Question 1

Define a function that allows the user to find the value of the nth term in the Fibonacci sequence. To make sure you've written your function correctly, test the first 10 numbers of the sequence. You can assume either that the first two terms are 0 and 1 or that they are both 1. If you do not know about the Fibonacci Sequence, read about it here https://en.wikipedia.org/wiki/Fibonacci_number

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Question 2

Define a function that creates a list of all the numbers that are factors of the user's number.

Example :

factor(36) => [1, 2, 3, 4, 6, 9, 12, 18, 36]

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Question 3

Find "iran" in the following list using indexing: lst = [1,2,[3,4],[5,[100,200,['iran']],34,23],3,5]

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Question **4**

Write a function that gets an email as input and returns the domain. Example : input : moeinheidari7829@gmail.com output : gmail

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Question 5

You are driving a little too fast, and a police officer stops you. Write a function to return one of 3 possible results: “No ticket”, “Small ticket”, or “Big Ticket”. If your speed is 60 or less, the result is “No Ticket”. If speed is between 61 and 80 inclusive, the result is “Small Ticket”. If speed is 81 or more, the result is “Big Ticket”. Unless it is your birthday (encoded as a boolean value in the parameters of the function) – on your birthday, your speed can be 5 higher in all cases.

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Question 6

First define the following variables:

planet = "earth" , diameter = "12742"

then display the following sentence in 2 ways : usual way , string formatting

"The diameter of earth is 12742 kilometers"

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