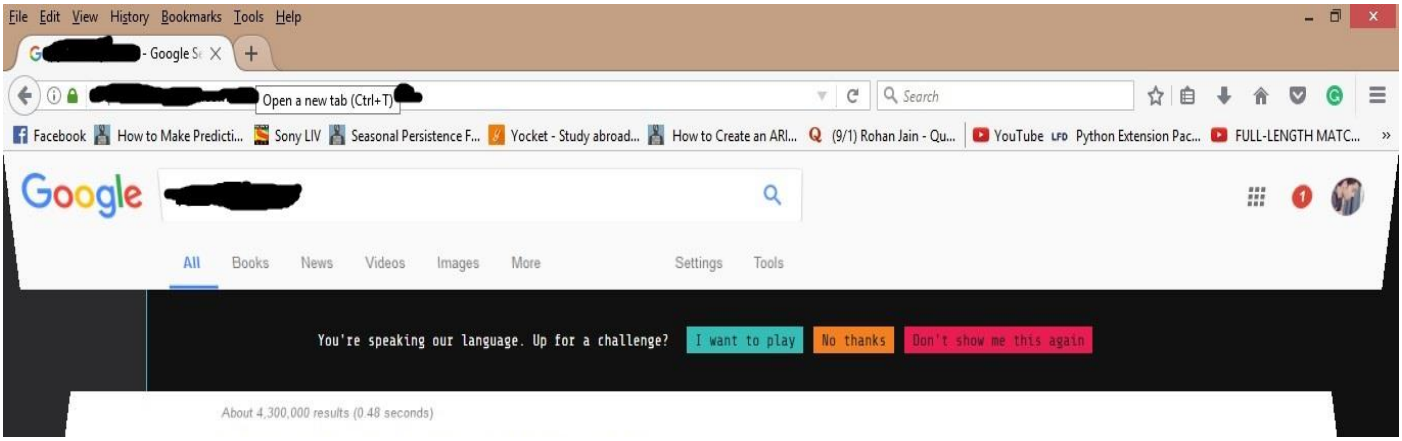
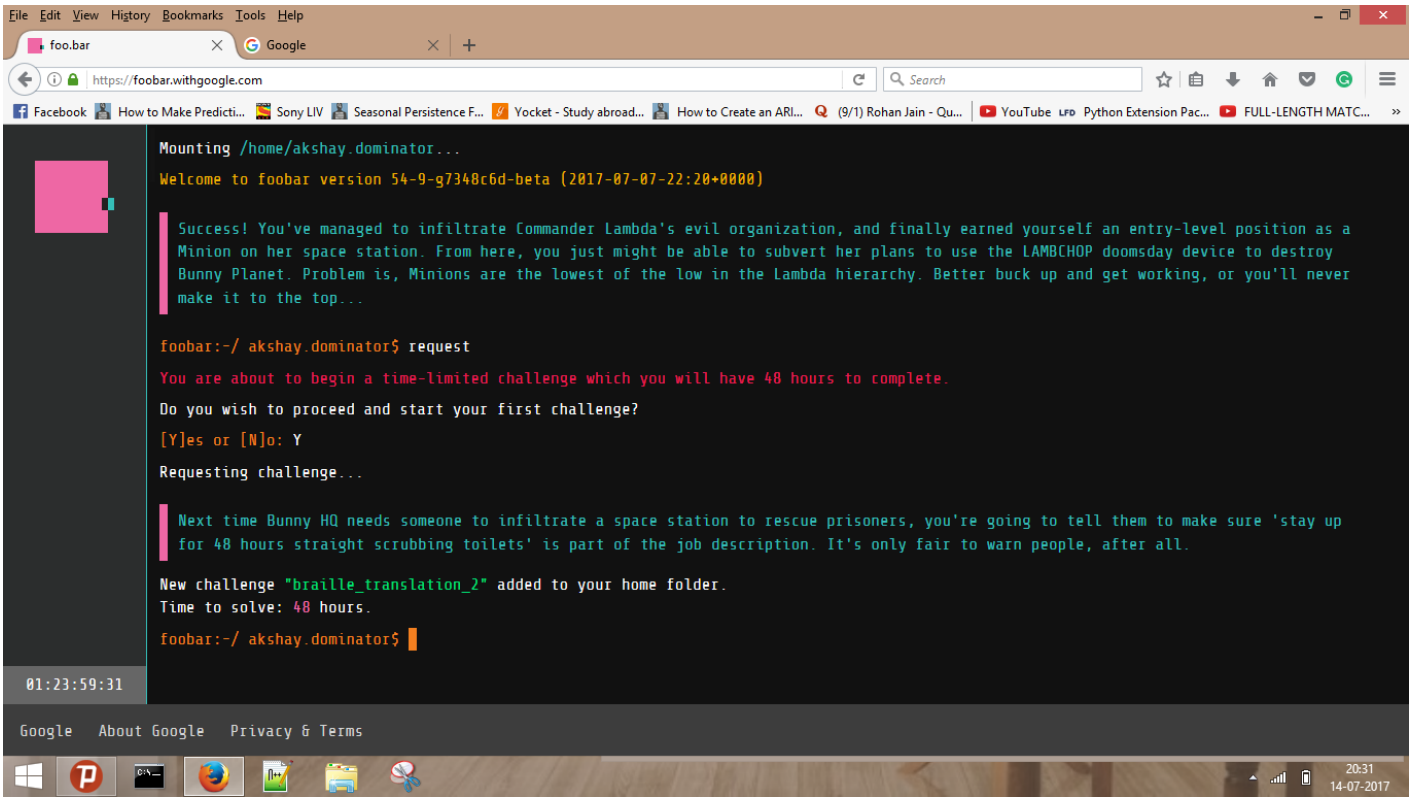
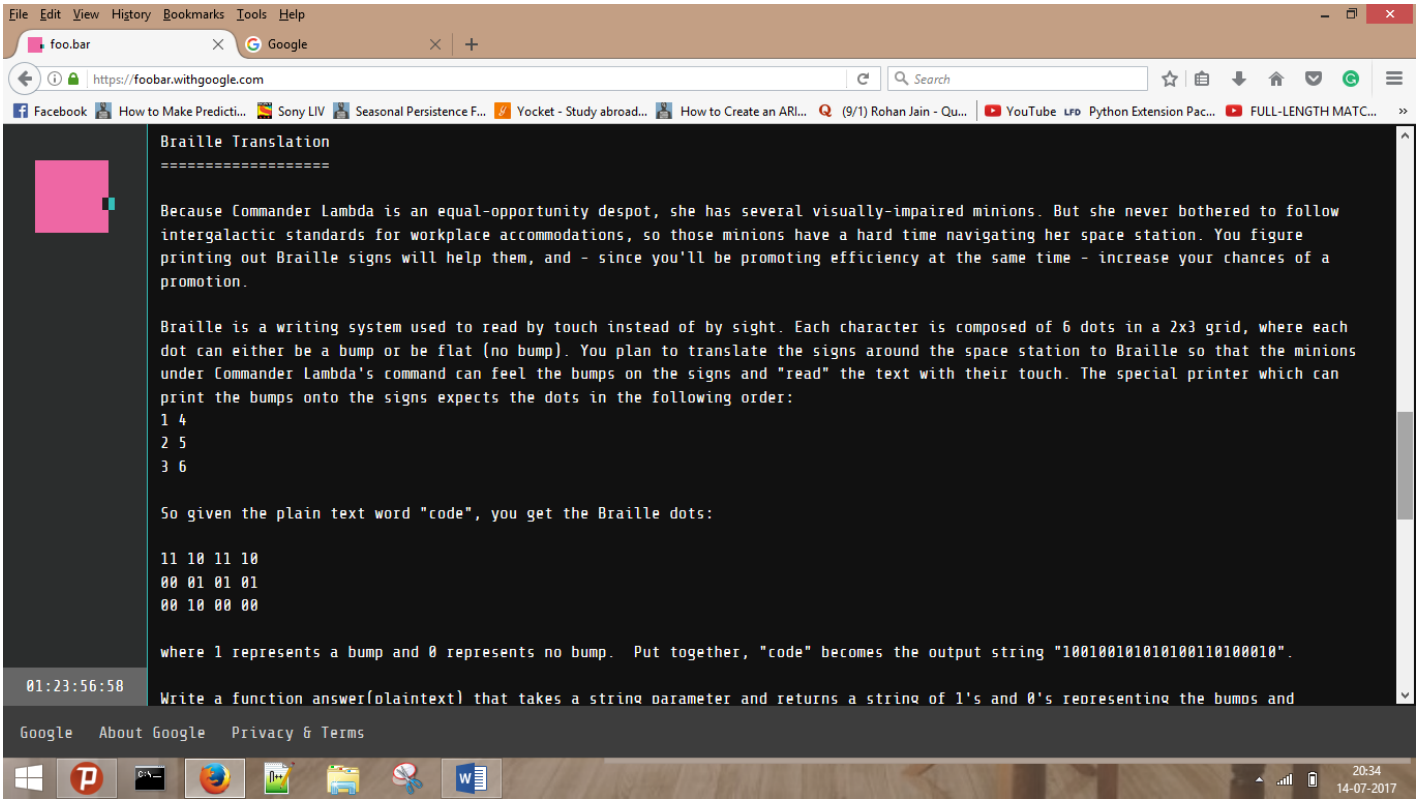
My experience with the Foo.bar challenge



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Braille Translation
==========
Because Commander Lambda is an equal-opportunity despot, she has several visually-impaired minions. But she never bothered to follow intergalactic standards for workplace accommodations, so those minions have a hard time navigating her space station. You figure printing out Braille signs will help them, and - since you'll be promoting efficiency at the same time - increase your chances of a promotion.
Braille is a writing system used to read by touch instead of by sight. Each character is composed of 6 dots in a 2x3 grid, where each dot can either be a bump or be flat (no bump). You plan to translate the signs around the space station to Braille so that the minions under Commander Lambda's command can feel the bumps on the signs and "read" the text with their touch. The special printer which can print the bumps onto the signs expects the dots in the following order:
1 4
2 5
3 6
So given the plain text word "code", you get the Braille dots:
11 10 11 10
00 01 01 01
00 10 00 00
where 1 represents a bump and 0 represents no bump. Put together, "code" becomes the output string "100100101010100110100010".
01:23:56:58
Write a function answer(plaintext) that takes a string parameter and returns a string of 1's and 0's representing the bumps and
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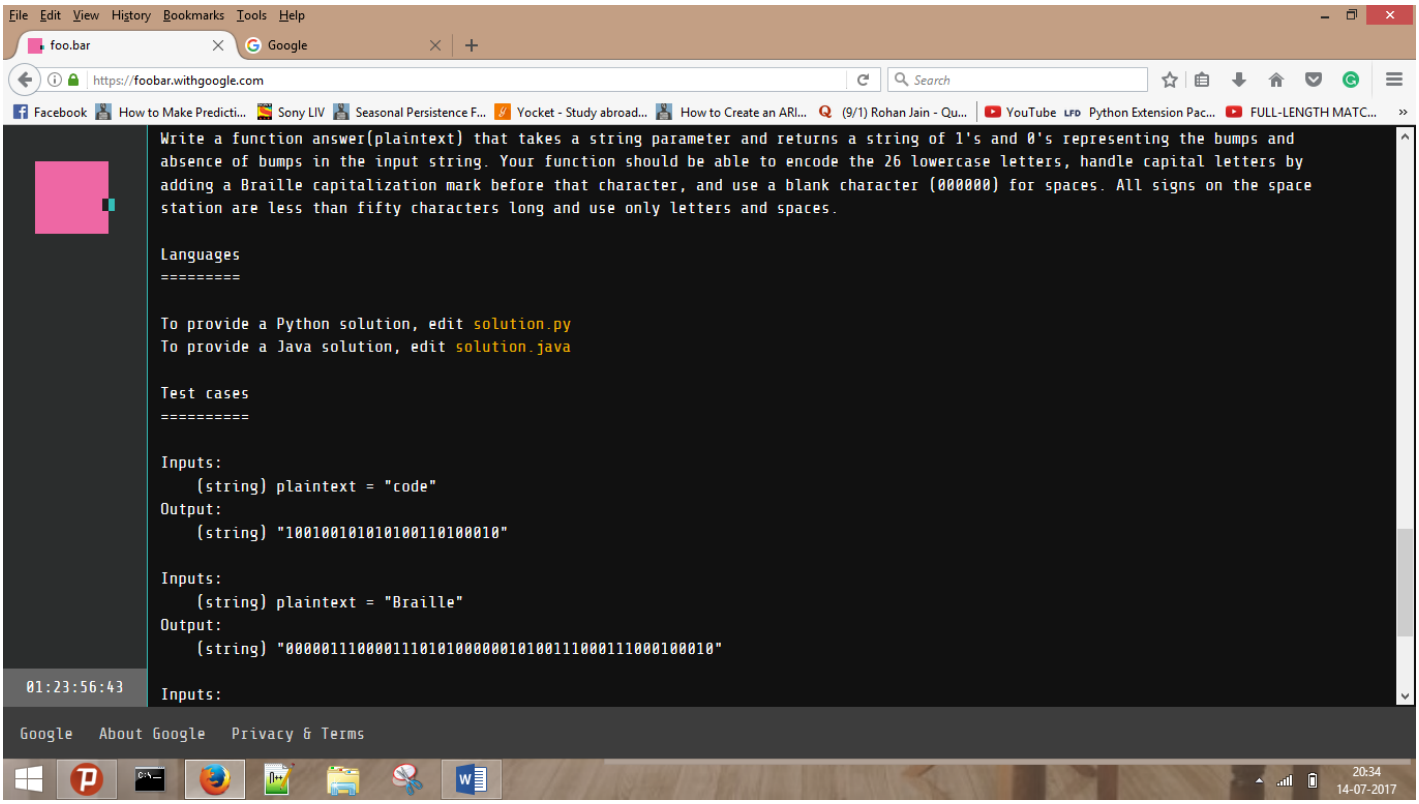
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Write a function answer(plaintext) that takes a string parameter and returns a string of 1's and 0's representing the bumps and absence of bumps in the input string. Your function should be able to encode the 26 lowercase letters, handle capital letters by adding a Braille capitalization mark before that character, and use a blank character (000000) for spaces. All signs on the space station are less than fifty characters long and use only letters and spaces.
Languages
=========
To provide a Python solution, edit solution.py
To provide a Java solution, edit solution.java
Test cases
==========
Inputs:
(string) plaintext = "code"
Output:
(string) "100100101010100110100010"
Inputs:
(string) plaintext = "Braille"
Output:
(string) "000000111000011101010000000101001110001110001000010"
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Inputs:
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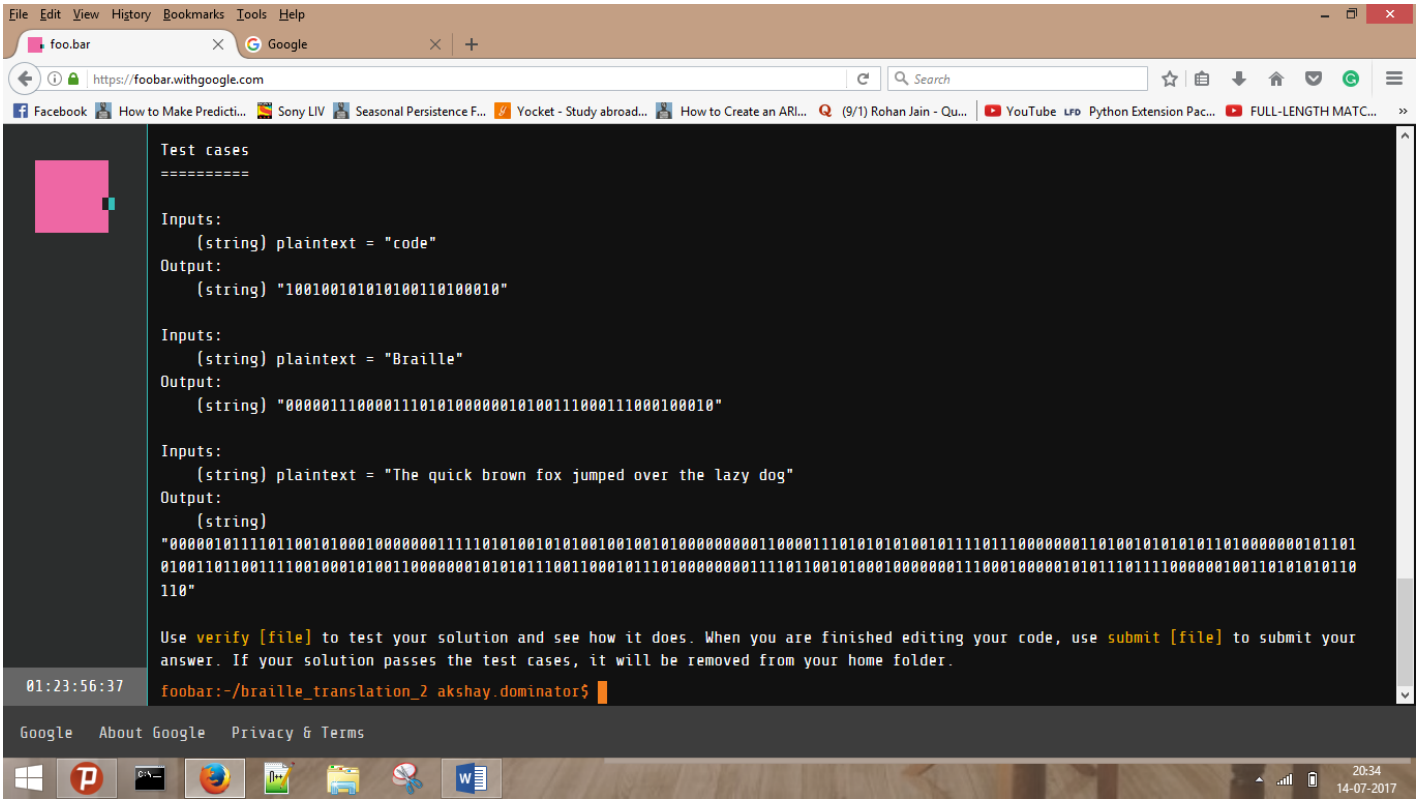
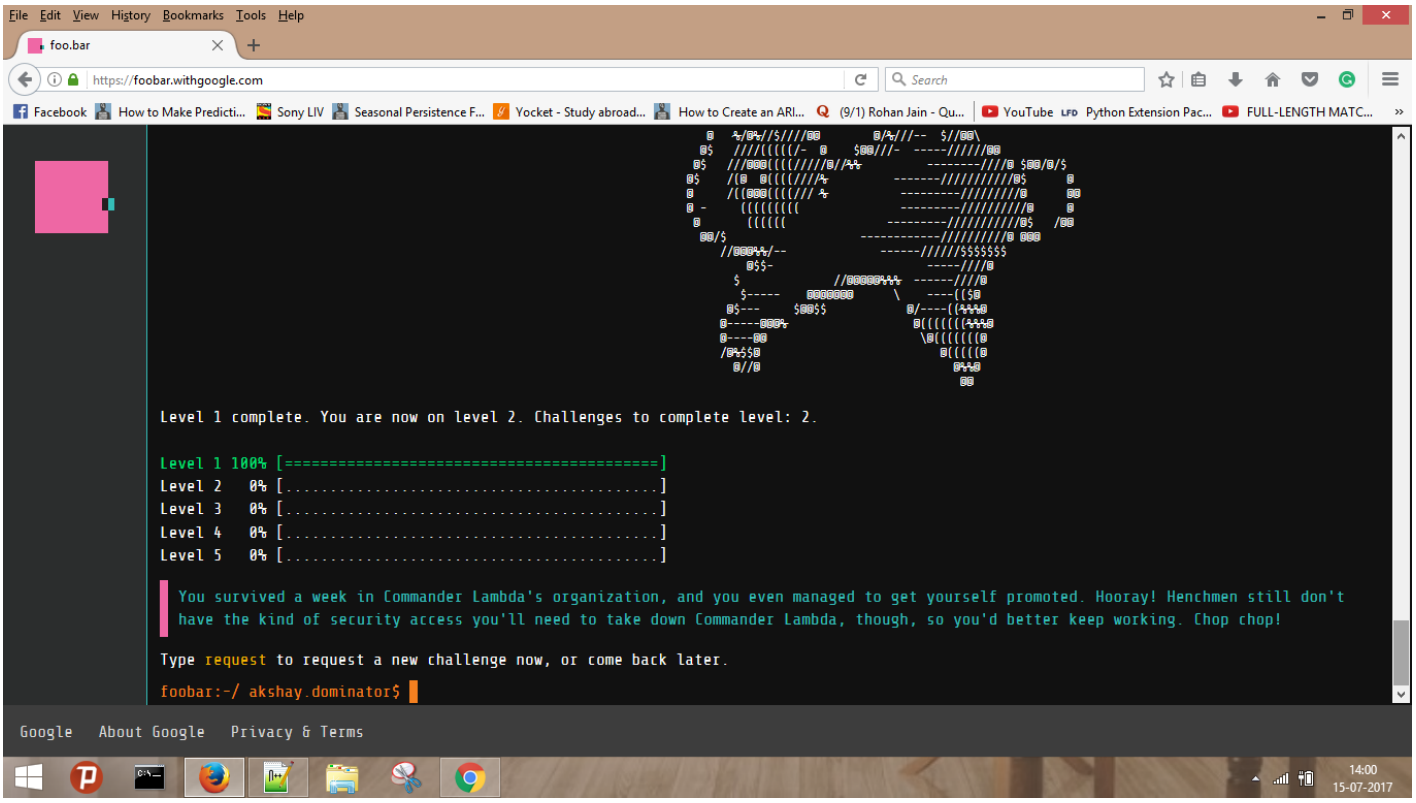
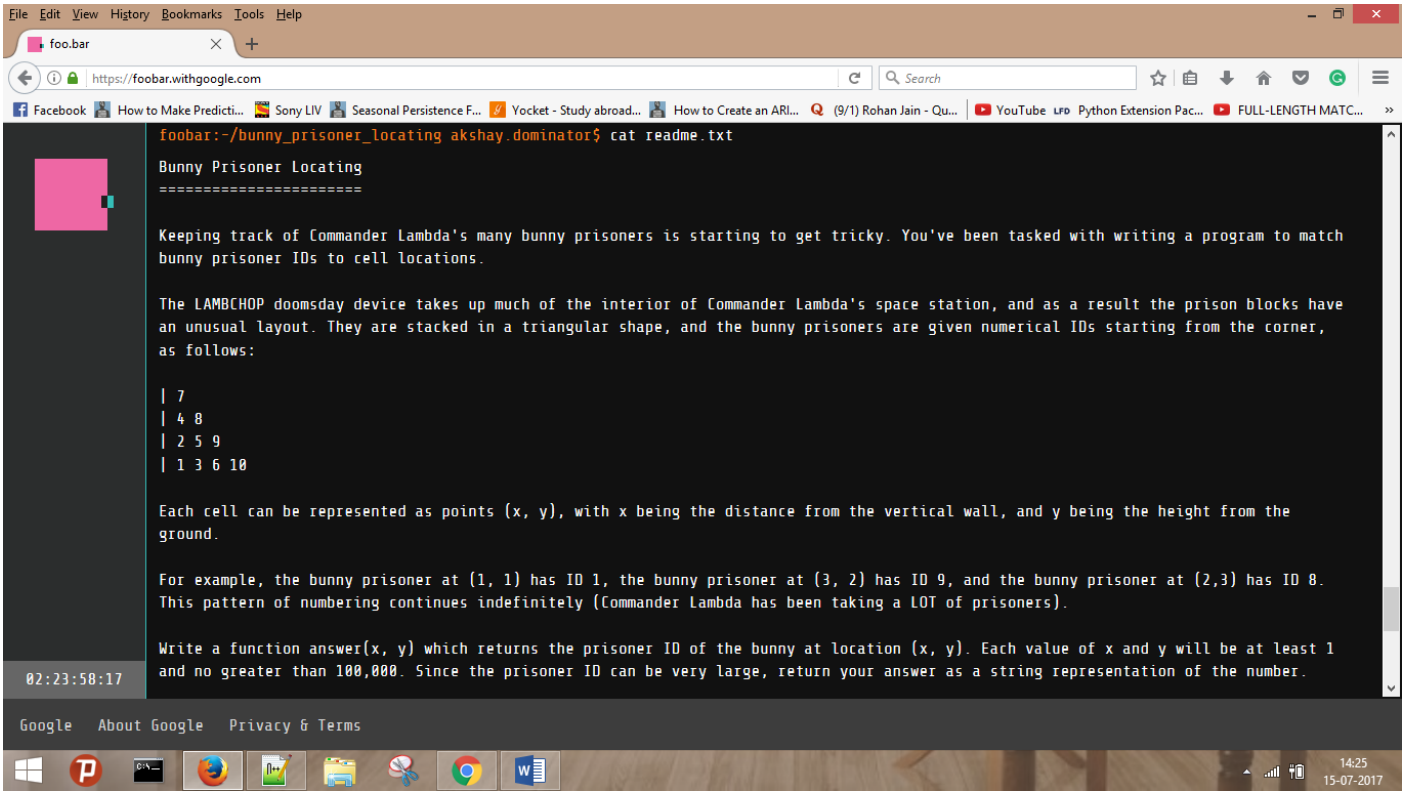




Question 2 BUNNY PRISONER LOCATING


foobar:~/bunny_prisoner_locating akshay.dominator$ cat readme.txt
Bunny Prisoner Locating
Keeping track of Commander Lambda's many bunny prisoners is starting to get tricky. You've been tasked with writing a program to match bunny prisoner IDs to cell locations.
The LAMBCHOP doomsday device takes up much of the interior of Commander Lambda's space station, and as a result the prison blocks have an unusual layout. They are stacked in a triangular shape, and the bunny prisoners are given numerical IDs starting from the corner, as follows:
| 7
| 4 8
| 2 5 9
| 1 3 6 10
Each cell can be represented as points (x, y), with x being the distance from the vertical wall, and y being the height from the ground.
For example, the bunny prisoner at (1, 1) has ID 1, the bunny prisoner at (3, 2) has ID 9, and the bunny prisoner at (2,3) has ID 8. This pattern of numbering continues indefinitely (Commander Lambda has been taking a LOT of prisoners).
Write a function answer(x, y) which returns the prisoner ID of the bunny at location (x, y). Each value of x and y will be at least 1 and no greater than 100,000. Since the prisoner ID can be very large, return your answer as a string representation of the number.
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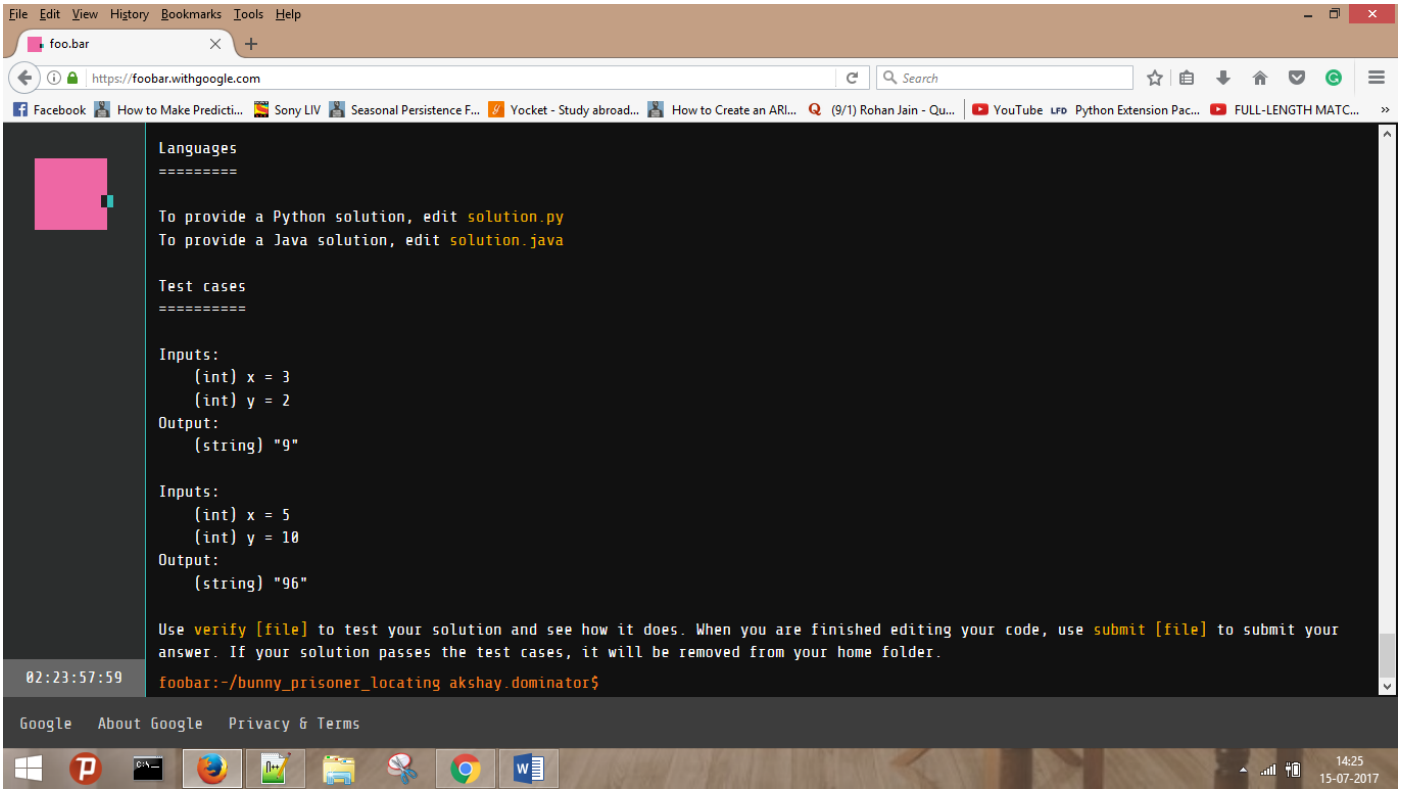
Languages
To provide a Python solution, edit solution.py
To provide a Java solution, edit solution.java
Test cases
Inputs:
(int) x = 3
(int) y = 2
Output:
(string) "9"
Inputs:
(int) x = 5
(int) y = 10
Output:
(string) "96"
Use verify [file] to test your solution and see how it does. When you are finished editing your code, use submit [file] to submit your answer. If your solution passes the test cases, it will be removed from your home folder.
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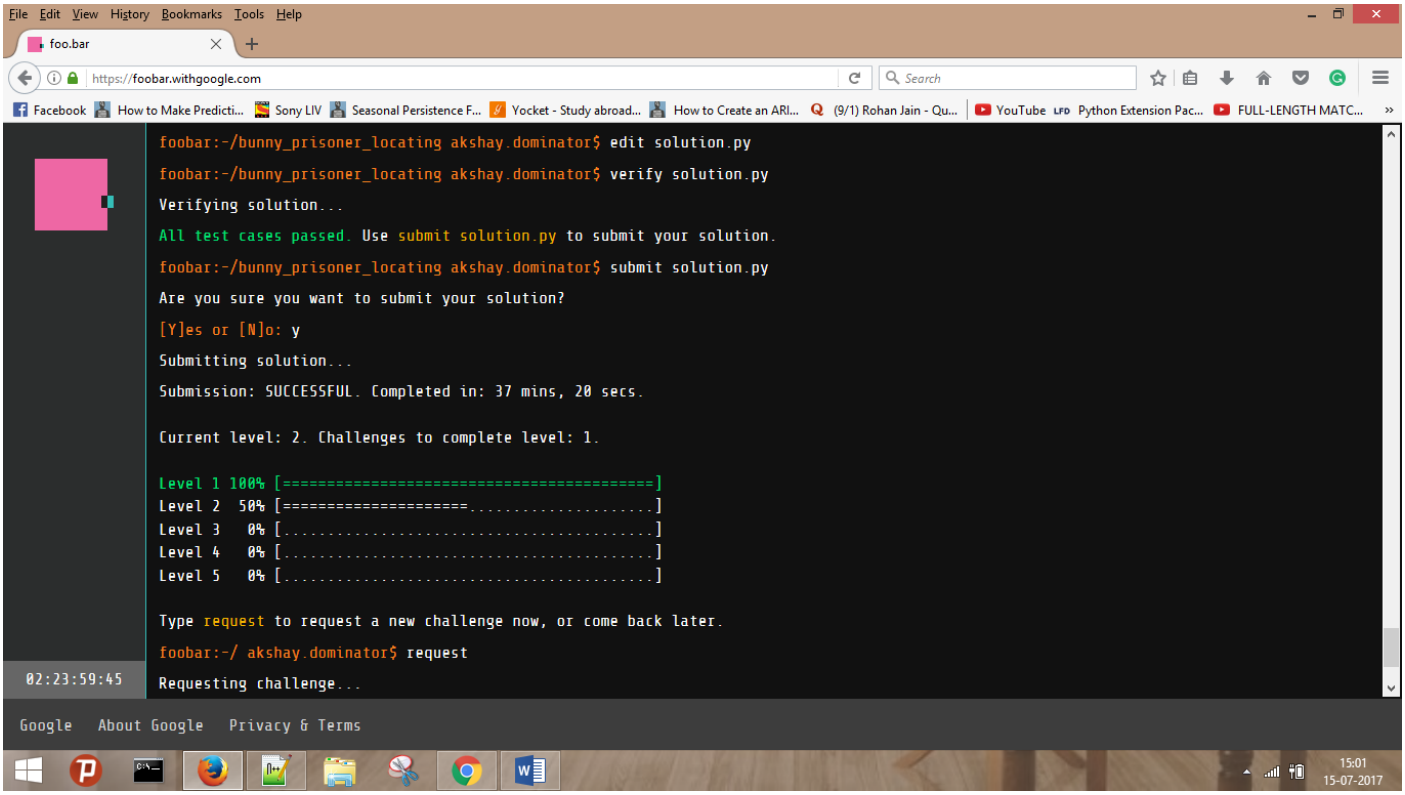
foobar:~/bunny_prisoner_locating akshay.dominator$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foobar:~/bunny_prisoner_locating akshay.dominator$ edit solution.py
foobar:~/bunny_prisoner_locating akshay.dominator$ verify solution.py
Verifying solution...
All test cases passed. Use submit solution.py to submit your solution.
foobar:~/bunny_prisoner_locating akshay.dominator$ submit solution.py
Are you sure you want to submit your solution?
[Y]es or [N]o: y
Submitting solution...
Submission: SUCCESSFUL. Completed in: 37 mins, 20 secs.
Current level: 2. Challenges to complete level: 1.
Level 1 100% [==========]
Level 2 50% [==========.....]
Level 3 0% [..........]
Level 4 0% [..........]
Level 5 0% [..........]
Type request to request a new challenge now, or come back later.
foobar:~/ akshay.dominator$ request
Requesting challenge...
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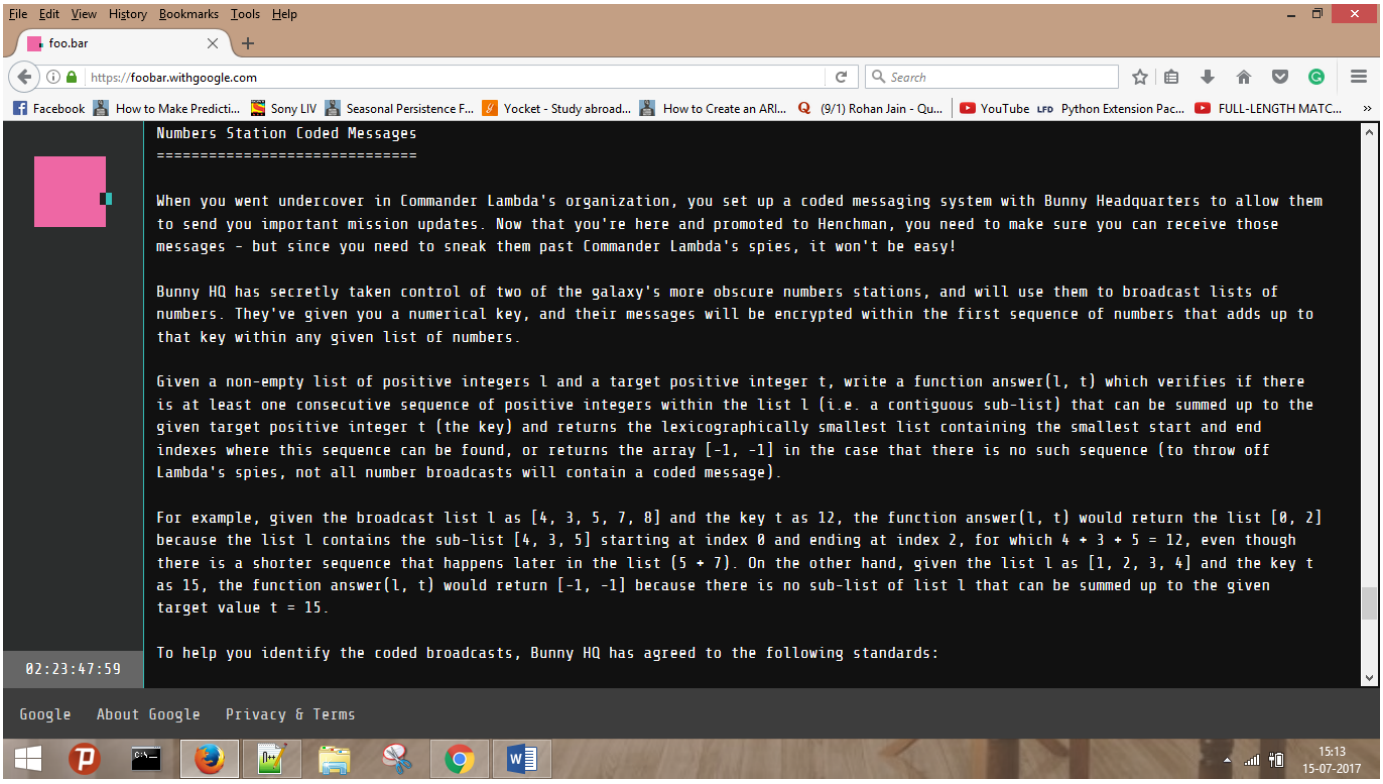
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Numbers Station Coded Messages
==========
When you went undercover in Commander Lambda's organization, you set up a coded messaging system with Bunny Headquarters to allow them to send you important mission updates. Now that you're here and promoted to Henchman, you need to make sure you can receive those messages - but since you need to sneak them past Commander Lambda's spies, it won't be easy!
Bunny HQ has secretly taken control of two of the galaxy's more obscure numbers stations, and will use them to broadcast lists of numbers. They've given you a numerical key, and their messages will be encrypted within the first sequence of numbers that adds up to that key within any given list of numbers.
Given a non-empty list of positive integers l and a target positive integer t, write a function answer(l, t) which verifies if there is at least one consecutive sequence of positive integers within the list l (i.e. a contiguous sub-list) that can be summed up to the given target positive integer t (the key) and returns the lexicographically smallest list containing the smallest start and end indexes where this sequence can be found, or returns the array [-1, -1] in the case that there is no such sequence (to throw off Lambda's spies, not all number broadcasts will contain a coded message).
For example, given the broadcast list l as [4, 3, 5, 7, 8] and the key t as 12, the function answer(l, t) would return the list [0, 2] because the list l contains the sub-list [4, 3, 5] starting at index 0 and ending at index 2, for which 4 + 3 + 5 = 12, even though there is a shorter sequence that happens later in the list (5 + 7). On the other hand, given the list l as [1, 2, 3, 4] and the key t as 15, the function answer(l, t) would return [-1, -1] because there is no sub-list of list l that can be summed up to the given target value t = 15.
To help you identify the coded broadcasts, Bunny HQ has agreed to the following standards:
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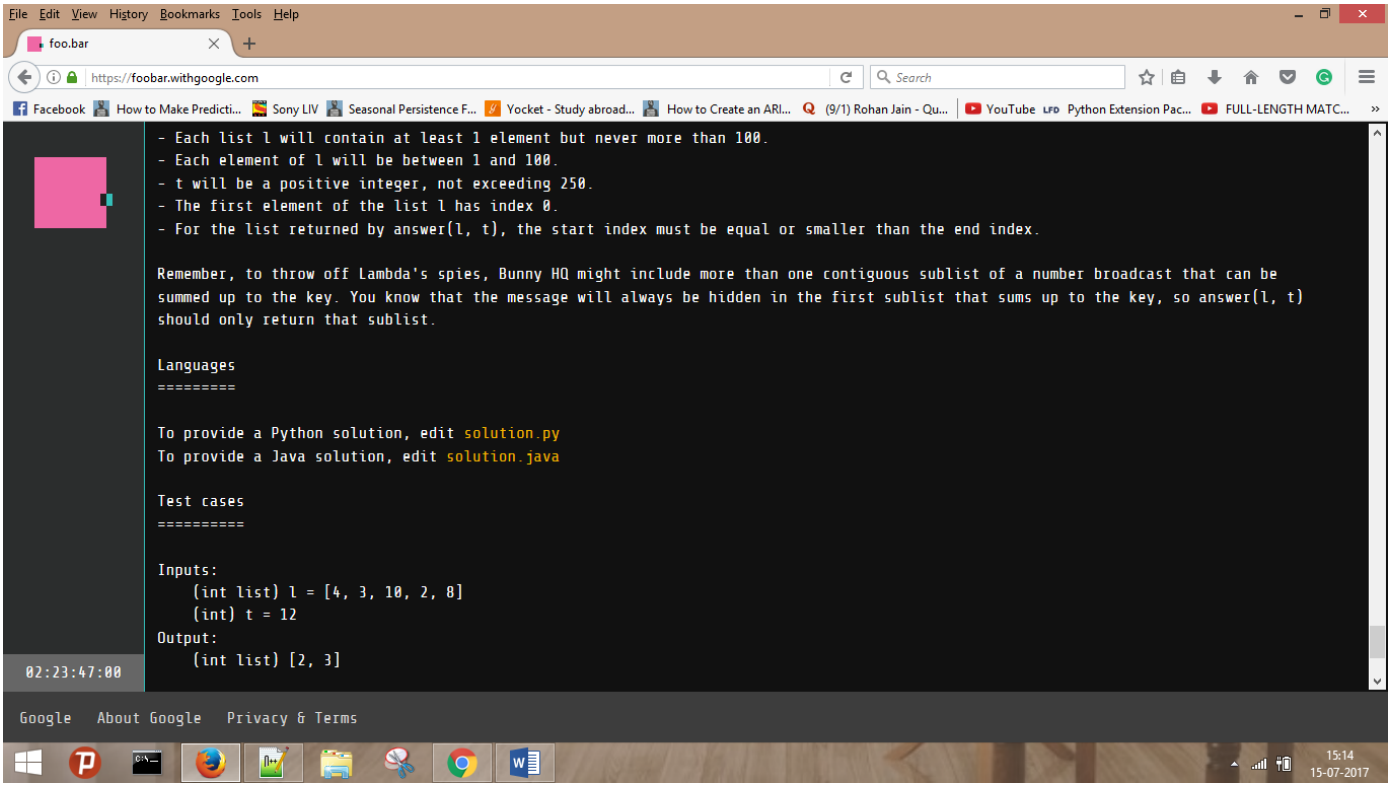
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- Each list l will contain at least 1 element but never more than 100.
- Each element of l will be between 1 and 100.
- t will be a positive integer, not exceeding 250.
- The first element of the list l has index 0.
- For the list returned by answer(l, t), the start index must be equal or smaller than the end index.
Remember, to throw off Lambda's spies, Bunny HQ might include more than one contiguous sublist of a number broadcast that can be summed up to the key. You know that the message will always be hidden in the first sublist that sums up to the key, so answer(l, t) should only return that sublist.
Languages
=========
To provide a Python solution, edit solution.py
To provide a Java solution, edit solution.java
Test cases
==========
Inputs:
(int list) l = [4, 3, 10, 2, 8]
(int) t = 12
Output:
(int list) [2, 3]
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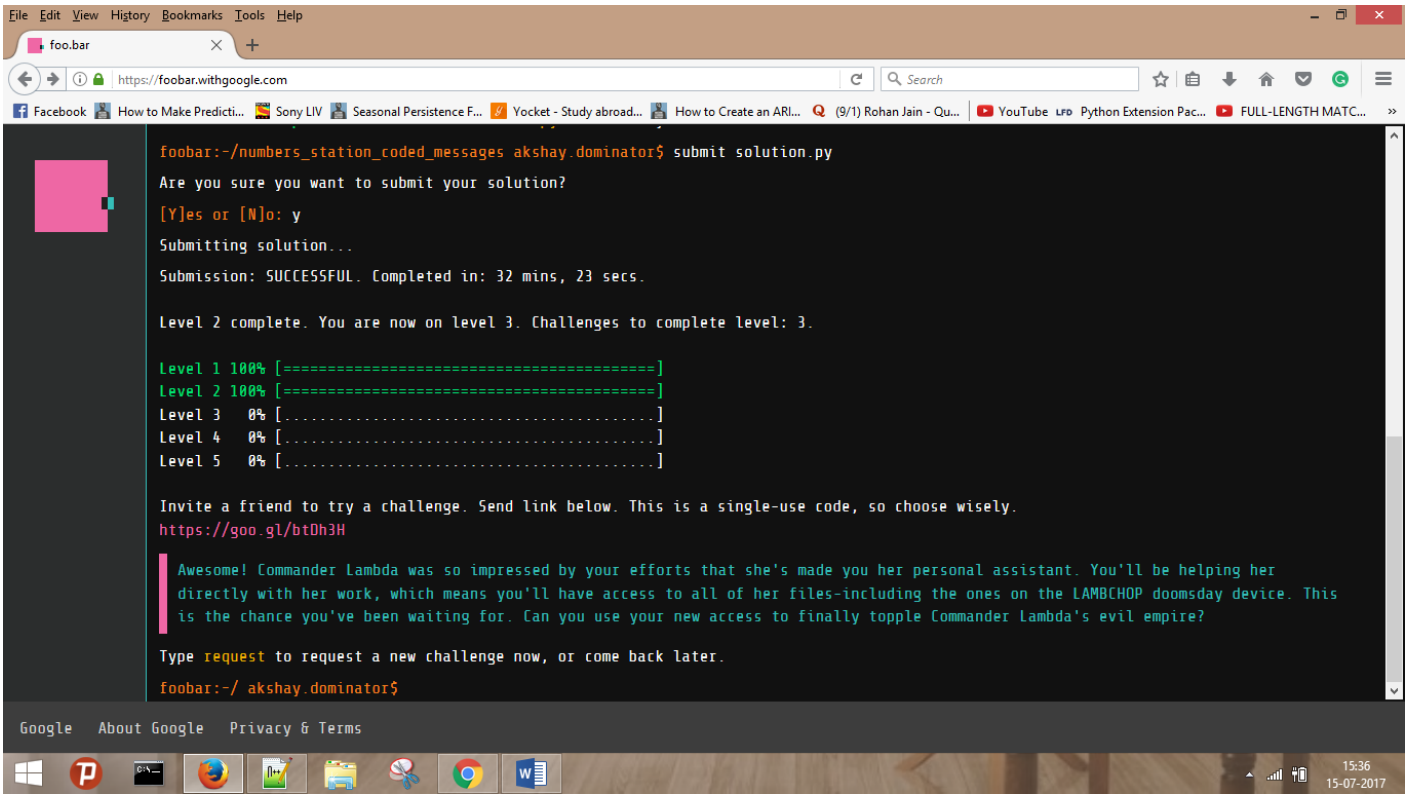
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FULL-LENGTH MATC...
foobar:~/numbers_station_coded_messages akshay.dominator$ submit solution.py
Are you sure you want to submit your solution?
[Y]es or [N]o: y
Submitting solution...
Submission: SUCCESSFUL. Completed in: 32 mins, 23 secs.
Level 2 complete. You are now on level 3. Challenges to complete level: 3.
Level 1 100% [==]
Level 2 100% [==]
Level 3 0% [..]
Level 4 0% [..]
Level 5 0% [..]
Invite a friend to try a challenge. Send link below. This is a single-use code, so choose wisely.
https://goo.gl/btDh3H
Awesome! Commander Lambda was so impressed by your efforts that she's made you her personal assistant. You'll be helping her directly with her work, which means you'll have access to all of her files-including the ones on the LAMBCHOP doomsday device. This is the chance you've been waiting for. Can you use your new access to finally topple Commander Lambda's evil empire?
Type request to request a new challenge now, or come back later.
foobar:~/ akshay.dominator$
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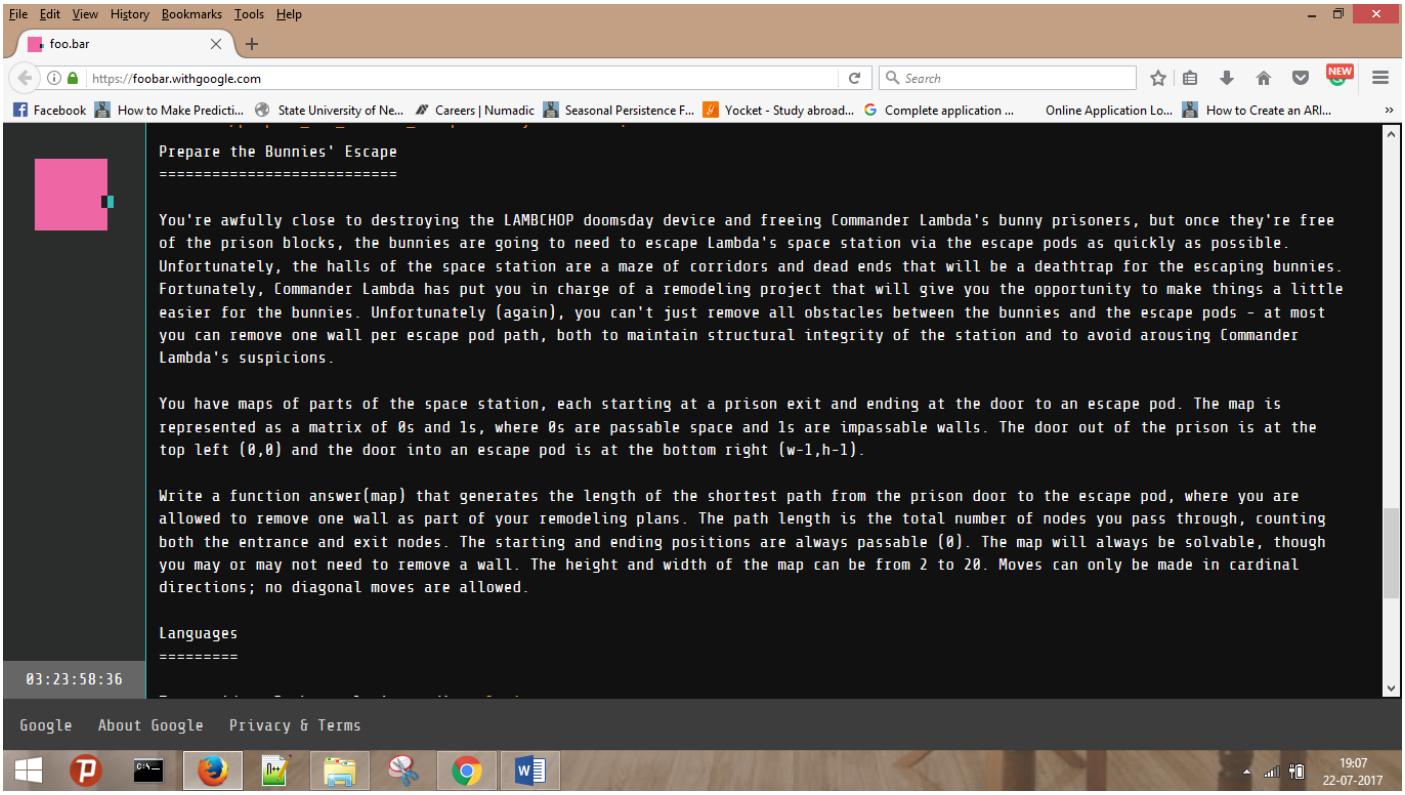
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Prepare the Bunnies' Escape
==========
You're awfully close to destroying the LAMBCHOP doomsday device and freeing Commander Lambda's bunny prisoners, but once they're free of the prison blocks, the bunnies are going to need to escape Lambda's space station via the escape pods as quickly as possible. Unfortunately, the halls of the space station are a maze of corridors and dead ends that will be a deathtrap for the escaping bunnies. Fortunately, Commander Lambda has put you in charge of a remodeling project that will give you the opportunity to make things a little easier for the bunnies. Unfortunately (again), you can't just remove all obstacles between the bunnies and the escape pods - at most you can remove one wall per escape pod path, both to maintain structural integrity of the station and to avoid arousing Commander Lambda's suspicions.
You have maps of parts of the space station, each starting at a prison exit and ending at the door to an escape pod. The map is represented as a matrix of 0s and 1s, where 0s are passable space and 1s are impassable walls. The door out of the prison is at the top left (0,0) and the door into an escape pod is at the bottom right (w-1,h-1).
Write a function answer(map) that generates the length of the shortest path from the prison door to the escape pod, where you are allowed to remove one wall as part of your remodeling plans. The path length is the total number of nodes you pass through, counting both the entrance and exit nodes. The starting and ending positions are always passable (0). The map will always be solvable, though you may or may not need to remove a wall. The height and width of the map can be from 2 to 20. Moves can only be made in cardinal directions; no diagonal moves are allowed.
Languages
==========
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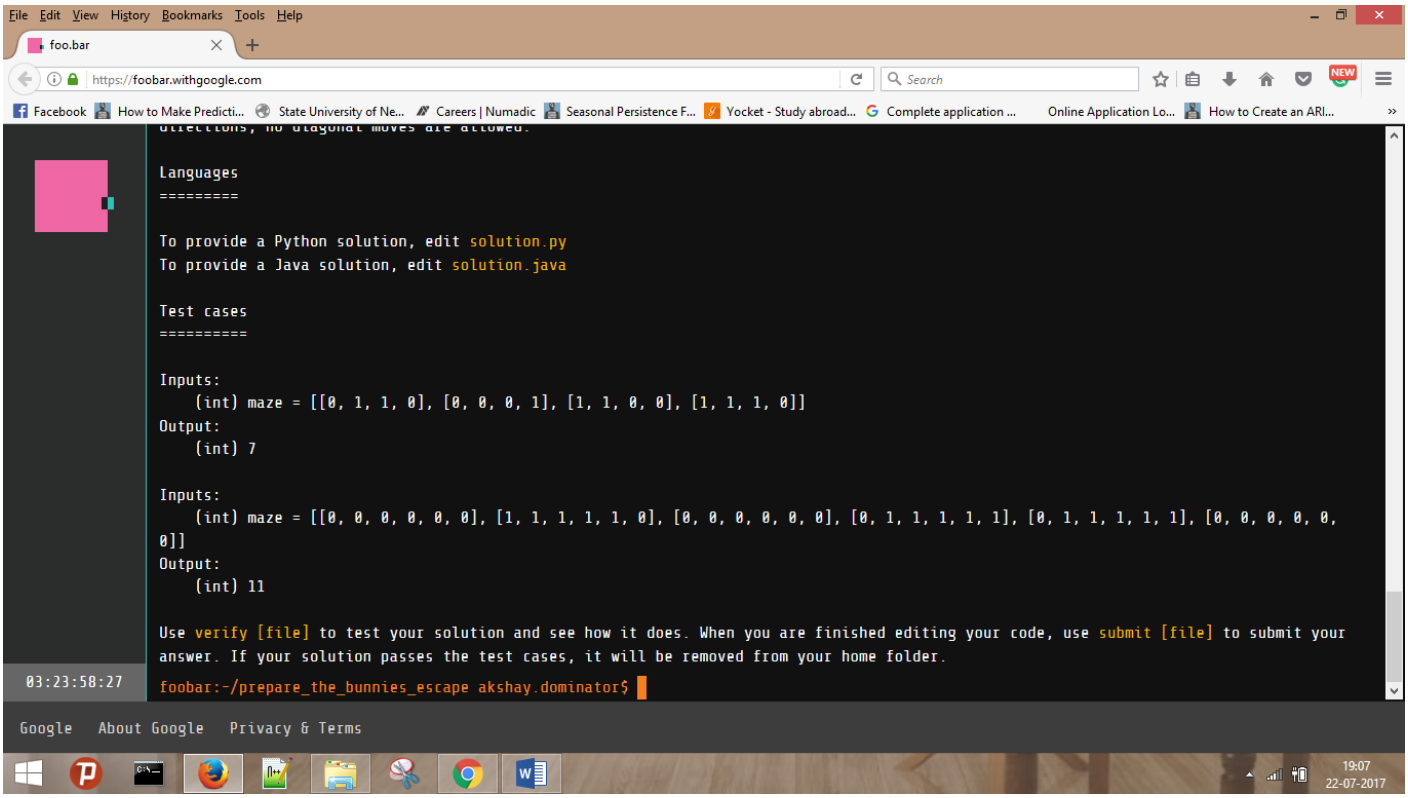
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Languages
==========
To provide a Python solution, edit solution.py
To provide a Java solution, edit solution.java
Test cases
==========
Inputs:
(int) maze = [[0, 1, 1, 0], [0, 0, 0, 1], [1, 1, 0, 0], [1, 1, 1, 0]]
Output:
(int) 7
Inputs:
(int) maze = [[0, 0, 0, 0, 0, 0], [1, 1, 1, 1, 1, 0], [0, 0, 0, 0, 0, 0], [0, 1, 1, 1, 1, 1], [0, 1, 1, 1, 1, 1], [0, 0, 0, 0, 0, 0]]
Output:
(int) 11
Use verify [file] to test your solution and see how it does. When you are finished editing your code, use submit [file] to submit your answer. If your solution passes the test cases, it will be removed from your home folder.
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foobar:~/prepare_the_bunnies_escape akshay.dominator$
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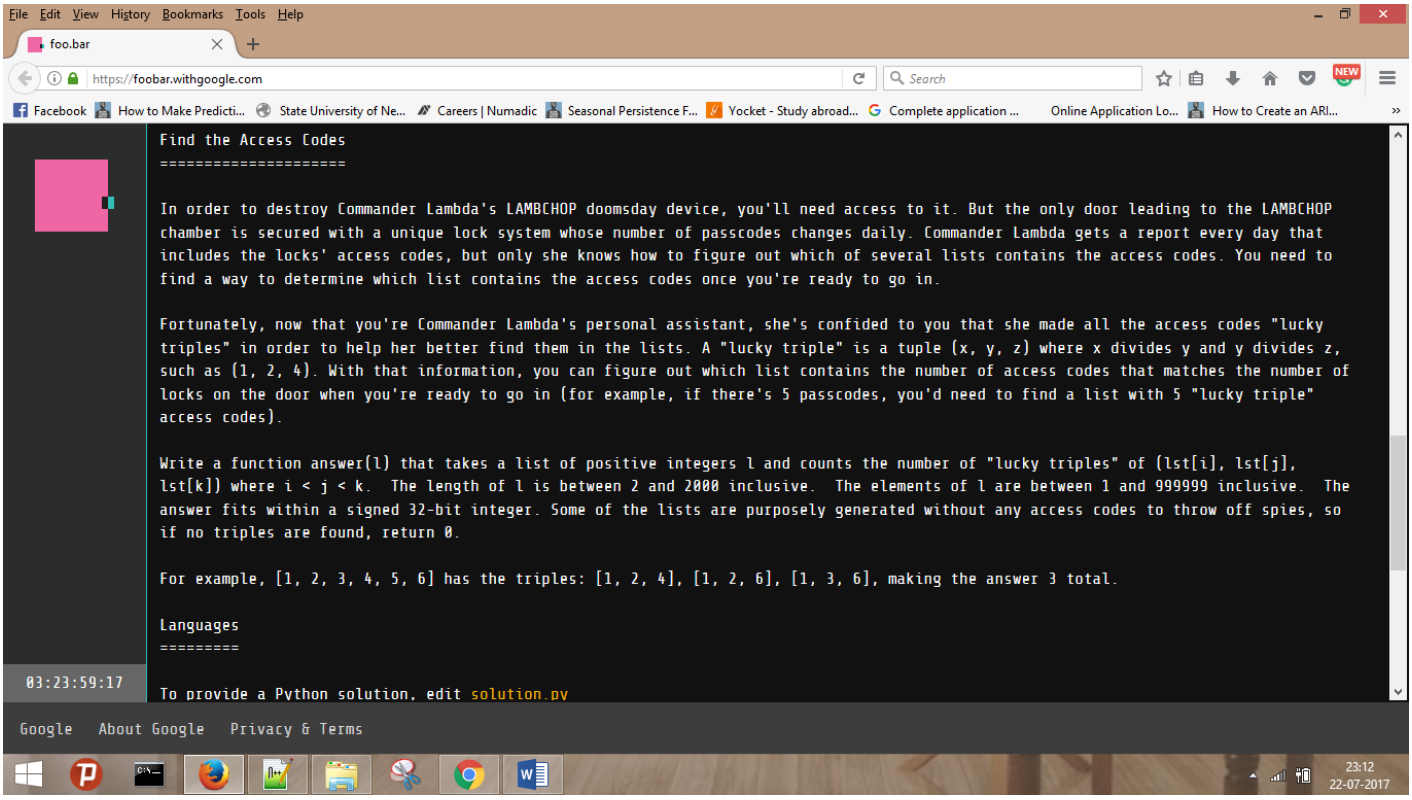
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Find the Access Codes
==========
In order to destroy Commander Lambda's LAMBCHOP doomsday device, you'll need access to it. But the only door leading to the LAMBCHOP chamber is secured with a unique lock system whose number of passcodes changes daily. Commander Lambda gets a report every day that includes the locks' access codes, but only she knows how to figure out which of several lists contains the access codes. You need to find a way to determine which list contains the access codes once you're ready to go in.
Fortunately, now that you're Commander Lambda's personal assistant, she's confided to you that she made all the access codes "lucky triples" in order to help her better find them in the lists. A "lucky triple" is a tuple (x, y, z) where x divides y and y divides z, such as (1, 2, 4). With that information, you can figure out which list contains the number of access codes that matches the number of locks on the door when you're ready to go in (for example, if there's 5 passcodes, you'd need to find a list with 5 "lucky triple" access codes).
Write a function answer(l) that takes a list of positive integers l and counts the number of "lucky triples" of (lst[i], lst[j], lst[k]) where i < j < k. The length of l is between 2 and 2000 inclusive. The elements of l are between 1 and 999999 inclusive. The answer fits within a signed 32-bit integer. Some of the lists are purposely generated without any access codes to throw off spies, so if no triples are found, return 0.
For example, [1, 2, 3, 4, 5, 6] has the triples: [1, 2, 4], [1, 2, 6], [1, 3, 6], making the answer 3 total.
Languages
==========
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To provide a Python solution, edit solution.py
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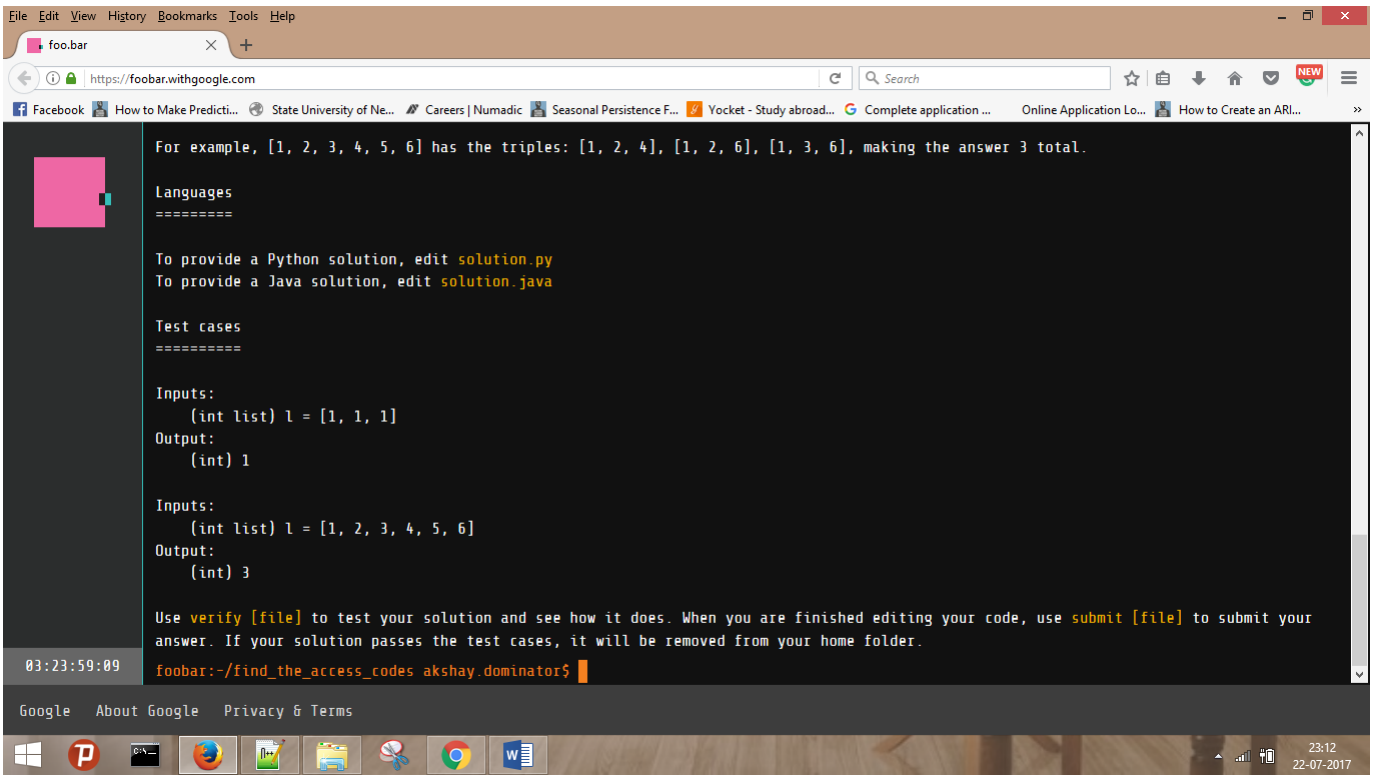
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For example, [1, 2, 3, 4, 5, 6] has the triples: [1, 2, 4], [1, 2, 6], [1, 3, 6], making the answer 3 total.
Languages
==========
To provide a Python solution, edit solution.py
To provide a Java solution, edit solution.java
Test cases
==========
Inputs:
(int list) l = [1, 1, 1]
Output:
(int) 1
Inputs:
(int list) l = [1, 2, 3, 4, 5, 6]
Output:
(int) 3
Use verify [file] to test your solution and see how it does. When you are finished editing your code, use submit [file] to submit your answer. If your solution passes the test cases, it will be removed from your home folder.
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foobar:~/find_the_access_codes akshay.dominator$
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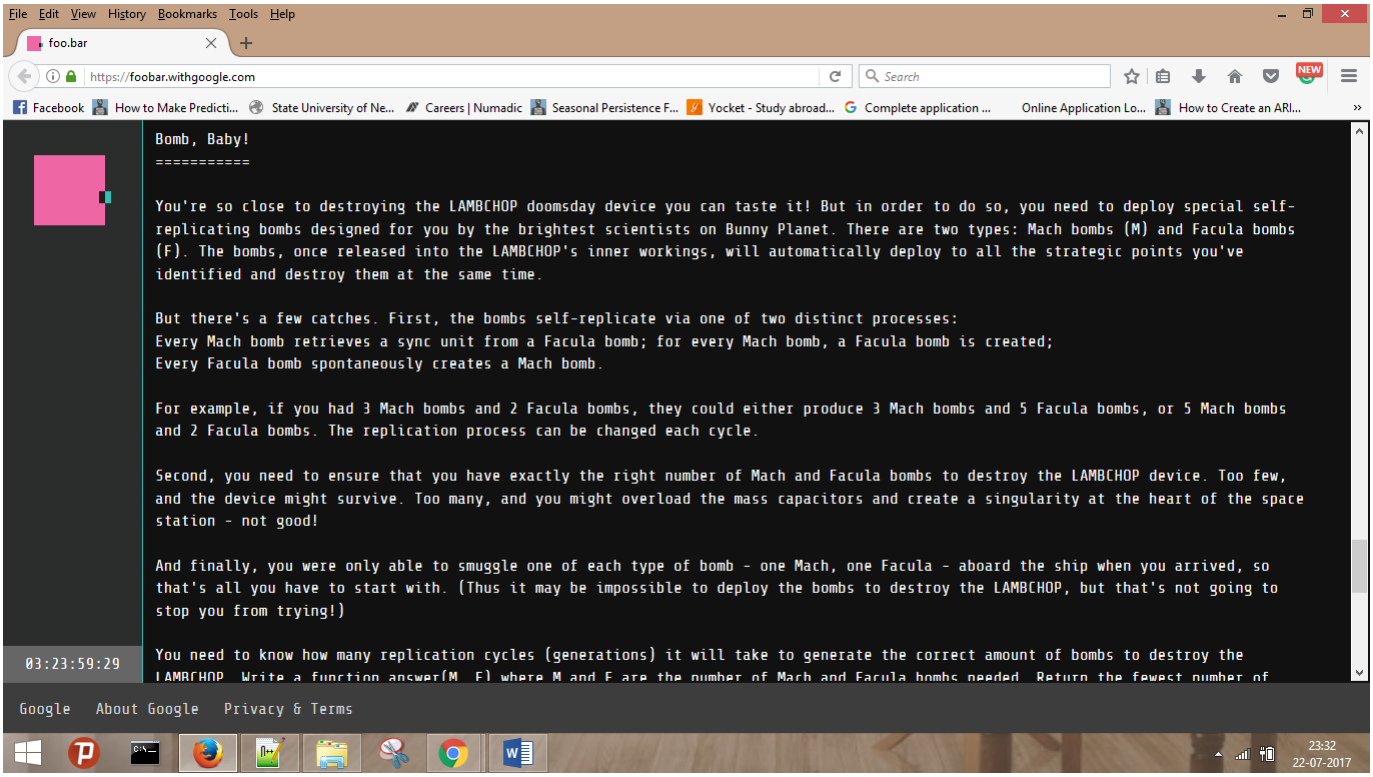
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Bomb, Baby!
==========
You're so close to destroying the LAMBCHOP doomsday device you can taste it! But in order to do so, you need to deploy special self-replicating bombs designed for you by the brightest scientists on Bunny Planet. There are two types: Mach bombs (M) and Facula bombs (F). The bombs, once released into the LAMBCHOP's inner workings, will automatically deploy to all the strategic points you've identified and destroy them at the same time.
But there's a few catches. First, the bombs self-replicate via one of two distinct processes:
Every Mach bomb retrieves a sync unit from a Facula bomb; for every Mach bomb, a Facula bomb is created;
Every Facula bomb spontaneously creates a Mach bomb.
For example, if you had 3 Mach bombs and 2 Facula bombs, they could either produce 3 Mach bombs and 5 Facula bombs, or 5 Mach bombs and 2 Facula bombs. The replication process can be changed each cycle.
Second, you need to ensure that you have exactly the right number of Mach and Facula bombs to destroy the LAMBCHOP device. Too few, and the device might survive. Too many, and you might overload the mass capacitors and create a singularity at the heart of the space station - not good!
And finally, you were only able to smuggle one of each type of bomb - one Mach, one Facula - aboard the ship when you arrived, so that's all you have to start with. (Thus it may be impossible to deploy the bombs to destroy the LAMBCHOP, but that's not going to stop you from trying!)
You need to know how many replication cycles (generations) it will take to generate the correct amount of bombs to destroy the
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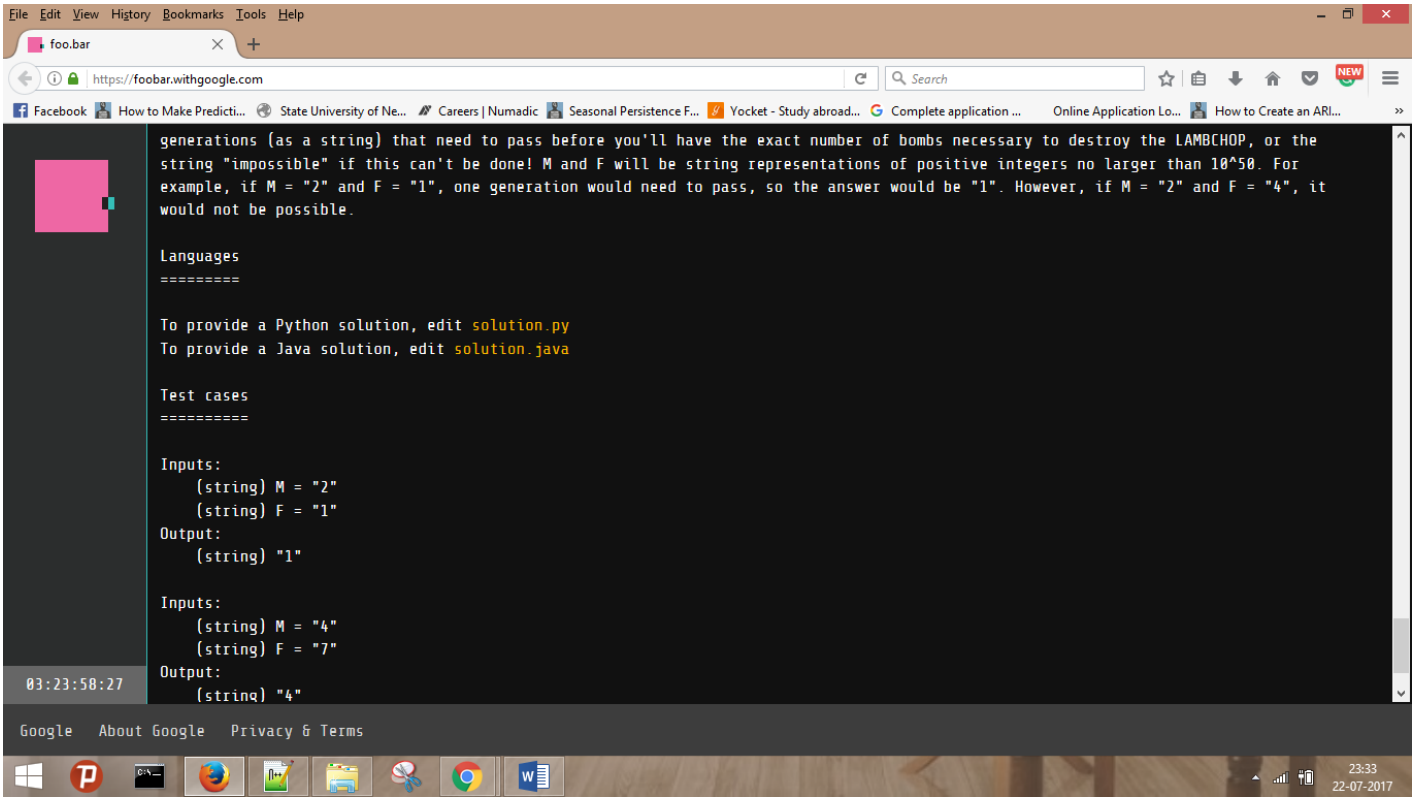
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generations (as a string) that need to pass before you'll have the exact number of bombs necessary to destroy the LAMBCHOP, or the string "impossible" if this can't be done! M and F will be string representations of positive integers no larger than 10^50. For example, if M = "2" and F = "1", one generation would need to pass, so the answer would be "1". However, if M = "2" and F = "4", it would not be possible.
Languages
=========
To provide a Python solution, edit solution.py
To provide a Java solution, edit solution.java
Test cases
==========
Inputs:
(string) M = "2"
(string) F = "1"
Output:
(string) "1"
Inputs:
(string) M = "4"
(string) F = "7"
Output:
(string) "4"
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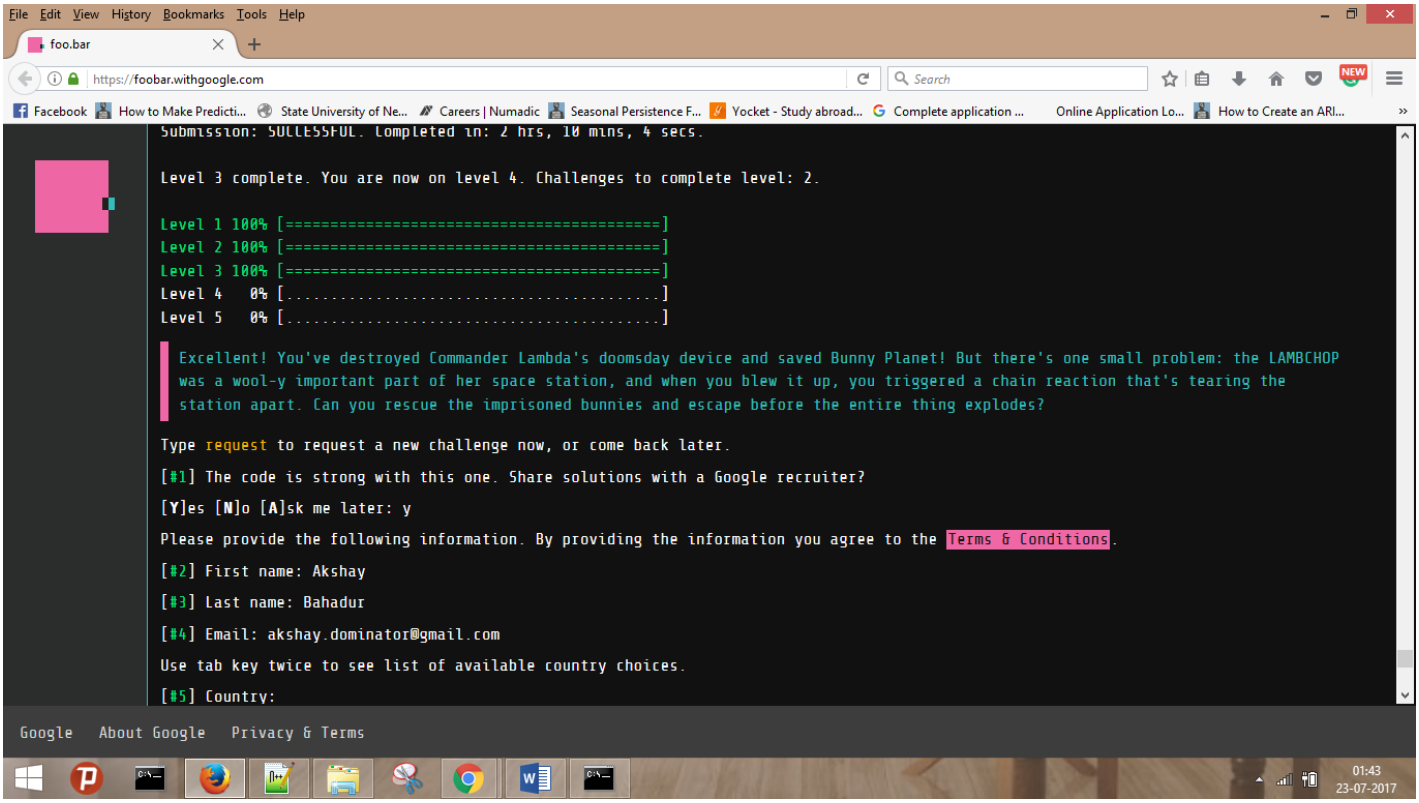
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Submission: SUCCESSFUL. Completed in: 2 hrs, 10 mins, 4 secs.
Level 3 complete. You are now on level 4. Challenges to complete level: 2.
Level 1 100% [==========]
Level 2 100% [==========]
Level 3 100% [==========]
Level 4 0% [..........]
Level 5 0% [..........]
Excellent! You've destroyed Commander Lambda's doomsday device and saved Bunny Planet! But there's one small problem: the LAMBCHOP was a wool-y important part of her space station, and when you blew it up, you triggered a chain reaction that's tearing the station apart. Can you rescue the imprisoned bunnies and escape before the entire thing explodes?
Type request to request a new challenge now, or come back later.
[#1] The code is strong with this one. Share solutions with a Google recruiter?
[Y]es [N]o [A]sk me later: y
Please provide the following information. By providing the information you agree to the Terms & Conditions.
[#2] First name: Akshay
[#3] Last name: Bahadur
[#4] Email: akshay.dominator@gmail.com
Use tab key twice to see list of available country choices.
[#5] Country:
Google
About Google
Privacy & Terms
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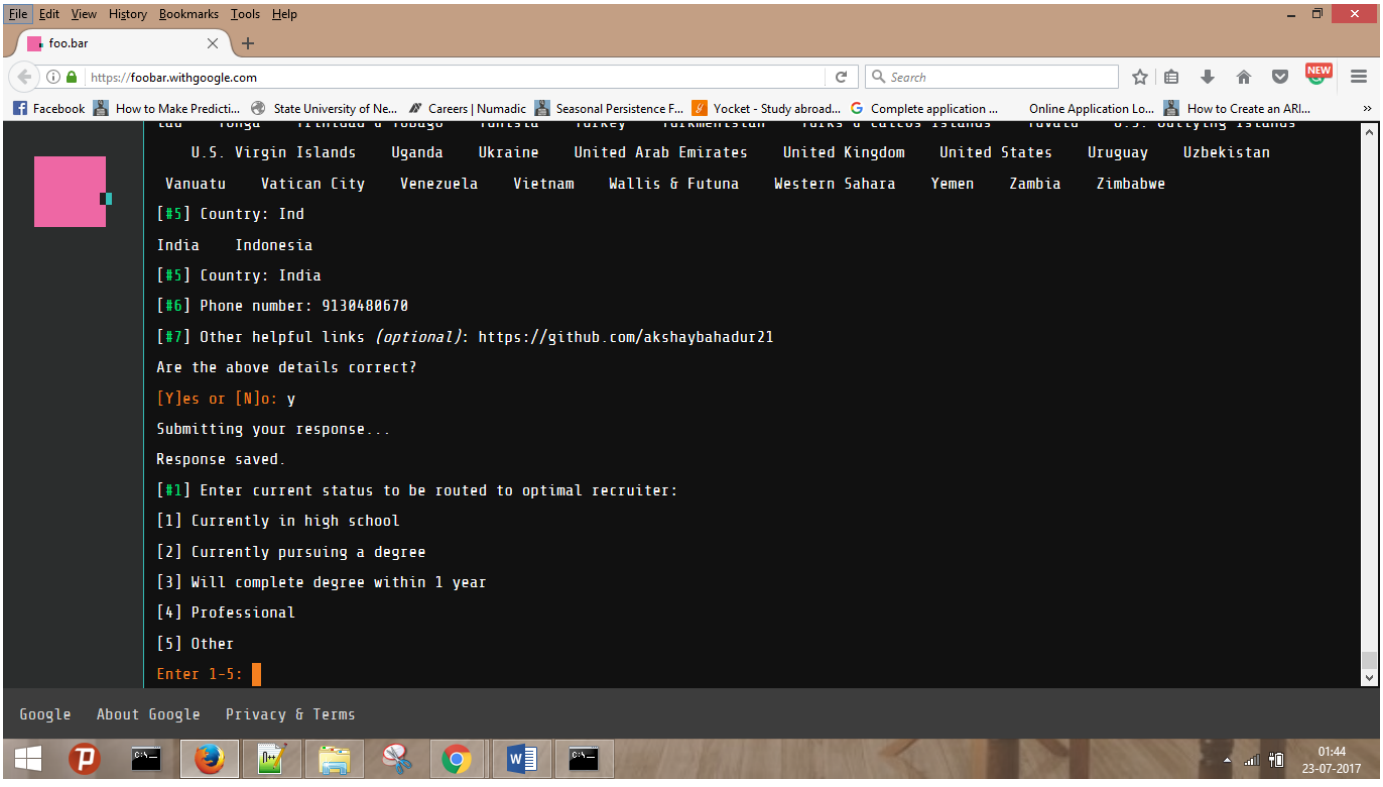
23-07-2017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U.S. Virgin Islands Uganda Ukraine United Arab Emirates United Kingdom United States Uruguay Uzbekistan
Vanuatu Vatican City Venezuela Vietnam Wallis & Futuna Western Sahara Yemen Zambia Zimbabwe
[#5] Country: Ind
India Indonesia
[#5] Country: India
[#6] Phone number: 9130480670
[#7] Other helpful links (optional): https://github.com/akshaybahadur21
Are the above details correct?
[Y]es or [N]o: y
Submitting your response...
Response saved.
[#1] Enter current status to be routed to optimal recruiter:
[1] Currently in high school
[2] Currently pursuing a degree
[3] Will complete degree within 1 year
[4] Professional
[5] Other
Enter 1-5:
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01:44
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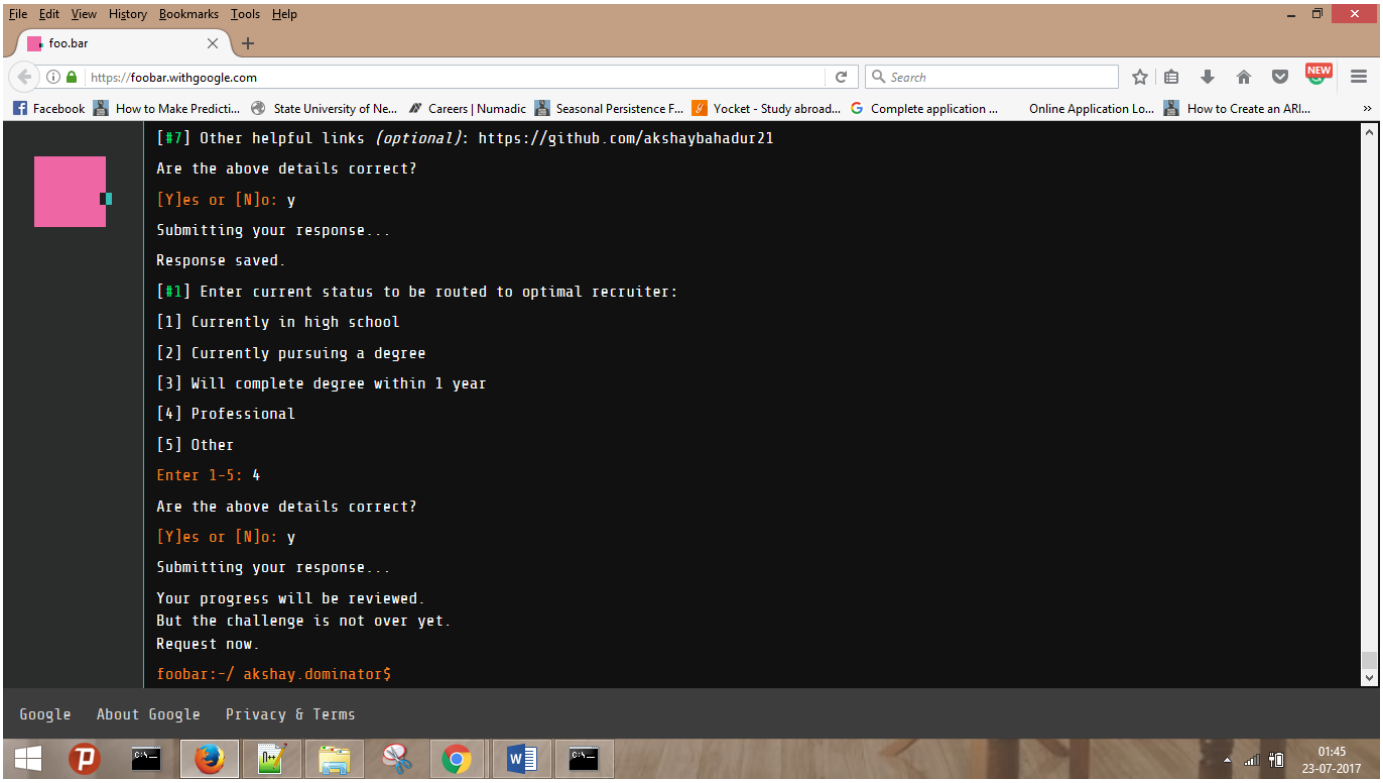
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[#7] Other helpful links (optional): https://github.com/akshaybahadur21
Are the above details correct?
[Y]es or [N]o: y
Submitting your response...
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[#1] Enter current status to be routed to optimal recruiter:
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[2] Currently pursuing a degree
[3] Will complete degree within 1 year
[4] Professional
[5] Other
Enter 1-5: 4
Are the above details correct?
[Y]es or [N]o: y
Submitting your response...
Your progress will be reviewed.
But the challenge is not over yet.
Request now.
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23-07-2017