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NPTEL (https://swayam.gov.in/explorer?ncCode=NPTEL) » Programming, Data Structures And

Algorithms Using Python (course)

Announcements (announcements)

**About the Course (https://swayam.gov.in/nd1\_noc19\_cs40/preview)** Ask a Question (forum)

Progress (student/home) Mentor (student/mentor)

## Course outline

How to access the portal

Week 1: Introduction

Week 1 Quiz

Week 2: Basics of Python

Week 2 Quiz

Week 2 Programming Assignment

Week 3: Lists, inductive function

### Online Test 2, Question 7

Due on 2019-09-26, 22:00 IST

#### Instructions

This is the second of two online programming tests.

- These tests account for 25% of the total evaluation for the course.
- The duration of the test is 2 hours.
- The first test was from 9:30-11:30 am and the second is from 8:00-10:00 pm, on Thursday, 26 September 2019.
- You can attempt either of the tests. The best score will be counted...

**Note:** In this question, you have to write a standalone Python program. Your program should not print anything except what is asked in the problem description. Do not print any messages or diagnostic information. Your code will be evaluated automatically by comparing your program's output with the expected output, so any spurious output from your program will cause your answer to be reported as wrong. You can assume that the input to your program will be as specified in the question.

There are some "public" test cases where you can see how your program does when you use "Compile and Run". Finally, you should "Submit" your code for evaluation. Your solution will be checked against

definitions, sorting

Week 3 Programming Assignment

Week 4:
Sorting,
Tuples,
Dictionaries,
Passing
Functions, List
Comprehension

Week 4 Quiz

Week 4
Programming
Assignment

Week 5: Exception handling, input/output, file handling, string processing

Week 5 Programming Assignment

Week 6:
Backtracking,
scope, data
structures;
stacks,
queues and
heaps

Week 6 Quiz

Week 7: Classes, objects and user defined datatypes

Week 7 Quiz

"private" test cases, which you cannot see. You will get a score on 100 based on how many private test cases you solve correctly.

#### Question 7

Write a Python program that reads input from the keyboard (standard input). The input will consist of some number of lines of text. The input will be terminated by a blank line. The first line will consist of a single word to be interpreted as a *pattern*, after discarding the new line character. Your program should print the *last line* from the second line onward that contains an occurrence of the pattern. If no lines match the pattern, the program should print an empty line. You can assume that the input will have a non-empty pattern line. Recall that for a string s and a pattern p, s.find(p) returns the first position in s where p occurs, and returns -1 if p does not occur in s.

For instance, if the input is the following:

```
the "Spot the mistake in the following argument", Jack challenged 1+(-1+1)+(-1+1)+\ldots = (1+-1)+(1+-1)+\ldots so therefore, 1=0 ??
```

then your program should print the following. Note that the pattern string the is matched by the word therefore.

```
so therefore,
```

# Private Test cases used for evaluation

Expected Output Actual Output Status

Test Case 1

giraffe
US playwrigh
t Edward Alb
ee, the auth
or of Who's
Afraid of Vi

rginia Wool

f?, has died aged 88.

NA Pas sed

Week 8: Dynamic programming, wrap-up

Week 8 Programming Assignment

Download videos

Text Transcripts

Online Programming Test - Sample

Online Programming Test 1, 26 Sep 2019, 09:30-11:30

Online Programming Test 2, 26 Sep 2019, 20:00-22:00

- Online Test 2, Question 1 (/noc19\_cs40/progassignment? name=121)
- Online Test 2, Question 2 (/noc19\_cs40/progassignment? name=122)
- Online Test 2, Question 3 (/noc19\_cs40/progassignment? name=123)
- Online Test 2, Question 4 (/noc19\_cs40/progassignment? name=124)
- Online Test 2, Question 5

Albee's assi stant said h e died on Fr iday at his home on Long Island near New York. No cause of death was gi ven. A thre e-time Pulit zer Prize winner, he w as arguably America's gr eatest livin g playwright a fter the dea ths of Arthu r Miller and August Wilso n in 2005, A lbee was awa rded Pulitze for A Delica te Balance. Seascape and Three Tall Women. Ofte n bleakly hu morous, his plays explor ed the darker s ides of marr iage, religi on, raising children, an

d American l

ife.

- (/noc19\_cs40/progassignment? name=125)
- Online Test 2, Question 6 (/noc19\_cs40/progassignment? name=126)
- Online Test 2,
   Question 7
   (/noc19\_cs40/progassignment?
   name=127)
- Online Test 2, Question 8 (/noc19\_cs40/progassignment? name=128)
- Online
  Programming
  Test 2, 26 Sep
  2019, 20:0022:00 (unit?
  unit=111&lesson=129)

Test Case 2

rded a Natio nal Medal of the Arts by then-preside nt Bill Clin ton. Albee continued to write into h is 70s, and 200 8 saw the pr emiere of a new play, M e, Myself an dΙ, about identi cal twins. A few years ago, before undergoing m ajor surgery, Alb ee penned a short statem ent to be pu blished at t he time of his death: "To a ll of you wh o have made my being ali ve so wonderful, s o exciting a nd so full, my thanks an d all my lov e," he wrote.

he

The same yea

r he was awa

he wrote.\n he wrote.\n

Pas sed

Test Case 3

sea The sea-ice extent on 10 September st Record glob al land and sea surface temperatures Record globa l land and s ea surface t emperatures

Pas sed

ood at 4.14 million sq k m, some way sho rt of the 3. 39 million s q km record low in 2012. Arctic sea-i ce cover gro ws each autu mn and winte r, and shrin ks each spring and summer. It has long been regarde d as a sensi tive indicator of change to th e Earth's cl imatic syste m. The ice extent has b een tracked by the US Na tional Snow and Ice Data Center (NSID C) in Boulde r, Colorado, using satell ite measurement s. However, the centre c autioned tha t the figure s were preliminary, adding that changing win ds could sti ll push the ice extent lowe r. Ted Scamb os, NSIDC le

in 2015 that \n in 2015 that \n

ad scientis t, commente d: "It really sugge sts that in the next few years, with more typical warmer condi tions, we wi ll see some very dramati c further losses." Thi s year's min imum is seen as something of a surpris as scientist s believed t hat the low atmospheric pressure and cloudy skies in June and July had slo wed down the melt. "It's pretty remar kable that t his year's s ea-ice minim um extent en ded up the secon d lowest, af ter how the melt progres sed in June and July," said Walt Meier, a sea ice sc ientist with Nasa's Godda rd Space Flight Center. "Jun e and July a

re usually k ey months fo melt because that's when you have 24 hours a day of sunlight and this yea r we lost me lt momentum during those two months." Record globa l land and s ea surface t emperatures in 2015 that continued to shatter reco rds well int o 2016 had l ed many to believe that the Arctic m elt would re ach a new lo w mark this year. But so me scientist s, including experts from Reading University i n the UK, ar gued that th eir analysis of melt pond s on ice floes in dicated that 2016 would n ot beat 201 2. While tyi ng for the seco nd lowest mi

nimum in the satellite er

a, this yea r's figure is in fact well ab ove the 2012 melt, which saw the ice cover fall t o 3.41 milli on sq km (1.32 million s q mi) - 50% lower than the 197 9-2000 avera ge.

#### Test Case 4

Tesla Tesla and it s former bus iness partne r MobilEye h ave traded m ore angry remark s over the s afety of the electric veh icle's Autop ilot system. Mobi lEye executi ve Amnon Sha shua had sai d the carmak er had "pushed the envelop e" on safety in a bid to extend its r each. Tesla said M obilEye had tried to sto p it working on its own system. Auto pilot has be Tesla CEO E lon Musk ann ounced a ser ies of new s afety change s\n Tesla CEO El on Musk anno unced a seri es of new sa fety changes \n

Pas sed

en under scr utiny since a fatal cras h in May caused b y the techno logy missing a lorry. The two had work ed on the syste m together b ut stopped t he partnersh ip in July. "Tesla has b een developi ng its own v ision capabi lity in-hous e for some time wi th the goal of accelerat ing performa nce improvem ents. "After learn ing that Tes la would be deploying th is product, MobilEye att empted to fo rce Tesla to discontinue this development, pay them mor e, and use t heir product s in future hardware, s aid a Tesla spokeswoman. "When Tesla refused to cancel its o wn vision de velopment ac

tivities and plans for deployment, MobilEye dis continued ha rdware suppo rt for futur е platforms an d released p ublic statem ents implyin g that this discontinuan ce was motiv ated by safe ty concern s." She also reiterated t hat the Auto pilot featur e is not sup posed to rep lace the vehicl e's human dr iver. "At no time has Tes la ever said or implied that Autopilot ma kes a car au tonomous or 'self-drivin any more tha n autopilot on a plane, after which it is named, makes a plan e self-flyin g," she sai d. Hands-on MobilEye has now issued a fur ther stateme nt challengi

ng Tesla's l atest respon se. It said it h ad "little k nowledge" of Tesla's in-h ouse produc t. "Tesla's res ponse to the May 7 crash, wherein the company shif ted blame to the camera, and later correc ted and shif ted blame to the radar, indic ated to Mobi leye that Mo bileye's rel ationship wi th Tesla could not continu e," it said. It said the two firms ha clashed over whether to e nable Autopi lot to have a "hands-fre e" function, wi th an exchan ge of emails taking place in May 2015. "After a sub sequent face -to-face mee ting, Tesl a's CEO conf irmed

that activat ion of Autop ilot would b e 'hands-o n'. Despite this confirmatio n, Autopilot was rolled o ut in late 2 015 with a hands-free a ctivation mo de," the sta tement read s. Last Sund ay, Tesla CEO El on Musk anno unced a seri es of new sa fety changes which includ ed Autopilot repeatedly t elling drive rs to keep t heir hands on the wheel. If th ey refuse, t he system wi ll switch of f until the ca r is parked.

Due Date Exceeded. 4 out of 4 tests passed. You scored 100.0/100.

Your last recorded submission was:

```
lines = []
while True:
    line = input()
if line:
    lines.append(line)
else:
    break
pattern = lines[0]
```