

IEEE XTREME 15.0

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- ▣ O tekmovanju
- ▣ Nagrade
- ▣ Vadnica

IEEEXtreme – 24-urno programersko tekmovanje

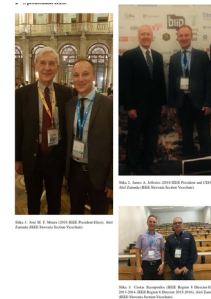


IEEEXtreme 12.0

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IEEEExtreme – 24-urno programersko tekmovanje



Xtreme 14.0

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IEEEXtreme

24 Hours of competitive programming
is waiting for you



As a global competition, IEEEXtreme is always virtual. Typically, students would compete with their team and their proctor in the same location, in most cases at their local Student Branch. This year, the IEEEXtreme committee will allow the proctored teams to compete using online [Video Conferencing Platforms](#). The committee will be doing its best to keep teams engaged throughout the 24-hours.

What is IEEEExtreme?

IEEEExtreme is a global challenge in which teams of IEEE Student members – advised and proctored by an IEEE member, and often supported by an IEEE Student Branch – compete in a 24-hour time span against each other to solve a set of programming problems.



9494

Participants



606933

Compilations



525

Volunteers



73

Countries



4132

Teams



809

Student Branches



<https://ieeextreme.org/ieeextreme-14-0-universities-with-registered-proctors/>

1,212 entries



Want to check if your university has any proctors?

Show 10 entries

Search:

Registered Schools

City College of New York

New York State Univ Of Albany

New York Univ

New York University Abu Dhabi

First Place

Cover a trip to the IEEE conference of your choice, anywhere in the world.

- * Roundtrip coach airline tickets for each winner from winner's preferred major metropolitan airport to the conference destination.
- * conference registration fees
- * three-night hotel stay in a standard room will be provided by IEEE for each winning team member.

** Alternatives can be provided should travel be restricted.



Top 100

All members of teams that place in the top 100 at the end of the Xtreme will receive merchandise bundle and special software gifts from competition sponsors



<https://csacademy.com/ieeextreme-practice/>

IEEE XTREME
PROGRAMMING
COMPETITION

Practice Community

Summary Tasks Scoreboard Submissions Chat

Statement Submissions

Restaurant Reopening

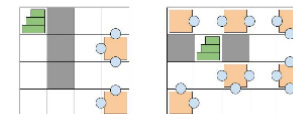
Time limit: 5000 ms
Memory limit: 256 MB

Many restaurants have been closed due to the global pandemic, including Cafe Xtreme. Now that the reopening is ongoing while indoor dining is still restricted, the manager of Cafe Xtreme thinks that it would be a good opportunity to redesign the restaurant floor layout to better use its space. Cafe Xtreme is big and it has multiple floors. Each floor of the restaurant can be viewed as an $R \times C$ grid with R rows and C columns. Two cells are adjacent if they share an edge. A cell may be empty, contain a wall, or contain the stairs. There is exactly one cell with the stairs per floor, which is the entrance and exit.

The manager will place dining tables in some empty cells of the floor. Each dining table occupies an entire empty cell. Dining chairs are placed in the adjacent empty cells of a dining table. A dining chair must be placed towards an edge of a dining table, and allows a customer to sit at the left, right, top, or bottom of the dining table. A dining table can therefore serve between one to four customers, depending on how many dining chairs are placed around it. A dining chair takes a negligible amount of space, so that multiple dining chairs that belong to different dining tables may be placed in a same empty cell. However, dining chairs cannot be placed in a cell that has a wall, a dining table, or the stairs.

A restaurant customer can walk through a cell as long as the cell does not contain a wall or a dining table. In particular, a customer may walk through a cell that contains his/her own dining chair or other customers' dining chairs (slipping through people's backs). All customers must be able to reach the stairs from their dining chairs so that they can enter and exit the restaurant.

The manager wants to know the maximum number of customers that each restaurant floor can accommodate.



Standard input

The first line has a single integer T , the number of floors to consider. This is followed by the description of T floors.

Each floor starts with two integers R and C on a single line.

The next R lines each have a string of length C . Each character in the string can be a dot $.$ as an empty cell, a hash $\#$ as a wall, or a letter S as the stairs.

Standard output

For each floor, output the maximum number of customers the floor can accommodate on single line.

Constraints and notes

- $1 \leq T \leq 10$
- $2 \leq R, C \leq 100$
- Each floor map has exactly one letter S , and at least two empty cells.
- Before placing any dining tables and chairs, it is possible to walk to the stairs from every empty cell on a floor.
- For 37.5% of the test files, $R, C \leq 20$.

Input	Output	Explanation
<pre>2 5 5 .#... .#... .#... .#... .#... 5 6 .#... .#... .#... .#... .#... .#... .#... .#... .#... .#... .#...</pre>	<pre>5 13</pre>	<p>The image illustrates an optimal layout for the first two floors in the sample test case. Each dining chair is shown as a blue dot, and each dining table is shown as an orange square. The walls are marked grey. It can be seen that every blue dot can move to the stairs via a sequence of white cells, which are either completely empty or contain only dining chairs.</p> <p>In the first floor, no customer can be seated in the first or the second columns from the left, otherwise the path to the stairs will be blocked.</p>

Tasks Scoreboard Submissions Chat SIGN IN

#Segment-Tree

Ad Hoc
Backtracking
Binary Search
Bits
Bitset
Bitwise Operations
Gray Codes
Constructive Algorithms
Data Structures
Binary Search Tree
Deque
Disjoint Sets
Fenwick Tree
Hashing
Hashmap
Heap
Linked Lists
Range Minimum Query
Segment Tree
Stack
Trie
Divide and Conquer

Show tags

Task	Contest	Score	Tags	Difficulty	Solved	Tried	Ratio
Nonempty Rectangles	IOI 2016 Training Round #4	Segment Tree show all tags	HARD	63%	72/114		
Empty Triangles	IOI 2016 Training Round #5	Segment Tree show all tags	HARD	46%	38/77		
Field Activation	Round #13	Segment Tree show all tags	HARD	79%	53/67		
Points Matching	Round #15	Segment Tree show all tags	HARD	66%	28/39		

<https://csacademy.com/contest/archive/>

https://ieeetv.ieee.org/live_event/xtreme-live



Presents

IEEEXtreme 14.0 Winners Announcement and IEEEXtreme 15.0 Kickoff

Date & Time

9 December / 12:30 pm EST

Speaker

IEEEXtreme Executive Committee



Dan IEEE, 9. december 2020, FERI