

In the past, Hotels usually have 2 teams :

- Hotel Amenity Center team oversees the handling of all guest room welcome and turndown amenities, such as fruits, wine and chocolates,
- F&B team oversee the in-room minibar by stocking it with F&B treats. Essentially, this meant that double the manpower was required to do a similar task in the same area. Hence, the two teams were identified to be integrated to handle both the amenities and in-room minibar

Hotel Industry are heavily affected by the Covid-19 situation. Employees appreciate the learning opportunities and expansion of their responsibilities that came with the need of Job Redesign.

The roles to be redesigned were identified:

- Service Associate – Housekeeping (Amenity Center) and
- Service Associate – F&B (Captain)

The roles were merged to form a new role, Service Associate - Guest Amenity Services (GAS). The employees involved were cross trained in minibar operations and amenity services. Not only did the employees learn new tasks that increased their employability, but the hotel also reduced the overall headcount required to staff the team.

However, this brings about the deployment issues of the 3 categories of service associates.

You are required to design and implement an online scheduler for the 3 categories of service associates to better support the hotel operations. Upon completion, publish and make available for employees to view their work schedule. An example of such an equivalent manual scheduling done up with Excel application is illustrated as follows:

	A	B	C	D	E	F	G	H	I	J	K	L
1	Week Starting	6-Sep-21		Housekeeping (Amenity Center)				F&B (Captain)				
2												
3	Monday	Shift 1		Ali	Charles	X		Bala	X	X		Staff List
4		Shift 2		Ella	Gina	X		Danny	X	X		Ali
5	Tuesday	Shift 1		Ali	Hannah	X		Francis	X	X		Bala
6		Shift 2		Danny	Gina	X		Ivan	X	X		Charles
7	Wednesday	Shift 1		Ella	Hannah	X		Francis	X	X		Danny
8		Shift 2		Charles	Ivan	X		Bala	X	X		Ella
9	Thursday	Shift 1		Ali	Gina	X		Danny	X	X		Francis
10		Shift 2		Charles	Ella	X		Bala	X	X		Gina
11	Friday	Shift 1		Gina	Hannah	X		Francis	X	X		Hannah
12		Shift 2		Ali	Danny	X		Ivan	X	X		Ivan
13	Saturday	Shift 1		Ella	Hannah	X		Bala	X	X		
14		Shift 2		Charles	Ivan	X		Francis	X	X		
15	Sunday	Shift 1		Ali	Ella	X		Danny	X	X		Status
16		Shift 2		Gina	Charles	X		Bala	X	X		Trained in Amenity Center
17												Trained in F&B
18												Trained as GAS
19												
20												
21												
22												
23												

Application Requirements

You may assume the following for your application:

- The hotel work on a 2-shift manner
- Employees who worked for 2 consequent days within a week must have a rest day after that.
- Employees may work less than 5 days in a week as they may be deployed elsewhere in the hotel (not in this assignment scope)
- Both Housekeeping and F&B used to require 3 manpower for every shift but during covid-19 period, the manpower required for Housekeeping is 2 and F&B is one. Hence the administrator must have a way to “block-out” duties.

Your challenge is to create a Tool for Online Scheduling.

The core capabilities of an Online Scheduling are:

- Add in employee profile with their trained status (AC, F&B and GAS)
- For any new week schedule,
 - Block out the excess manpower slots
 - Assign the manpower according to the rules of the company and the trained status of the employee.
- Alert any job assignments that are illogical, for example
 - allocated both shift 1 and 2 on the same day
 - assign AC trained staff to F&B and vice versa.
- Save the work copy with version control
- Allow the planner a “view only” option for older versions of work copies.
- Published the week schedule and archive all work copies.
- Allow schedule to be published for employees viewing (work copy is not accessible)
- Display published schedule for a chosen week for all employees by management
- Display published schedule for individual by each employee.
- Remembering the published and planning schedules after rebooting the user's computer

You are encouraged include or invent additional features (such as Drag and drop etc) that are suitable for such a scheduler.

Application Requirements

You will build an application from scratch, fulfilling these requirements:

1. You are to specify and construct this tool using a combination of HTML, CSS, and JavaScript.
2. If a database is required, you may only use JSON files, MySQL or sqlite.
3. The application must start, and be reachable, via HTTP on port 8080 when run on our test machine.
4. The application must launch with `npm start`
 - If your application requires a configuration step, this must be achieved via the command `npm run setup` and documented in the README file – we will not undertake any other manual steps.

