Problem Statement 1

Corona has affected human life, and changed things drastically. There is a shortage of hospital beds in these tough times. Being a programmer in beingartifex, you have thought to overcome this issue, so that people will not have to rush to different hospitals to get a bed for their loved ones.

In a village named artifexnagar, there are 10 hospitals named A, B, C, D, E, F, G, H, I, J. Each hospital has 100 beds. Initially, all beds are vacant(there is no patient on any bed).

Now, a person can either book a bed for him, or he/she can be discharged from there. If a person is discharged from a bed, then that bed is vacant and can be booked again.

For free beds :
A person can enter two data "freebeds" and hospital name, and the bed number of all beds that are free in that hospital hospital will be displayed.

Bed number will start from 1 and go upto 100 (1, 2, 3, 4 … 100).

A person can book a bed by entering "book" and entering four details of him/her that is name(one worded), phone number , age and a password . And two more details that is hospital name and bed number, if that bed is free (that is not previously booked by any patient , or the patient has been discharged from that bed) , the bed will be booked , otherwise a message will display " bed is already booked".

For discharge:
A person can discharge from a hospital by entering "discharge" and 3 details, password, hospital name and bed number. If all the details are genuine, he'll be discharged , and that bed of the hospital is again ready to book.

A person can enter "OK" to get out of your program , and you'll display a message "thanks for using beingartifex corona management system".

Example:

book Aniket 9192939495 20 mysecurebed C 3
book Pranamika 9495969792 19 letmecure J 10
book Akash 9342634425 19 coronawin A 20
book Alok 9134955664 19 coronaishell C 13
book Shashvat 9758474744 18 coronalose E 7
book Aman 9846983743 19 coronahell F 10
book Nitik 9134995664 18 coronais G 4

Freebeds C

1 2 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 (instruction-> This is your output where all the free beds in hospital C are being displayed. Where bed 3 and 13 are booked , so it's being displayed).

discharge mysecurebed 3 C

Freebeds C

1 2 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
(as bed 3 is being discharged by aniket, it's free to book now, but bed 13 in hospital C is still occupied by Alok).

OK
thanks for using beingartifex corona management system

………………………..x……………………………………….x…………………………………………….x…………………………………………x……

MOST IMPORTANT MESSAGE:

In these problem statement , the condition given is basic and must be done .

But in order to win this competition , you should add some additional features that should be important , genuine, and useful.

One example of adding an additional feature is:

Adding a system which also displays if oxygen cylinder is available on that bed or not. One entering "oxygen" hospital name and bed number, it'll display the bed numbers of that hospital which has oxygen cylinders.

This is just an example of adding an additional feature.
You've to use your own innovative mind to think and add some useful features to your program. 😊

🔴Weightage of marking will depend on completing of basic task first(the problem statement provided), and usefulness of the additional features you've added, the way you've written your code.

Put your day and night efforts, happy learning😊

If you'll be caught in any type of cheating. You'll be disqualified and more of heavy actions will be taken.

Best Of Luck From Beingartifex Team.

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Problem statement 2

During these tough times, the Artifex Hotel in ArtifexNagar saw a spike in the number of guests. Mr. Bansal, the manager of the hotel, saw that the staff is facing some issue in the allotment of hotel rooms, and tables of the restaurants. Being a programmer, Mr. Aman wants you to solve the issue by writing a programme that allots rooms and tables to the guests of the hotel.

Now, a guest can either check in the hotel room or checkout. If a guest checks out of a room, then that room is vacant and can be booked again. While check-in, a guest provides four pieces of information - His/Her name, Date of birth(dd/mm/yy), Phone no and sets a Password for himself, all separated by a space.

For allotting a room no. :
A person can enter a data "free_room" "floor_number", and the room number of all rooms that are free on that floor will be displayed. There are 5 floors each having 100 rooms.
A person can book a room by entering "book" and entering four details of him/her that is name(one worded), phone number , age and a password.
Room No. format R_floorno._roomno.
For allotting a table no. :
A guest enters a keyword "table" and room number which is allotted while check-in and the table no. is allotted.

For check out:
A person can check-out from the hotel by entering "check" and 3 details, password, floor no. and room no.. If all the details are genuine, he can check out , and that room of the hotel is again ready to book.

A person can enter "OK" to get out of your program , and you'll display a message "thanks for using being artifex hotel management system".

Example:
Input example:
free_room1
book Aniket 9192939495 02/01/2001 mysecurebed

Allotted room : R_1_1
table R_1_1
free_room2
book Shashvat 9495969792 03/01/2001 letmecure
Allotted room : R_2_100
table R_2_100
free_room3
book Aman 9342634425 04/01/2001 coronawin
Allotted room : R_3_50
table R_3_50
free_room4
book Alok 9134955664 01/01/2001 coronaishell
Allotted room : R_4_35
table R_4_35
free_room5
Book Nitik 919413768570 09/10/2000 18 secureshield
Allotted room : R_5_16
table R_5_16

………………………..x………………………………………….x………………………………………….x………………………………………….x……

MOST IMPORTANT MESSAGE:

In these problem statement , the condition given is basic and must be done .

But in order to win this competition , you should add some additional features that should be important , genuine, and useful.

One example of adding an additional feature is:

If a family having 5 members approaches the hotel, then,if possible allot the room and table together. Else you may do the needful.

This is just an example of adding an additional feature.
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Best Of Luck From Beingartifex Team.

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Problem Statement 3

Corona has affected human life, and changed things drastically. To maintain social distancing and reduce the possibility of covid-19 spread during admission in school. you have thought to find a solution, so that people will find that if the school has available vacancy for the student admissions.

In a village named Artifexnagar, there are 10 schools for classes I-X named A, B, C, D, E, F, G, H, I, J.

School details
Each school has 100 admission capacity, (per class-10 students) and any student can take admission at any time. Initially, there is 0 admission in a school.
Now, a person can either get admission for him, or he/she can leave(Transfer,etc) from a class. If a person leaves a school, then 1 vacancy will be created and can be booked again.
A person can enter two data "Vac_adm" and school name with a class number and roll number (Vac_adm A X), and the number of admission vacancies of a particular class with roll number(from 1-10) will be displayed.
Class number will start from I and go upto X (I, II,III, … X)

Admission procedure
A person can book admission by entering "adm" and entering four details of his/her name(one worded), phone number , age and a password . And three more details, that is school name and class number with roll number, if that place is available (that is not previously booked by any student, or the student has left from that class), the place will be booked, otherwise a message will display " Admission is already done".

Leaving procedure
A person can leave a school by entering "leave" and 5 details, password, school name, class, and roll number. If all the details are genuine, he can leave , and that place of the school is again ready to book and if the details are not genuine then a message pops up "invalid details entered"

A person can enter "OK" to get out of your program , and you'll display a message "thanks for using beingartifex school management system".

Example:
adm Aniket 9192939495 20 mysecurebed C II 5
adm Nitik 919413768570 18 secureshield A III 7
adm Pranamika 9495969792 19 letmecure J V 9
adm Akash 9342634425 19 coronawin A X 4
adm Alok 9134955664 19 coronaishell C IX 10

Vac_adm C X
1 2 4 5 6 7 8 (instruction-> This is your output where all the free beds in school C and class X are being displayed. Where roll number 3,9 and 10 are booked , so it's not being displayed).

leave secureshield C X 4

Vac_adm C X
1 2 5 6 7 8 (instruction-> This is your output where all the free beds in school C and class X are being displayed. Where roll number 3 and 9 are booked , so it's not being displayed).

(as roll number 4 is being left by Nitik, it's free to book now, but bed 9 and 10 in school C is still occupied).

OK
thanks for using beingartifex school management system

………………………..x………………………………………x…………………………………………x…………………………………………x……

MOST IMPORTANT MESSAGE:

In these problem statement, the condition given is basic and must be done .

But in order to win this competition , you should add some additional features that should be important , genuine, and useful.

One example of adding an additional feature is:

Adding a system which also displays if a digital-board is available on that class or not.

One entering "digital_board" school name and class , it'll display the vacant roll numbers of that school which has digital_board.

This is just an example of adding an additional feature.
You've to use your own innovative mind to think and add some useful features to your program. 😊

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