SHIFT MANAGERIAL STRATEGY FOR IT SERVICES

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Abstract

Employees are the backbone of any company; their management plays a major role in deciding the success of the organization. Employee's shift scheduling is a process through which a team can provide the best quality of service to their clients and can utilize the resources efficiently. The main objective is to provide shift rostering for IT Operations Management. It includes a tool that provides a platform where the admin can opt for different shift timings manually for their work force through which it schedules transportation for employees, estimation of Allowances, leave tracker, comp off tracker and whenever changes are made in roster intimation to employees can be sent automatically.

*Keywords***:** Shift allotment, Allowances, Transport scheduling, leave tracker.

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1. The paper surveys

Veerendra K Rai and Praveen Chandak [1] A Shift Planning and scheduling for IT operations framework using the Greedy algorithm can produce shift scheduling and leave tracking automatically that makes the work easier.
Using a Greedy algorithm cannot always give optimal results. To get good allocation heuristic based search can be used that closely mimics greedy algorithm to get an optimal allocation. An extension to this would be adding the resources depending upon skill sets from various locations which can be used for allocation of human resources as a project planner for engagement.

C.Anantaram, Prasad Joshi, Kiran Deshpande, Piyush Trivedi [2] has done research on crew rostering system for Indian Airlines and given their research and implementation. Crew rostering for airlines involves in large crew, parameters, constraints, objectives and this makes it complex to handle manually. Conventional programming techniques cannot result in solving such problems so, there is a need for an expert system.

This expert system that has been developed for Indian Airlines will give the schedule for one month and also supports the dynamic changes for the schedule. The product can assist the organization in maintaining a record of every project it undertakes. All the information relevant to the projects like size, time, effort and departments involved, etc is maintained by the tool.

2. Establishment of systems to manage the risks of shift work

Effective management of the risks associated with shift work requires commitment from senior management. It is vitally important to make sure senior management (ie those who make the business decisions, allocate funds and create a drive for a change) are included in the development of, and/or modification of, shift-working arrangements.

Developing clear policies and procedures for managing shift-working arrangements ensures that people throughout the organization, no matter how large or small, are aware that preventing or limiting the risks of shift working needs to be considered at all levels of planning.

IT operation teams provide 24/7 services to their clients. They might face uncommon operating hours. Working staff may experience movement shifts, which can have an inconclusive impact on rota satisfaction and performance. The shift Rota plays a very important role in decreasing the influence of surprising operating hours on the individual.

3. Motivation

The motivation behind this automation process is to make the accessing of sources easy. Time constraint is an important factor in any of the organization to reach their goals. Scheduling the shifts manually and estimation of other requirements such as shift allowances calculation, Transport provision, leaves and comp off tracking manually takes a lot of effort and time taking process. Sharing of shift roster is done through emails so whenever a change is done on the roster, that should be intimated to all the employees manually through emails. The management tool can be a solution to prepare shift roster and view independently. PHP is used to build this application. As PHP is used to build fast, secure and large web applications.

4. Objectives

The proposed system is an attempt to provide a rich solution to lessen the inconvenience in handling the cumbersome job of managing and scheduling different shifts. Systematic handling of the schedules in such a way is a key to increasing its manageability.

1. To reduce a lot of manual work.
2. To provide multiple disciplinarians in a single tool.
3. To have every employee the view the roster independently.
4. To have an opaque to all the employees.
5. A comprehensive report generation technique is in place to put on screen the various categories of reports as per the requirements
6. One manager/team leader is only responsible for his team and can't have the details of other teams. This brings in security to the system.

5. Implementation

To design the management tool, it is completely dependent upon two sets of data one is employee details and second is the shifts. Defining the term 'shift work' is not as easy as it appears because shift work means different things to different people. Defining shift work as a system where one worker replaces another on the same job with no break in the operation of machinery or equipment was the basis.

5.1 Manage Employees:

Manage employee is used maintain the details of employees. The details here must be specific at many levels such as Team, Emp id, First name, last name, HR Id, Managers Emp id, band, Gender, Compute shift allowance, Avail cab, phone, web phone and Role. Adding employees according to the team will the best choice. The bands are the levels that are given the employees according to their designation in the organization. Other details such as cab, if availing a cab is given as yes then some more details must be filled such as pickup and drop point. Compute shift allowance can also set as yes or no depending on the type of employee. If yes is given then only the allowances can be calculated by the tool.

Role

The role of the user who is added to the list can be either an employee or Team lead or Manager or Admin. There are four different roles. By submitting the above details an employee can be added to a team. Depending on these roles chosen the rights are given such as view and edit. An employee can view his/her shift details independently.

A Team lead can view all the details of employees such as shift allowances, leave tracker, comp off tracker.

A manager can view and edit all the details of employees. He has right to add, remove, edit the employee details.

An admin can have view and edit rights of all the employees including managers and teams.

5.3 Manage Shifts

Shift Roster Management is directly or indirectly is completely dependent on the shifts. Each team may have different timings depending on their requirement. The shift may be same such as morning, Afternoon, peak, night, but the timings may differ. The timings are clearly important as these details are sent to the transport team to pick and drop the employees. Even the transport team has to plan their work depending on the timings. Different types of shifts can be added to the tool. Using Manage shifts a new shift can be added and existing shifts can be changed or deleted. We can also opt for colors to represent different shifts. To create a new shift, shift name, shift timings and shift color can be used. Shift number is created by default. To edit an existing shift edit option can be used. The details can be changed and saved. To delete the existing shift delete option can be used. Some examples of types of shits are

- General
- Morning
- Afternoon
- Night
- Peak
- Weekend Morning
- Weekend Night

5.4 Manage Team

To access the tool team and team members must be given access rights by adding them to the list. To add a team initially an admin must add the teams into the list by using add team. Manage team page has detailed such as team number, Team name, VP, Director, Edit, Delete. To add a team initially admin must use the Add Team. We can opt for different options such as edit and delete the team. To edit the team name/ VP/ Director Name this option can be used. To delete the team, delete option can be used.

5.6 Roster and other implementations

A Manager can use the framework of shift roster and provide the shifts. The design provides a view which can have all the employee names of that team and in parallel, it shows different shift options from which the user can choose and save. The saved roster can further be used for calculation of shift allowances, leave and comp off tracker. As mentioned each employee has a band depending on their skill set. Each band has provided with some amount of shift allowances. The tool computes and provides the output. Shift legends are used to track the leaves. Shift legends can be defined as a group of types of leaves that an organization provides to its employees. Every organization has its list of public holidays and these public holidays are used to keep track of the comp off tracker. Whenever the changes have been made in the saved roster, an email will be sent to the employees whose shifts are changed. This makes the employees to have a clear understanding about their shift timings even if any changes are done anytime.

7. Results

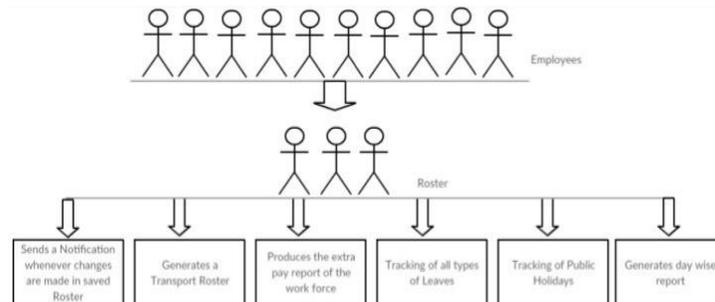The Framework implemented using PHP. It is a web based application. The Results are explained using the diagram.

Figure 1: Output of the implemented framework

8. Conclusion

Manual allocation of shifts is a tough task. This manual allocation is automated by using this tool which shows you different shifts to select and create a schedule. The resulted schedule can be further used as discussed. The tool can be used to get the results for multiple disciplinarians which makes the work easy.

References

[1] Veerendra K Rai, Praveen Chandak, Shift Planning and Scheduling For IT Service Operations Management, 978-1-4799-5927-3/15/$31.00 ©2015 IEEE

[2] C.Anantaram, Prasad Joshi, Kiran Deshpande, Piyush Trivedi, Crew rostering system An expert System for scheduling Crew for Indian Airlines 1043-0989/93 © 1993 IEEE