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श्रद्धावान् लभते ज्ञानम्

19CSE100 – Problem Solving and Algorithmic Thinking

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PSAT Mini Project

Question:

Write a program that helps to allocate seats in a theatre while online booking. Consider there are 10 rows and each row has 10 seats. So, total there will be 100 seats. While booking always you should make sure the continuous seat allotment whenever it is possible. Seat allocation can start from the first row. Suppose if the continuous seat allotment is not possible then the user can be informed and if the user agrees, then the seats can be allocated. When all the allocation finishes, display the number of empty seats.

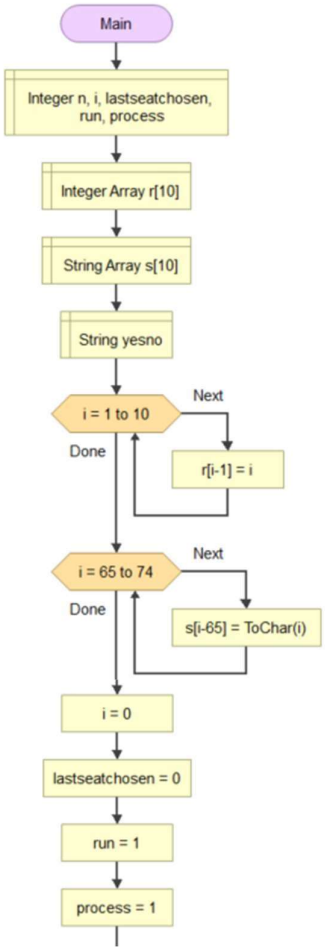
Tool used:

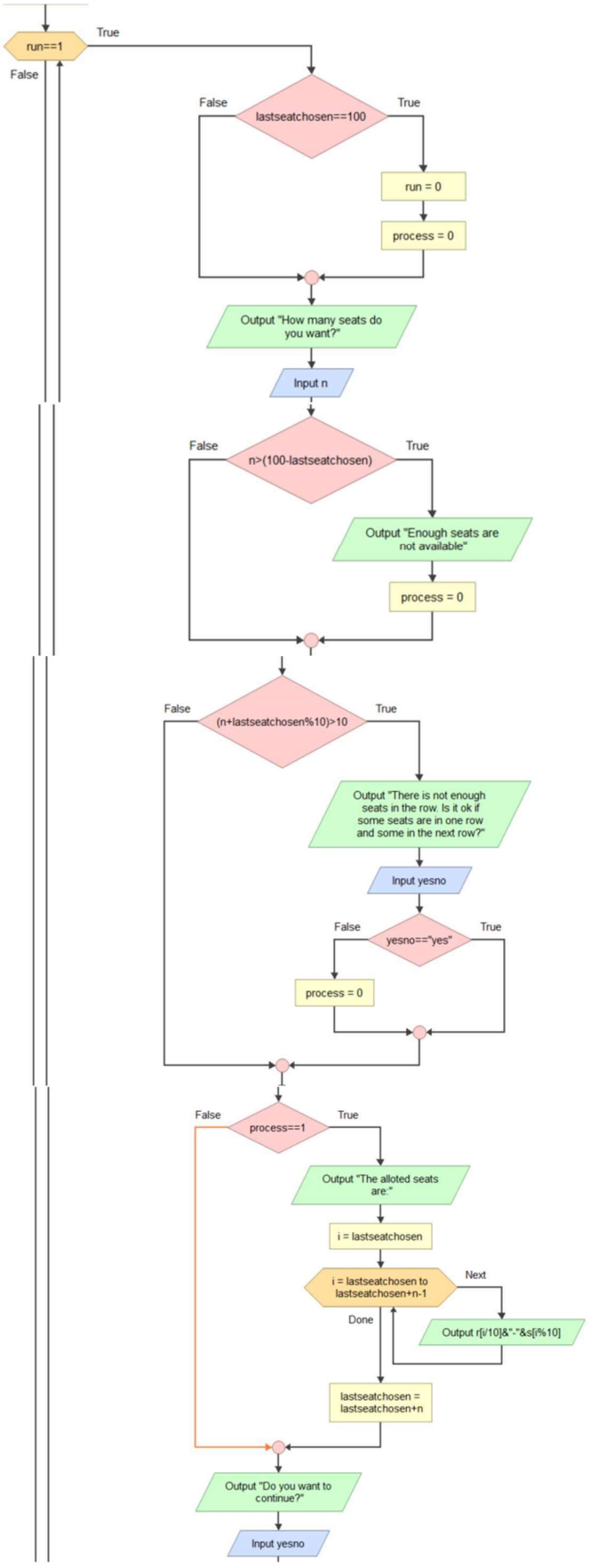
Flowgorithm

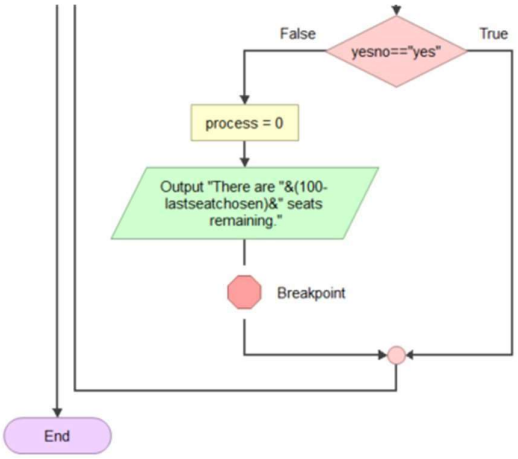
Methods used:

Loops(for and while), Arrays(integer and string), Conditions, Breakpoint, ToChar

Flowgorithm:




run==1
True
False
lastseatchosen==100
False
True
run = 0
process = 0
Output "How many seats do you want?"
Input n
n>(100-lastseatchosen)
False
True
Output "Enough seats are not available"
process = 0
(n+lastseatchosen%10)>10
False
True
Output "There is not enough seats in the row. Is it ok if some seats are in one row and some in the next row?"
Input yesno
yesno=="yes"
False
True
process = 0
process==1
False
True
Output "The alloted seats are:"
i = lastseatchosen
i = lastseatchosen to lastseatchosen+n-1
Next
Done
Output r[i/10]&"-"&s[i%10]
lastseatchosen = lastseatchosen+n
Output "Do you want to continue?"
Input yesno



Output Console:

How many seats do you want?

5

The alloted seats are:

1-A

1-B

1-C

1-D

1-E

Do you want to continue?

yes

How many seats do you want?

7

There is not enough seats in the row. Is it ok if some seats are in one row and some in the next row?

yes

The alloted seats are:

1-F

1-G

1-H

1-I

1-J

2-A

2-B

Do you want to continue?

no

There are 88 seats remaining.

Breakpoint: The program was paused.

Reference links: https://www.cs.cmu.edu/~pattis/15-1XX/common/handouts/ascii.html

http://www.flowgorithm.org/documentation/intrinsic-functions.html