**inSight 2017**

**Department : Hostel Office**

**Problem Title : Hostel room allocation**

**Problem Code : PS02**

**Problem Description :**

With the large number of hostel applications received every year, the allocation of rooms to each applicant is a very tedious task. A software solution which would enable the hostel department with the allocation of rooms which would also make it easy for the students (they don’t have to stand in long queues anymore for allocation) would benefit both the management and the students. The priority number concept must be followed. Priority number is given on the basis of first come first serve basis on the mode of payment.

This system must be able to generate report of occupants of each hostel and the rooms which are unallocated after allocation.

Note: The solutions can include webapps, stand-alone windows systems, android apps etc.

**Proposed solution:**

Priorities allotted to students at the time of fee payment will be stored along with the Name, USN and Semester of the student. Allocation will be done in two stages.

**Stage 1:**

A web application will be opened to all the students with priority numbers. For any hostel, applicants will be required to enter their roommate of preference (identified by University Serial Number(USN)) and five rooms of their preference. At the time of entering preference, all the applicants who have previously opted for the same room will be displayed along with their priorities and roommate of choice.

Roommate of preference has to confirm if he wishes to stay with the previous applicant. In that case his priority will be merged with the higher priority applicant. If not, he can either specify other choice of roommate or else any one can be open to take a room with him.

**Stage 2:**

Time slice of 5 minutes per applicant will be allotted per applicant starting with the highest priority. He will be allowed to choose from his choice of 5 rooms in real time. In case, he fail to show up in his time slice he can join in at any time afterwards at lower priority. In case all the five rooms are not available room priorities of the roommate will be considered. If both fail then rooms from blocks decided by the hostel office have to be selected.

At the end the participants who failed to show up in either of two stages will be allotted rooms starting with semi-vacant rooms and vacant rooms starting with numbers as specified by hostel office.

Separate priority list for single, double rooms.

**Technology Stack :**

Front end: HTML, CSS and Java script.

Back end: SQL and Python.

**Use Case:**

Accept room preferences and preferred roommate

Confirm roommate preference

(FRONT END)

Database for student details and priority and entered preferences.

(BACK END)

Input preferences

Confirm roommate preference

Blocks Selected room

Load room preferences

Real time room selection

Select rooms from your list of preferred rooms

(Front end)

Blocks Selected room

Load room preferences

Intermediate

5 minutes dedicated time slot based on priority

**Team Members details:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Role** | **Name** | **USN** | **Email id** | **Phone no.** |
| Team Leader | Abhay Poddar | 1SI15IS071 | [abhaypoddargumla@gmail.com](mailto:abhaypoddargumla@gmail.com) | 9472758663 |
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