**UPDATE: dplyr has been updated since this question was asked and now performs as the OP wanted**

I´m trying to get the second to the seventh line in a data.frame using dplyr.

I´m doing this:

require(dplyr)

df <- data.frame(id = 1:10, var = runif(10))

df <- df %>% filter(row\_number() <= 7, row\_number() >= 2)

But this throws an error.

Error in rank(x, ties.method = "first") :

argument "x" is missing, with no default

I know i could easily make:

df <- df %>% mutate(rn = row\_number()) %>% filter(rn <= 7, rn >= 2)

But I would like to understand why my first try is not working.

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[Jonno Bourne](https://stackoverflow.com/users/2737503/jonno-bourne)

92511334

asked Sep 23 '14 at 11:46

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[Daniel Falbel](https://stackoverflow.com/users/3297472/daniel-falbel)

81611329

* 8

df %>% filter(row\_number() %in% 2:7) – [akrun](https://stackoverflow.com/users/3732271/akrun" \o "414,047 reputation) [Sep 23 '14 at 11:59](https://stackoverflow.com/questions/25994307/filtering-data-frame-based-on-row-number#comment40707113_25994307)

* I could do that too, but why df <- df %>% filter(row\_number() <= 7, row\_number() >= 2) is wrong? – [Daniel Falbel](https://stackoverflow.com/users/3297472/daniel-falbel) [Sep 23 '14 at 12:04](https://stackoverflow.com/questions/25994307/filtering-data-frame-based-on-row-number#comment40707261_25994307)
* I don't know the real reason behind that. A double filter appears to work. – [akrun](https://stackoverflow.com/users/3732271/akrun" \o "414,047 reputation) [Sep 23 '14 at 12:05](https://stackoverflow.com/questions/25994307/filtering-data-frame-based-on-row-number#comment40707326_25994307)
* 4

It's a bug. Please file an issue on [github.com/hadley/dplyr/issues](https://github.com/hadley/dplyr/issues) – [hadley](https://stackoverflow.com/users/16632/hadley" \o "80,076 reputation) [Sep 23 '14 at 22:53](https://stackoverflow.com/questions/25994307/filtering-data-frame-based-on-row-number#comment40728896_25994307)

* 2

I think it is useful to have around as long as it is clear, that it is now out of date, this way, people (like me) looking for help can see that this is not a problem. I edited the post for clarity. – [Jonno Bourne](https://stackoverflow.com/users/2737503/jonno-bourne" \o "925 reputation) [Nov 16 '16 at 13:18](https://stackoverflow.com/questions/25994307/filtering-data-frame-based-on-row-number#comment68498662_25994307)

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70

Actually dplyr's slice function is made for this kind of subsetting:

df %>% slice(2:7)

(I'm a little late to the party but thought I'd add this for future readers)

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answered Feb 11 '16 at 19:59

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52.3k1179119

* 1

thanks, this was really helpful as the error reoccurred for me. I later found out that this is a inconsistency with how row\_number() treats data tables, see: [stackoverflow.com/questions/23861047/…](http://stackoverflow.com/questions/23861047/unique-rows-in-dplyr-row-number-from-tbl-dt-inconsistent-to-tbl-df) – [Alex](https://stackoverflow.com/users/2109289/alex) [Jun 21 '16 at 23:10](https://stackoverflow.com/questions/25994307/filtering-data-frame-based-on-row-number#comment63360226_35348901)

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28

The row\_number() function does not simply return the row number of each element and so can't be used like you want:

• ‘row\_number’: equivalent to ‘rank(ties.method = "first")’

You're not actually saying what you want the row\_number of. In your case:

df %>% filter(row\_number(id) <= 7, row\_number(id) >= 2)

works because id is sorted and so row\_number(id) is 1:10. I don't know what row\_number() evaluates to in this context, but when called a second time dplyr has run out of things to feed it and you get the equivalent of:

> row\_number()

Error in rank(x, ties.method = "first") :

argument "x" is missing, with no default

That's your error right there.

Anyway, that's **not** the way to select rows.

You simply need to subscript df[2:7,], or if you insist on pipes everywhere:

> df %>% "["(.,2:7,)

id var

2 2 0.52352994

3 3 0.02994982

4 4 0.90074801

5 5 0.68935493

6 6 0.57012344

7 7 0.01489950

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answered Sep 23 '14 at 12:37

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[Spacedman](https://stackoverflow.com/users/211116/spacedman)

73.4k996169

* 12

The purpose of row\_number() is definitely to return the row number (hence the name!) and this behaviour is a bug. (Also you don't need . in your piping example) – [hadley](https://stackoverflow.com/users/16632/hadley" \o "80,076 reputation) [Sep 23 '14 at 22:52](https://stackoverflow.com/questions/25994307/filtering-data-frame-based-on-row-number#comment40728882_25995324)

  Note to anyone thinking row\_number shows the row\_number code. It doesn't. You want the row\_number\_prototype C++ function. – [Spacedman](https://stackoverflow.com/users/211116/spacedman" \o "73,425 reputation) [Sep 24 '14 at 7:01](https://stackoverflow.com/questions/25994307/filtering-data-frame-based-on-row-number#comment40736825_25995324)

 1

Would you care to explain how the "["(.,2:7,) syntax works? It's really interesting solution. – [Konrad](https://stackoverflow.com/users/1655567/konrad) [Aug 4 '16 at 14:49](https://stackoverflow.com/questions/25994307/filtering-data-frame-based-on-row-number#comment64912591_25995324)

 3

Its just the way almost everything in R can be written as a function. Try "+"(1,3). – [Spacedman](https://stackoverflow.com/users/211116/spacedman" \o "73,425 reputation) [Aug 4 '16 at 15:12](https://stackoverflow.com/questions/25994307/filtering-data-frame-based-on-row-number#comment64913786_25995324)

 1

@Konrad as alternative you can write, slightly more readable than the "[" syntax: df %>% .[2:7, ] – [Agile Bean](https://stackoverflow.com/users/7769076/agile-bean) [Dec 29 '17 at 9:49](https://stackoverflow.com/questions/25994307/filtering-data-frame-based-on-row-number#comment83010159_25995324)

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7

Here is another way to do row-number based filtering in a pipeline.

df <- data.frame(id = 1:10, var = runif(10))

df %>% .[2:7,]

> id var

2 2 0.28817

3 3 0.56672

4 4 0.96610

5 5 0.74772

6 6 0.75091

7 7 0.05165

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answered Feb 11 '16 at 18:56

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[dabsingh](https://stackoverflow.com/users/1252338/dabsingh)

161129

* It's slower than slice, but it does't drop NA (e.g. df %>% .[c(NA,2,4,7),]) which could be useful in some cases. – [Bastien](https://stackoverflow.com/users/4366703/bastien) [Jan 9 '18 at 12:53](https://stackoverflow.com/questions/25994307/filtering-data-frame-based-on-row-number#comment83316455_35347717)