Test your R knowledge!

The purpose of this survey is to assess your R programming knowledge, focused on dataframes. You will answer 10 questions regarding dataframes in R. Your score and missed questions will be shown to you after submitting the survey. Please do not share your answers with others!

* Required

1. **Email address** *

Please refrain from using any resources when answering these questions! NOTE: You are only allowed ONE submission.

Dataframe df:

	A	B	foobar
0	0.0	7	a
1	NaN	3	b
2	9.0	2	c
3	5.0	0	d
4	3.0	4	e
5	NaN	3	f

2. **1. What does the following R code output?** *

```
df[0:1]
```

Mark only one oval.

	A	B	foobar
0	0.0	7	a

A

	A	B
0	0	7
1	NA	3
2	9	2
3	5	0
4	3	4
5	NA	3

B

	A	B	foobar
0	0	7	a
1	NA	3	b

C

	A
0	0
1	NA
2	9
3	5
4	3
5	NA

D

3. **Briefly explain why you chose your answer:**

_____

4. **2. Do these both return the first few rows of a dataframe called 'df'?** *

Python: `df.head()` **R:** `head(df)`

Mark only one oval.

- Yes
- No

5. **Briefly explain why you chose your answer:**

_____

Dataframe df:

	A	B	foobar
0	0.0	7	a
1	NaN	3	b
2	9.0	2	c
3	5.0	0	d
4	3.0	4	e
5	NaN	3	f

6. **3. The following snippet returns a _____ in Python and returns a _____ in R.** *

```
df[['B']]
```

Mark only one oval.

- dataframe; dataframe
- series; dataframe
- dataframe; vector
- vector; dataframe

7. **Briefly explain why you chose your answer:**

Dataframe df:

	A	B	foobar
0	0.0	7	a
1	NaN	3	b
2	9.0	2	c
3	5.0	0	d
4	3.0	4	e
5	NaN	3	f

8. **4. Do these both reference the column A?** *

Python: `df.A` **R:** `df$A`

Mark only one oval.

- Yes
- No

9. **Briefly explain why you chose your answer:**

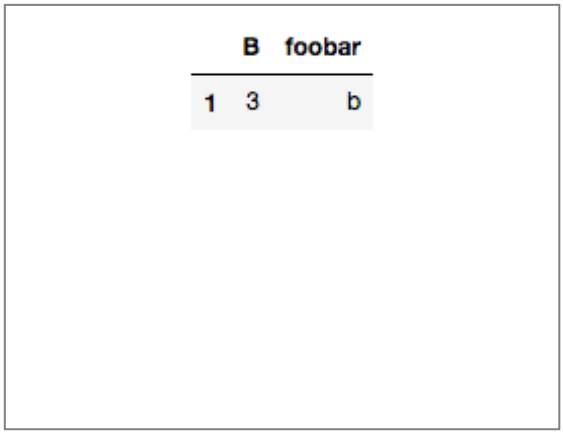
Dataframe df:

	A	B	foobar
0	0.0	7	a
1	NaN	3	b
2	9.0	2	c
3	5.0	0	d
4	3.0	4	e
5	NaN	3	f

10. **5. What does the following R code output?** *

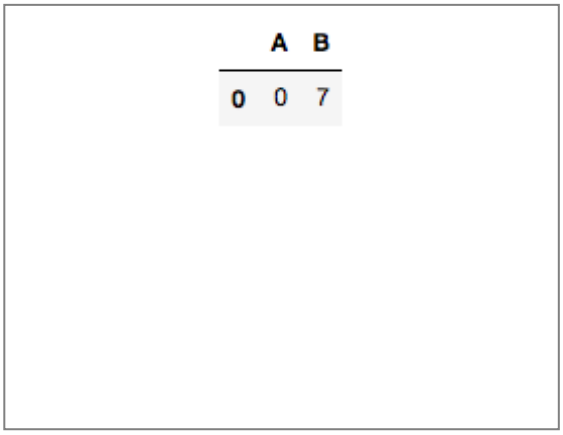
```
df[1:2, 1:3]
```

Mark only one oval.



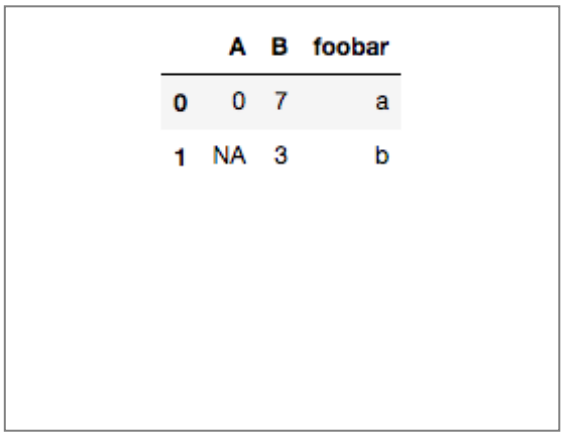
	B	foobar
1	3	b

A



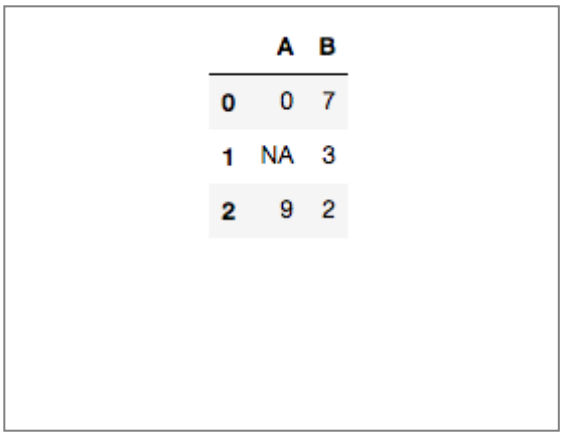
	A	B
0	0	7

B



	A	B	foobar
0	0	7	a
1	NA	3	b

C



	A	B
0	0	7
1	NA	3
2	9	2

D

11. **Briefly explain why you chose your answer:**

Dataframe df:

	A	B	foobar
0	0.0	7	a
1	NaN	3	b
2	9.0	2	c
3	5.0	0	d
4	3.0	4	e
5	NaN	3	f

12. **6. Do these both retrieve rows of df where column foobar is 'a'?** *

Python: `df.query("foobar == 'a'")` **R:** `filter(df, foobar == 'a')`

Mark only one oval.

- ◯ Yes
- ◯ No

13. **Briefly explain why you chose your answer:**

Dataframe df:

	A	B	foobar
0	0.0	7	a
1	NaN	3	b
2	9.0	2	c
3	5.0	0	d
4	3.0	4	e
5	NaN	3	f

14. **7. What does the following R code output?** *

```
df[df$A > 1, ]
```

Mark only one oval.

	A	B	foobar
NA	NA	NA	NA
2	9	2	c
3	5	0	d
4	3	4	e
NA.1	NA	NA	NA

A

	A	B	foobar
2	9.0	2	c
3	5.0	0	d
4	3.0	4	e

B

	A	B	foobar
0	0	7	a
NA	NA	NA	NA
NA.1	NA	NA	NA

C

	A	B	foobar
1	NaN	3	b
2	9.0	2	c
3	5.0	0	d
4	3.0	4	e
5	NaN	3	f

D

15. **Briefly explain why you chose your answer:**

Dataframe df:

	A	B	foobar
0	0.0	7	a
1	NaN	3	b
2	9.0	2	c
3	5.0	0	d
4	3.0	4	e
5	NaN	3	f

16. **8. Do these both return a dataframe with columns A and B?** *

Python: `df[['A', 'B']]` **R:** `select(df, 'A', 'B')`

Mark only one oval.

- Yes
- No

17. **Briefly explain why you chose your answer:**

Dataframe df:

	A	B	foobar
0	0.0	7	a
1	NaN	3	b
2	9.0	2	c
3	5.0	0	d
4	3.0	4	e
5	NaN	3	f

18. **9. Which of these R snippets would select rows where column A does NOT contain a missing value NA?** *

Mark only one oval.

```
df[!is.na(df$A)]
```

A

```
df[~df.A.isna()]
```

B

```
df[!is.na(df$A), ]
```

C

```
df[~df$A.isna()]
```

D

19. **Briefly explain why you chose your answer:**

Dataframe df:

	A	B	foobar
0	0.0	7	a
1	NaN	3	b
2	9.0	2	c
3	5.0	0	d
4	3.0	4	e
5	NaN	3	f

20. **10. Do these both retrieve rows of df where the column foobar is 'a'?** *

Python: `df.loc[df.foobar == 'a', ]` **R:** `df[df$foobar == 'a', ]`

Mark only one oval.

- Yes
- No

21. **Briefly explain why you chose your answer:**

Exit Survey

Below, we ask you to rate your experience with Python, the Pandas library and R.

22. **How familiar are you with Python?** *

Mark only one oval.

	1	2	3	4	5	
Unfamiliar						Very Familiar

23. **How familiar are you with Python's Pandas library?** *

Mark only one oval.

	1	2	3	4	5	
Unfamiliar						Very Familiar

24. **How familiar are you with R?** *

Mark only one oval.

	1	2	3	4	5	
Unfamiliar						Very Familiar

Thank you!

Thanks for contributing to our research. Our goal is to help people transfer knowledge from one programming language to another. We are currently investigating misconceptions programmers might hold onto when switching to a new language. Contact Nischal at nshrest@ncsu.edu if you have any further questions and/or comments.

25. **Is it ok if we contact you for any follow-up questions we might have?** *

Mark only one oval.

- ◯ Yes
- ◯ No

☐ Send me a copy of my responses.
