dominican Republic	001-808-617-6467x12895		+1-813-324-8756	
4	Slovakia (Slovak Republic)	001-234-203-0635x76146	001-199-446-3860x3486		

		Email	Subscription Date	Website
0		zunigavanessa@smith.info	2020-08-24	http://www.stephenson.com/
1		vmata@colon.com	2021-04-23	http://www.hobbs.com/
2		beckycarr@hogan.com	2020-03-25	http://www.lawrence.com/
3		stanleyblackwell@benson.org	2020-06-02	http://www.good-lyons.com/
4		colinalvarado@miles.net	2021-04-17	https://goodwin-ingram.com/

[69]: hari.iloc[[0,3,6,24],[0,5,6]]

[69]:

	Index	City	Country
0	1	East Leonard	Chile
3	4	Bensonview	Dominican Republic
6	7	Lake Ana	Pitcairn Islands
24	25	Bryanville	Albania

[70]: bankar.iloc[0:5, 5:8]

[70]:

	City	Country	Phone 1
0	East Leonard	Chile	229.077.5154

1	East Jimmychester	Djibouti	5153435776
2	Isabelborough	Antigua and Barbuda	+1-539-402-0259
3	Bensonview	Dominican Republic	001-808-617-6467x12895
4	West Priscilla	Slovakia (Slovak Republic)	001-234-203-0635x76146

[71]: bankar["City"]

[71]: 0 East Leonard

1	East Jimmychester
2	Isabelborough
3	Bensonview
4	West Priscilla
5	Chavezborough
6	Lake Ana
7	Kimport
8	Robersonstad
9	Elaineberg
10	Shannonville
11	East Andrea
12	South Joannamouth
13	Jodyberg
14	Burchbury
15	Desireeshire
16	West Adriennestad
17	Lake Leslie
18	Harmonview
19	Jamesshire
20	East Carly
21	South Alvin
22	Brittanyview
23	Veronicamouth
24	Bryanville
25	Kaitlyntown
26	Michealshire
27	South Marissatown
28	Acevedoville
29	North Harold
30	West Samuel
31	Cunninghamborough
32	Port Annatown
33	New Kaitlyn
34	West Marthaburgh
35	East Teresa
36	South Hunter
37	South Walter
38	Poolefurt
39	West John

```

40         West Darius
41         North Jimstad
42     East Rebekahborough
43         North Drew
44         Lake Lindaburgh
45         Gwendolynview
46         Zimmermanland
47         North Kerriton
48         North Eileenville
49         Port Sergiofort
50         New Alberttown
51         South Jasmine
52         Cowanfort
53         New Deborah
54         Wallstown
55         Lake Ellenchester
56         Lake Whitney
57         East Jaredbury
58         Selenabury
59         Huangfort
Name: City, dtype: object

```

```
[72]: list=['Index', 'Customer Id', 'First Name']
hari[list]
```

```
[72]:
```

	Index	Customer Id	First Name
0	1	DD37Cf93aecA6Dc	Sheryl
1	2	1Ef7b82A4CAAD10	Preston
2	3	6F94879bDAfE5a6	Roy
3	4	5Cef8BFA16c5e3c	Linda
4	5	053d585Ab6b3159	Joanna
..
95	96	cb8E23e48d22Eae	Karl
96	97	CeD220bdAaCfaDf	Lynn
97	98	28CDbC0dFe4b1Db	Fred
98	99	c23d1D9EE8DEB0A	Yvonne
99	100	2354a0E336A91A1	Clarence

[100 rows x 3 columns]

```
[73]: bankar=bankar.drop('Country',axis=1)
```

```
[74]: bankar
```

```
[74]:
```

	Index	Customer Id	First Name	Last Name \
0	1	DD37Cf93aecA6Dc	Sheryl	Baxter
1	2	1Ef7b82A4CAAD10	Preston	Lozano

2	3	6F94879bDAfE5a6	Roy	Berry
3	4	5Cef8BFA16c5e3c	Linda	Olsen
4	5	053d585Ab6b3159	Joanna	Bender
5	6	2d08FB17EE273F4	Aimee	Downs
6	7	EA4d384DfDbBf77	Darren	Peck
7	8	0e04AFde9f225dE	Brett	Mullen
8	9	C2dE4dEEc489ae0	Sheryl	Meyers
9	10	8C2811a503C7c5a	Michelle	Gallagher
10	11	216E205d6eBb815	Carl	Schroeder
11	12	CEDec94deE6d69B	Jenna	Dodson
12	13	e35426EbDEceaFF	Tracey	Mata
13	14	A08A8aF8BE9FaD4	Kristine	Cox
14	15	6fEaA1b7cab7B6C	Faith	Lutz
15	16	8cad0b4CBceaeec	Miranda	Beasley
16	17	a5DC21AE3a21eaA	Caroline	Foley
17	18	F8Aa9d6DfcBeeF8	Greg	Mata
18	19	F160f5Db3EfE973	Clifford	Jacobson
19	20	0F60FF3DdCd7aB0	Joanna	Kirk
20	21	9F9AdB7B8A6f7F2	Maxwell	Frye
21	22	FBd0Ded4F02a742	Kiara	Houston
22	23	2FB0FAA1d429421	Colleen	Howard
23	24	010468dAA11382c	Janet	Valenzuela
24	25	eC1927Ca84E033e	Shane	Wilcox
25	26	09D7D7C8Fe09aea	Marcus	Moody
26	27	aBdfcF2c50b0bfD	Dakota	Poole
27	28	b92EBfdF8a3f0E6	Frederick	Harper
28	29	3B5dAAFA41AFa22	Stefanie	Fitzpatrick
29	30	EDA69ca7a6e96a2	Kent	Bradshaw
30	31	64DCcDFaB9DFd4e	Jack	Tate
31	32	679c6c83DD872d6	Tom	Trujillo
32	33	7Ce381e4Afa4ba9	Gabriel	Mejia
33	34	A09AEc6E3bF70eE	Kaitlyn	Santana
34	35	aA9BAFfBc3710fe	Faith	Moon
35	36	E11dfb2DB8C9f72	Tammie	Haley
36	37	889eCf90f68c5Da	Nicholas	Sosa
37	38	7a1Ee69F4fF4B4D	Jordan	Gay
38	39	dca4f1D0A0fc5c9	Bruce	Esparza
39	40	17aD8e2dB3df03D	Sherry	Garza
40	41	2f79Cd309624Abb	Natalie	Gentry
41	42	6e5ad5a5e2bB5Ca	Bryan	Dunn
42	43	7E441b6B228DBcA	Wayne	Simpson
43	44	D3fC11A9C235Dc6	Luis	Greer
44	45	30Dfa48fe5Ede78	Rhonda	Frost
45	46	fD780ED8dbEae7B	Joanne	Montes
46	47	300A40d3ce24bBA	Geoffrey	Guzman
47	48	283DFCD0Dba40aF	Gloria	Mccall
48	49	F4Fc91fEAEad286	Brady	Cohen

49	50	80F33Fd2AcebF05	Latoya	Mccann
50	51	Aa20BDe68eAb0e9	Gerald	Hawkins
51	52	e898eEB1B9FE22b	Samuel	Crawford
52	53	faCEF517ae7D8eB	Patricia	Goodwin
53	54	c09952De6Cda8aA	Stacie	Richard
54	55	f3BEf3Be028166f	Robin	West
55	56	C6F2Fc6a7948a4e	Ralph	Haas
56	57	c8FE57cBBdCDcb2	Phyllis	Maldonado
57	58	B5acdFC982124F2	Danny	Parrish
58	59	8c7DdF10798bCC3	Kathy	Hill
59	60	C681dDd0cc422f7	Kelli	Hardy

	Company	City \
0	Rasmussen Group	East Leonard
1	Vega-Gentry	East Jimmychester
2	Murillo-Perry	Isabelborough
3	Dominguez, Mcmillan and Donovan	Bensonview
4	Martin, Lang and Andrade	West Priscilla
5	Steele Group	Chavezborough
6	Lester, Woodard and Mitchell	Lake Ana
7	Sanford, Davenport and Giles	Kimport
8	Browning-Simon	Robersonstad
9	Beck-Hendrix	Elaineberg
10	Oconnell, Meza and Everett	Shannonville
11	Hoffman, Reed and McClain	East Andrea
12	Graham-Francis	South Joannamouth
13	Carpenter-Cook	Jodyberg
14	Carter-Hancock	Burchbury
15	Singleton and Sons	Desireeshire
16	Winters-Mendoza	West Adriennestad
17	Valentine LLC	Lake Leslie
18	Simon LLC	Harmonview
19	Mays-Mccormick	Jamesshire
20	Patterson Inc	East Carly
21	Manning, Hester and Arroyo	South Alvin
22	Greer and Sons	Brittanyview
23	Watts-Donaldson	Veronicamouth
24	Tucker LLC	Bryanville
25	Giles Ltd	Kaitlyntown
26	Simmons Group	Michealshire
27	Hinton, Chaney and Stokes	South Marissatown
28	Santana-Duran	Acevedoville
29	Sawyer PLC	North Harold
30	Acosta, Petersen and Morrow	West Samuel
31	Mcgee Group	Cunninghamborough
32	Adkins-Salinas	Port Annatown
33	Herrera Group	New Kaitlyn

34	Waters, Chase and Aguilar	West Marthaburgh
35	Palmer, Barnes and Houston	East Teresa
36	Jordan Ltd	South Hunter
37	Glover and Sons	South Walter
38	Huerta-Mclean	Poolefurt
39	Anderson Ltd	West John
40	Monroe PLC	West Darius
41	Kaufman and Sons	North Jimstad
42	Perkins-Trevino	East Rebekahborough
43	Cross PLC	North Drew
44	Herrera, Shepherd and Underwood	Lake Lindaburgh
45	Price, Sexton and Mcdaniel	Gwendolynview
46	Short-Wiggins	Zimmermanland
47	Brennan, Acosta and Ramos	North Kerriton
48	Osborne-Erickson	North Eileenville
49	Hobbs, Garrett and Sanford	Port Sergiofort
50	Phelps, Forbes and Koch	New Alberttown
51	May, Goodwin and Martin	South Jasmine
52	Christian, Winters and Ellis	Cowanfort
53	Byrd Inc	New Deborah
54	Nixon, Blackwell and Sosa	Wallstown
55	Montes PLC	Lake Ellenchester
56	Costa PLC	Lake Whitney
57	Novak LLC	East Jaredbury
58	Moore, Mccoy and Glass	Selenabury
59	Petty Ltd	Huangfort

	Phone 1	Phone 2 \
0	229.077.5154	397.884.0519x718
1	5153435776	686-620-1820x944
2	+1-539-402-0259	(496)978-3969x58947
3	001-808-617-6467x12895	+1-813-324-8756
4	001-234-203-0635x76146	001-199-446-3860x3486
5	(283)437-3886x88321	999-728-1637
6	(496)452-6181x3291	+1-247-266-0963x4995
7	001-583-352-7197x297	001-333-145-0369
8	854-138-4911x5772	+1-448-910-2276x729
9	739.218.2516x459	001-054-401-0347x617
10	637-854-0256x825	114.336.0784x788
11	(041)737-3846	+1-556-888-3485x42608
12	001-949-844-8787	(855)713-8773
13	786-284-3358x62152	+1-315-627-1796x8074
14	(781)861-7180x8306	207-185-3665
15	540.085.3135x185	+1-600-462-6432x21881
16	936.222.4746x9924	001-469-948-6341x359
17	(701)087-2415	(195)156-1861x26241
18	001-151-330-3524x0469	(748)477-7174

19	(266)131-7001x711	(283)312-5579x11543
20	423.262.3059	202-880-0688x7491
21	001-274-040-3582x10611	+1-528-175-0973x4684
22	1935085151	(947)115-7711x5488
23	354.259.5062x7538	500.433.2022
24	(429)005-9030x11004	541-116-4501
25	674-677-8623	909-277-5485x566
26	(371)987-8576x4720	071-152-1376
27	+1-077-121-1558x0687	264.742.7149
28	(752)776-3286	+1-472-021-4814x85074
29	+1-472-143-5037x884	126.922.6153
30	965-108-4406x20714	046.906.1442x6784
31	416-338-3758	(775)890-7209
32	4077245425	646.044.0696x66800
33	6303643286	447-710-6202x07313
34	+1-586-217-0359x6317	+1-818-199-1403
35	001-276-734-4113x6087	(430)300-8770
36	(661)425-6042	975-998-1519
37	7208417020	8035336772
38	559-529-4424	001-625-000-7132x0367
39	001-067-713-6440x158	(978)289-8785x5766
40	830.996.8238	499.122.5415
41	001-710-802-5565	078.699.8982x13881
42	(344)156-8632x1869	463-445-3702x38463
43	001-336-025-6849x701	684.698.2911x6092
44	(127)081-9339	+1-431-028-3337x3492
45	(897)726-7952	(467)886-9467x5721
46	975.235.8921x269	(983)188-6873
47	445-603-6729	001-395-959-4736x4524
48	741.849.0139x524	+1-028-691-7497x0894
49	(530)287-4548x29481	162-234-0249x32790
50	+1-323-239-1456x96168	(092)508-0269
51	802-242-7457	626.116.9535x8578
52	322.549.7139x70040	(111)741-4173
53	001-622-948-3641x24810	001-731-168-2893x8891
54	698.303.4267	001-683-837-7651x525
55	2239271999	001-962-434-0867x649
56	4500370767	001-508-064-6725x017
57	(669)384-8597x8794	506.731.5952x571
58	001-171-716-2175x310	888.625.0654
59	020.324.2191x2022	424-157-8216

	Email	Subscription Date \
0	zunigavanessa@smith.info	2020-08-24
1	vmata@colon.com	2021-04-23
2	beckycarr@hogan.com	2020-03-25
3	stanleyblackwell@benson.org	2020-06-02

4	colinalvarado@miles.net	2021-04-17
5	louis27@gilbert.com	2020-02-25
6	tgates@cantrell.com	2021-08-24
7	asnow@colon.com	2021-04-12
8	mariokhan@ryan-pope.org	2020-01-13
9	mdyer@escobar.net	2021-11-08
10	kirksalas@webb.com	2021-10-20
11	mark42@robbins.com	2020-11-29
12	alex56@walls.org	2021-12-02
13	holdenmiranda@clarke.com	2021-02-08
14	cassieparrish@blevins-chapman.net	2022-01-26
15	vduncan@parks-hardy.com	2022-04-12
16	holtgwendolyn@watson-davenport.com	2021-03-10
17	jaredjuarez@carroll.org	2022-03-26
18	joseph26@jacobson.com	2020-09-24
19	tuckerangie@salazar.net	2021-09-24
20	fgibson@drake-webb.com	2022-01-12
21	blanchardbob@wallace-shannon.com	2020-09-15
22	rsingleton@ryan-cherry.com	2020-08-19
23	stefanie71@spence.com	2020-09-08
24	mariah88@santos.com	2021-04-06
25	donnamullins@norris-barrett.org	2022-05-24
26	stacey67@fields.org	2022-02-20
27	jacobkhan@bright.biz	2022-05-26
28	wterrell@clark.com	2020-07-30
29	qjimenez@boyd.com	2020-04-26
30	gfigueroa@boone-zavala.com	2021-09-15
31	tapiagreg@beard.info	2022-01-13
32	coleolson@jennings.net	2021-04-24
33	georgeross@miles.org	2021-09-21
34	willistonya@randolph-baker.com	2021-11-03
35	harrisisaiah@jenkins.com	2022-01-04
36	fwolfe@dorsey.com	2021-08-10
37	tiffanydavies@harris-mcfarland.org	2021-02-24
38	preese@frye-vega.com	2021-10-22
39	ann48@miller.com	2021-11-01
40	tcummings@fitzpatrick-ashley.com	2020-10-10
41	woodwardandres@phelps.com	2021-09-08
42	barbarapittman@holder.com	2020-12-13
43	bstuart@williamson-mcclure.com	2022-05-15
44	zkrueger@wolf-chavez.net	2021-12-06
45	juan80@henson.net	2020-07-01
46	bauercrystal@gay.com	2020-04-23
47	bartlettjenna@zuniga-moss.biz	2022-03-11
48	mccalltyrone@durham-rose.biz	2022-03-10
49	bobhammond@barry.biz	2021-12-02
50	uwarner@steele-arias.com	2021-03-19

51	xpittman@ritter-carney.net	2021-03-27
52	vaughanchristy@lara.biz	2021-03-08
53	clinton85@colon-arias.org	2020-10-15
54	greenemiranda@zimmerman.com	2022-01-13
55	goodmancesar@figueroa.biz	2020-05-25
56	yhanson@warner-diaz.org	2021-01-25
57	howelldarren@house-cohen.com	2021-03-17
58	ncamacho@boone-simmons.org	2020-11-15
59	kristopher62@oliver.com	2020-12-20

Website

0	http://www.stephenson.com/
1	http://www.hobbs.com/
2	http://www.lawrence.com/
3	http://www.good-lyons.com/
4	https://goodwin-ingram.com/
5	http://www.berger.net/
6	https://www.le.com/
7	https://hammond-ramsey.com/
8	https://www.bullock.net/
9	https://arias.com/
10	https://simmons-hurley.com/
11	http://www.douglas.net/
12	http://www.beck.com/
13	https://www.brandt.com/
14	http://stevenson.org/
15	http://acosta.org/
16	http://www.benson-roth.com/
17	http://pitts-cherry.com/
18	https://mcconnell.com/
19	https://www.camacho.net/
20	http://www.roberts.com/
21	https://www.reid-potts.com/
22	http://paul.biz/
23	https://moreno.biz/
24	https://www.ramos.com/
25	https://www.curry.com/
26	https://sanford-wilcox.biz/
27	https://callahan.org/
28	https://meyers.com/
29	http://maynard-ho.com/
30	http://www.hawkins-ramsey.com/
31	http://www.daniels-klein.com/
32	https://patel-hanson.info/
33	http://pham.com/
34	https://spencer-charles.info/
35	http://evans-simon.com/


```

36 https://www.fleming-richards.com/
37     http://www.lee.org/
38     http://www.farley.org/
39     http://spence.com/
40     http://www.dorsey.biz/
41     http://www.butler.com/
42 https://gillespie-holder.com/
43 https://fletcher-nielsen.com/
44     http://www.khan.com/
45     http://ochoa.com/
46 https://decker-kline.com/
47     http://burgess-frank.com/
48 http://hammond-barron.com/
49 https://www.burton.com/
50 https://valenzuela.com/
51 https://guerrero.org/
52     http://clark.info/
53     https://kim.com/
54 https://www.mora.com/
55     http://may.com/
56     http://www.bernard.com/
57 http://www.parsons-hudson.com/
58     http://hayden.com/
59     http://www.kidd.com/

```

```
[76]: bankar.describe()
```

```

[76]:          Index
count  60.000000
mean   30.500000
std    17.464249
min     1.000000
25%    15.750000
50%    30.500000
75%    45.250000
max    60.000000

```

```
[77]: bankar.isnull()
```

```

[77]:   Index  Customer Id  First Name  Last Name  Company  City  Phone 1  \
0  False           False      False      False    False  False   False
1  False           False      False      False    False  False   False
2  False           False      False      False    False  False   False
3  False           False      False      False    False  False   False
4  False           False      False      False    False  False   False
5  False           False      False      False    False  False   False
6  False           False      False      False    False  False   False

```

[illegible]

54	False	False	False	False	False	False	False
55	False	False	False	False	False	False	False
56	False	False	False	False	False	False	False
57	False	False	False	False	False	False	False
58	False	False	False	False	False	False	False
59	False	False	False	False	False	False	False

	Phone 2	Email	Subscription	Date	Website
0	False	False		False	False
1	False	False		False	False
2	False	False		False	False
3	False	False		False	False
4	False	False		False	False
5	False	False		False	False
6	False	False		False	False
7	False	False		False	False
8	False	False		False	False
9	False	False		False	False
10	False	False		False	False
11	False	False		False	False
12	False	False		False	False
13	False	False		False	False
14	False	False		False	False
15	False	False		False	False
16	False	False		False	False
17	False	False		False	False
18	False	False		False	False
19	False	False		False	False
20	False	False		False	False
21	False	False		False	False
22	False	False		False	False
23	False	False		False	False
24	False	False		False	False
25	False	False		False	False
26	False	False		False	False
27	False	False		False	False
28	False	False		False	False
29	False	False		False	False
30	False	False		False	False
31	False	False		False	False
32	False	False		False	False
33	False	False		False	False
34	False	False		False	False
35	False	False		False	False
36	False	False		False	False
37	False	False		False	False
38	False	False		False	False

39	False	False	False	False
40	False	False	False	False
41	False	False	False	False
42	False	False	False	False
43	False	False	False	False
44	False	False	False	False
45	False	False	False	False
46	False	False	False	False
47	False	False	False	False
48	False	False	False	False
49	False	False	False	False
50	False	False	False	False
51	False	False	False	False
52	False	False	False	False
53	False	False	False	False
54	False	False	False	False
55	False	False	False	False
56	False	False	False	False
57	False	False	False	False
58	False	False	False	False
59	False	False	False	False

```
[78]: bankar.isnull().sum()
```

```
[78]: Index      0
      Customer Id  0
      First Name  0
      Last Name   0
      Company     0
      City        0
      Phone 1     0
      Phone 2     0
      Email       0
      Subscription Date  0
      Website     0
      dtype: int64
```

```
[ ]:
```