

Lab 5 Team Activity 1:
Section: 516

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Variables:

sex= male or female
age= user input
BMI = from 0 to 30, user input
hypertension= on medication or not
steroids= on steroids or not
smoker= do you smoke or not and have you ever
history=do you have family history of diabetes
n= part of the formula
risk= risk of developing type 2 diabetes

Sequence of steps:

- Input sex (male or female)
 - Assign particular float value to sex
- Input age
- Input BMI
 - Use if statements to assign certain risk value to inputted BMI
- Input if you are on medication
 - Assign value if y, else value = 0
- Input if you are on steroids or not
 - Assign value if y, else value = 0
- Input if you smoke
 - Assign value if y, else value = 0
- Input if you have ever smoked
 - Assign value if y, else value = 0
- Input if your family has a history of diabetes
 - Assign value if y, else value = 0
 - And if your sibling or parents have it
- Compute for n using all of these inputs
- Compute for your risk of developing type 2 diabetes
- Print answer

#	Case Type	Case description, case base, purpose	Input	Expected output
1	Typical	Test for a generic healthy teenager	Sex: male Age: 18 BMI: 24 Hypertension meds: N Steroids: N Cigarettes: N, used to smoke: N History: N	Expected value < 1
2	edge	Random erroneous values	Sex: 5 Age: 18 BMI: 24 Hypertension meds: N Steroids: N Cigarettes: N, used to smoke: N History: N	error
3	edge	Random erroneous values	Sex: m Age: asidufh BMI: 24 Hypertension meds: N Steroids: N Cigarettes: N, used to smoke: N History: N	error
4	edge	Random erroneous values	Sex: f Age: 18 BMI: asidfh Hypertension meds: N Steroids: N	error

			Cigarettes: N, used to smoke: N History: N	
5	edge	Random erroneous values	Sex: f Age: 18 BMI: 24 Hypertension meds: 404 Steroids: N Cigarettes: N, used to smoke: N History: N	error
6	edge	Random erroneous values	Sex: f Age: 18 BMI: 24 Hypertension meds: N Steroids: 404 Cigarettes: N, used to smoke: N History: N	error
7	edge	Random erroneous values	Sex: m Age: 18 BMI: 24 Hypertension meds: N Steroids: N Cigarettes: 404, used to smoke: N History: N	error
8	edge	Random erroneous values	Sex: m Age: 18 BMI: 24 Hypertension meds: N Steroids: N Cigarettes: N, used to smoke: 404 History: N	error

9	edge	Random erroneous values	Sex: 5 Age: 18 BMI: 24 Hypertension meds: N Steroids: N Cigarettes: N, used to smoke: N History: 404	error
10	edge	Negative age value	Age: -1	error
11	corner	Middle aged Female, very high BMI, on Hypertension meds and steroids who smokes and has family history	Sex: F Age:35 BMI:29 Hypertension:Y Steroids:N Smoker now:Y Smoker history:Y History:N	Very High
12	corner	Old Male, low bmi, no medication, smoking, or family history.	Sex: M Age:80 BMI:7 Hypertension:N Steroids:N Smoker now:N Smoker history:N History:N	Lowish
13	corner	Young male, high bmi, taking steroids who smokes and has family history.	Sex: M Age:17 BMI:35 Hypertension:N Steroids:Y Smoker now:Y Smoker history:Y History:Y	Very High
14	corner	Young female, low bmi, on medication,	Sex: F Age:7	Low

		who smokes and has family history.	BMI:6 Hypertension:Y Steroids:Y Smoker now:Y Smoker history:Y History:Y	
15	corner	Old Female, High BMI, Smokes but on no medication and no family history	Sex: F Age:90 BMI:29 Hypertension:N Steroids:N Smoker now:Y Smoker history:N History:N	Very High
16	corner	Old Female, Low BMI, Smokes and on meds, but no history	Sex: F Age:99 BMI:8 Hypertension:Y Steroids:Y Smoker now:Y Smoker history:N History:N	Extremely High
17	corner	Young Male, high BMI, hypertension meds only, no history and doesn't smoke	Sex: M Age:5 BMI:40 Hypertension:Y Steroids:N Smoker now:N Smoker history:N History:N	Low
18	corner	Old Male, High BMI, on all meds, smokes, and history	Sex: M Age:79 BMI:30 Hypertension:Y Steroids:Y Smoker now:Y Smoker history:Y	Almost Guaranteed

			History:N	
19	corner	Old Female, High BMI, on all meds, smokes, and history	Sex: F Age:85 BMI:35 Hypertension:Y Steroids:Y Smoker now:Y Smoker history:Y History:Y	Almost Guaranteed
20	corner	Young male, very low bmi, no history, no smoking, no meds	Sex: M Age:4 BMI:4 Hypertension: N Steroids: N Smoker now: N Smoker history: N History: N	Extremely Low
21	edge	extremely high BMI for female on steroids and has history	Sex: F Age:30 BMI:29.99 Hypertension:N Steroids:Y Smoker now:N Smoker history:N History:Y	on lower side
22	edge	extremely high BMI for female mid twenties	Sex: F Age:26 BMI:30 Hypertension:Y Steroids:N Smoker now:N Smoker history:N History:N	pretty low
23	edge	High BMI for female in her forties	Sex: F Age:40	low

			BMI:30.01 Hypertension:N Steroids:N Smoker now:Y Smoker history:Y History:N	
24	edge	Edge of BMI scale for female	Sex: F Age:35 BMI:27.49 Hypertension:Y Steroids:N Smoker now:Y Smoker history:N History:N	low
25	edge	Edge of BMI scale for female	Sex: F Age:50 BMI:27.5 Hypertension:N Steroids:Y Smoker now:N Smoker history:N History:Y	Pretty high
26	edge	Edge of BMI scale for female	Sex: F Age:65 BMI:27.48 Hypertension:Y Steroids:N Smoker now:N Smoker history:Y History:N	low
27	edge	Low edge of BMI scale for female	Sex: F Age:16 BMI:24.99 Hypertension:N Steroids:N Smoker now:Y Smoker history:N	Extremely low

			History:Y	
28	edge	Low edge BMI scale for female	Sex: F Age:49 BMI:25 Hypertension:N Steroids:N Smoker now:N Smoker history:Y History:N	Extremely low
29	edge	Low edge BMI scale for female	Sex: F Age:52 BMI:25.01 Hypertension:N Steroids:N Smoker now:N Smoker history:N History:Y	Extremely low
30	edge	high edge BMI scale for female	Sex: F Age:80 BMI: 35 Hypertension:Y Steroids:N Smoker now:N Smoker history:N History:N	Extremely high
31	typical	Female normal teenager	Sex: F Age:17 BMI:26 Hypertension:N Steroids:N Smoker now:N Smoker history:N History:N	Extremely low
32	typical	Female in young twenties that smokes	Sex: F Age:23	Pretty low

			BMI:28 Hypertension:N Steroids:N Smoker now:Y Smoker history:Y History:N	
33	typical	Female in older twenties on hypertension	Sex: F Age:27 BMI:27 Hypertension:Y Steroids:N Smoker now:N Smoker history:N History:N	Extremely low
34	typical	Female in mid twenties with history of diabetes	Sex: F Age:25 BMI:29 Hypertension:N Steroids:N Smoker now:N Smoker history:N History:Y	Extremely low
35	typical	Female in thirties who is on steroids and smokes	Sex: F Age:34 BMI:26.5 Hypertension:N Steroids:Y Smoker now:Y Smoker history:Y History:N	low
36	typical	Female in forties with history of diabetes	Sex: F Age:46 BMI:28.3 Hypertension:N Steroids:N Smoker now:N Smoker history:N	low

			History:Y	
37	typical	Female in fifties on medication and smokes	Sex: F Age:57 BMI:29.8 Hypertension:Y Steroids:N Smoker now:Y Smoker history:Y History:N	Fairly high
38	typical	Female in sixties who has a history of diabetes	Sex: F Age:61 BMI:25.8 Hypertension:N Steroids:N Smoker now:N Smoker history:N History:Y	Low
39	typical	Female in eighties who is very healthy	Sex: F Age:86 BMI:26.5 Hypertension:N Steroids:N Smoker now:N Smoker history:N History:N	In the middle
40	typical	Female in nineties who has smoked and takes medicine	Sex: F Age:93 BMI:28 Hypertension:Y Steroids:N Smoker now:Y Smoker history:Y History:N	Extremely high

#	Case Type	Case description, case base, purpose	Input	Output
1	Typical	Test for a generic healthy teenager	Sex: male Age: 18 BMI: 24 Hypertension meds: N Steroids: N Cigarettes: N used to smoke: N History: N	0.4%
2	edge	Random erroneous values	Sex: 5 Age: 18 BMI: 24 Hypertension meds: N Steroids: N Cigarettes: N, used to smoke: N History: N	error

3	edge	Random erroneous values	Sex: m Age: asidufh BMI: 24 Hypertension meds: N Steroids: N Cigarettes: N used to smoke: N History: N	error
4	edge	Random erroneous values	Sex: f Age: 18 BMI: asidfh Hypertension meds: N Steroids: N Cigarettes: N used to smoke: N History: N	error
5	edge	Random erroneous values	Sex: f Age: 18 BMI: 24 Hypertension meds: 404 Steroids: N Cigarettes: N used to smoke: N History: N	error
6	edge	Random erroneous values	Sex: f Age: 18 BMI: 24 Hypertension meds: N Steroids: 404 Cigarettes: N used to smoke: N History: N	error
7	edge	Random erroneous values	Sex: m Age: 18 BMI: 24	error

			Hypertension meds: N Steroids: N Cigarettes: 404, used to smoke: N History: N	
8	edge	Random erroneous values	Sex: m Age: 18 BMI: 24 Hypertension meds: N Steroids: N Cigarettes: N used to smoke: 404 History: N	error
9	edge	Random erroneous values	Sex: 5 Age: 18 BMI: 24 Hypertension meds: N Steroids: N Cigarettes: N, used to smoke: N History: 404	error
10	edge	Negative age value	Age: -1	error
11	corner	Middle aged Female, very high BMI, on Hypertension meds and steroids who smokes and has family history	Sex: F Age:35 BMI:29 Hypertension:Y Steroids:N Smoker now:Y Smoker history:Y History:N	27.9%
12	corner	Old Male, low bmi, no medication, smoking, or family history.	Sex: M Age:80 BMI:7 Hypertension:N Steroids:N	21.7%

			Smoker now:N Smoker history:N History:N	
13	corner	Young male, high bmi, taking steroids who smokes and has family history.	Sex: M Age:17 BMI:35 Hypertension:N Steroids:Y Smoker now:Y Smoker history:Y History:Y	74.4%
14	corner	Young female, low bmi, on medication, who smokes and has family history.	Sex: F Age:7 BMI:6 Hypertension:Y Steroids:Y Smoker now:Y Smoker history:Y History:Y	14.9%
15	corner	Old Female, High BMI, Smokes but on no medication and no family history	Sex: F Age:90 BMI:29 Hypertension:N Steroids:N Smoker now:Y Smoker history:N History:N	78.5%
16	corner	Old Female, Low BMI, Smokes and on meds, but no history	Sex: F Age:99 BMI:8 Hypertension:Y Steroids:Y Smoker now:Y Smoker history:N History:N	96.5%

17	corner	Young Male, high BMI, hypertension meds only, no history and doesn't smoke	Sex: M Age:5 BMI:40 Hypertension:Y Steroids:N Smoker now:N Smoker history:N History:N	9.4%
18	corner	Old Male, High BMI, on all meds, smokes, and history	Sex: M Age:79 BMI:30 Hypertension:Y Steroids:Y Smoker now:Y Smoker history:Y History:N	99.6%
19	corner	Old Female, High BMI, on all meds, smokes, and history	Sex: F Age:85 BMI:35 Hypertension:Y Steroids:Y Smoker now:Y Smoker history:Y History:Y	99.7%
20	corner	Young male, very low bmi, no history, no smoking, no meds	Sex: M Age:4 BMI:4 Hypertension: N Steroids: N Smoker now: N Smoker history: N History: N	0.2%
21	edge	extremely high BMI for female on steroids and has history	Sex: F Age:30 BMI:29.99 Hypertension:N Steroids:Y	39.6%

			Smoker now:N Smoker history:N History:Y	
22	edge	extremely high BMI for female mid twenties	Sex: F Age:26 BMI:30 Hypertension:Y Steroids:N Smoker now:N Smoker history:N History:N	13.9%
23	edge	High BMI for female in her forties	Sex: F Age:40 BMI:30.01 Hypertension:N Steroids:N Smoker now:Y Smoker history:Y History:N	35.9%
24	edge	Edge of BMI scale for female	Sex: F Age:35 BMI:27.49 Hypertension:Y Steroids:N Smoker now:Y Smoker history:N History:N	27.9%
25	edge	Edge of BMI scale for female	Sex: F Age:50 BMI:27.5 Hypertension:N Steroids:Y Smoker now:N Smoker history:N History:Y	70.3%

26	edge	Edge of BMI scale for female	Sex: F Age:65 BMI:27.48 Hypertension:Y Steroids:N Smoker now:N Smoker history:Y History:N	19.7%
27	edge	Low edge of BMI scale for female	Sex: F Age:16 BMI:24.99 Hypertension:N Steroids:N Smoker now:Y Smoker history:N History:Y	0.5%
28	edge	Low edge BMI scale for female	Sex: F Age:49 BMI:25 Hypertension:N Steroids:N Smoker now:N Smoker history:Y History:N	2.6%
29	edge	Low edge BMI scale for female	Sex: F Age:52 BMI:25.01 Hypertension:N Steroids:N Smoker now:N Smoker history:N History:Y	7.6%
30	edge	high edge BMI scale for female	Sex: F Age:80 BMI: 35 Hypertension:Y Steroids:N	82.9%

			Smoker now:N Smoker history:N History:N	
31	typical	Female normal teenager	Sex: F Age:17 BMI:26 Hypertension:N Steroids:N Smoker now:N Smoker history:N History:N	0.4%
32	typical	Female in young twenties that smokes	Sex: F Age:23 BMI:28 Hypertension:N Steroids:N Smoker now:Y Smoker history:Y History:N	10.0%
33	typical	Female in older twenties on hypertension	Sex: F Age:27 BMI:27 Hypertension:Y Steroids:N Smoker now:N Smoker history:N History:N	2.7%
34	typical	Female in mid twenties with history of diabetes	Sex: F Age:25 BMI:29 Hypertension:N Steroids:N Smoker now:N Smoker history:N History:Y	5.2%

35	typical	Female in thirties who is on steroids and smokes	Sex: F Age:34 BMI:26.5 Hypertension:N Steroids:Y Smoker now:Y Smoker history:Y History:N	21.2%
36	typical	Female in forties with history of diabetes	Sex: F Age:46 BMI:28.3 Hypertension:N Steroids:N Smoker now:N Smoker history:N History:Y	16.7%
37	typical	Female in fifties on medication and smokes	Sex: F Age:57 BMI:29.8 Hypertension:Y Steroids:N Smoker now:Y Smoker history:Y History:N	60.8%
38	typical	Female in sixties who has a history of diabetes	Sex: F Age:61 BMI:25.8 Hypertension:N Steroids:N Smoker now:N Smoker history:N History:Y	12.9%
39	typical	Female in eighties who is very healthy	Sex: F Age:86 BMI:26.5 Hypertension:N Steroids:N	25.3%

			Smoker now:N Smoker history:N History:N	
40	typical	Female in nineties who has smoked and takes medicine	Sex: F Age:93 BMI:28 Hypertension:Y Steroids:N Smoker now:Y Smoker history:Y History:N	93.7%