**Conference Room Booking**

**Instruction**-

Create simple a **django application** or **python script** for this exercise.

If I will give you VACANCY 10:00 12:00 input then output come C-Contact S-Sharing   
T-Team.   
If we give you BOOK 14:00 15:30 3 input then output come C-Contact.

Your office has dedicated meeting rooms where managers can conduct private discussions. They need a system for scheduling meetings that will be effective for scheduling meetings.

There are currently 3 meeting rooms with varying capacity:

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| --- | --- |
| **Name** | **Person Capacity** |
| C-Contact | 3 People |
| S-Sharing | 7 People |
| T-Team | 20 People |

Person Capacity - Maximum capacity of the meeting room.

Buffer Time - Time used for cleaning up the meeting room. It happens at fixed times from 09:00 - 09:15, 13:15 - 13:45 and 18:45 - 19:00. During buffer time, meeting rooms will not be available for booking.

**Rules:**

1. Bookings can be made only in a single day from 00:00 to night 23:45. It cannot overlap across days. So you cannot book from 23:00 to 01:00, but can from 23:00 to 23:45.

2. A booking can be started and ended only in 15 minute intervals, i.e. XX:00, XX:15, XX:30, XX:45. This means a booking can be made at 01:15 or 16:00 but not 15:35 or 16:03.

3. The rooms will be allocated only to those who book them, on a first come first serve basis.

4. The most optimal room which can accommodate the number of people will be allocated. For eg., if you asked for a 4 person capacity requirement then the S-Sharing (7 person capacity) will be allocated, provided it is available.

5. In case if the room of desired capacity is not available, the next available capacity room will be allocated. For eg., If you asked for the 4 person capacity room between 12:00 to 13:00 and the S-Sharing is not available then the T-Team will be allocated, provided it is available.

6. No meetings can be scheduled during the buffer time. If the booking time overlaps with the buffer time NO\_VACANT\_ROOM should be printed.

7. Bookings can be only made for 2 or more people and up to a maximum of 20 people. If the person capacity for booking is outside of 2-20 range NO\_VACANT\_ROOM should be printed.

8. Time input should follow HH:MM format (24 hours format). If an incorrect time input is provided then INCORRECT\_INPUT should be printed.

**Input Details**

The system will take two types of inputs:

1. Book Meeting Room

As a manager, he/she shall schedule a meeting by giving a time period and capacity requirement.

Format - BOOK <start\_time(inclusive)><end\_time(exclusive)><person\_capacity>

Example - BOOK 14:15 16:00 12

**Possible Output:**

“<Meeting\_Room\_Name>” - If the booking is successful

“NO\_VACANT\_ROOM” - If no room is vacant during the requested time period.

**2. View available meeting rooms**

As a manager, he/she would like to view a list of available meeting rooms by giving a time period. This should print the rooms in the ascending order of the room capacity. The rooms printed should be separated by a single space character.

Format - VACANCY <start\_time(inclusive)><end\_time(exclusive)>

Example - VACANCY 14:30 15:00

Output: C-Contact S-Sharing

**Input Constraints**

1. Time will be in HH:MM (24 hours) format

2. Time input should always consider the 15 minute time interval

3. For all the time inputs end\_time>start\_time

**SAMPLE INPUT-OUTPUT 1**

|  |  |
| --- | --- |
| **INPUT** | **OUTPUT** |
| VACANCY 10:00 12:00 | C-Contact S-Sharing T-Team |
| BOOK 11:00 11:45 2 | C-Contact |
| BOOK 11:30 13:00 35 | NO\_VACANT\_ROOM |
| BOOK 11:30 13:00 15 | T-Team |
| VACANCY 11:30 12:00 | S-Sharing |
| BOOK 14:00 15:30 3 | C-Contact |
| BOOK 15:00 16:30 2 | S-Sharing |
| BOOK 15:15 12:15 12 | INCORRECT\_INPUT |
| VACANCY 15:30 16:00 | C-Contact S-Sharing |
| BOOK 15:30 16:30 2 | C-Contact |
| VACANCY 15:45 16:00 | S-Sharing |
| BOOK 16:00 17:00 5 | S-Sharing |
| VACANCY 18:00 19:00 | NO\_VACANT\_ROOM |

**SAMPLE INPUT-OUTPUT 2**

|  |  |
| --- | --- |
| **INPUT** | **OUTPUT** |
| BOOK 09:30 13:15 2 | C-Contact |
| BOOK 13:45 18:45 2 | C-Contact |
| BOOK 12:55 14:00 3 | INCORRECT\_INPUT |
| BOOK 13:45 17:15 6 | S-Sharing |
| VACANCY 13:45 15:00 | T-Team |
| BOOK 14:00 15:00 2 | T-Team |
| BOOK 17:00 18:30 12 | T-Team |
| VACANCY 17:00 18:00 | NO\_VACANT\_ROOM |
| VACANCY 17:30 18:00 | S-Sharing |
| BOOK 17:00 18:30 12 | NO\_VACANT\_ROOM |
| BOOK 15:35 16:35 12 | INCORRECT\_INPUT |