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Machine Learning Problem Sets
(Problem Set 1)

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Contents

1 The number of divisors

Write a program that reads 20 numbers from the input and finally prints the number with the highest number of divisors along with the number of divisors in the output. If there are multiple numbers in this mode, print the largest number.

For this question, write a function that receives a number as input and prints the number of divisors of that number in the output. Then use this function in your program.

2   Age of the user

Write a program that asks the user to enter his/her age in years and prints the output exactly in the following format according to the following conditions:

- When age is less than or equal to 0, your program should print "UN-BORN".

- When age is greater than 0, less than 150, or equal to 150, your program should print "ALIVE".

- Your program should print "VAMPIRE" when the age is greater than 150.

3   Multiples of 3 or 5

If we list all the natural numbers below 10 that are multiples of 3 or 5, we get 3, 5, 6 and 9. The sum of these multiples is 23.

Write a program that it returns the sum of all the multiples of 3 or 5 <u>below</u> the number passed in. Additionally, if the number is negative, return 0.

Note: If the number is a multiple of both 3 and 5, only count it once.