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Virtual office: A cost effective solution

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Article Info

Abstract

The Covid-19 has changed the shape of the world. Now, everyone is preferring to work from anywhere. The recent pandemic brought into focus the merits and challenges of working from home on a level of personal experience [9]. Most of the employees are preferring to work from home or from a remote location. It depends on teleworking / telecommunicating arrangements where an employee does not require staying during the business hours with their employer [1]. This is an attempt by us to prepare such a system that helps the project manager to track the work allotted to the team members. An application called "VIRTUAL OFFICE" or work from anywhere streamlines and streamlines organisational processes. It is an effective tool for outlining the actions that must be completed, the dependencies that must be upheld, and the permissions that must be received in order to complete projects. It records the details of the employees as well as the tasks that are given to each employee. The "ADMIN" and the "EMPLOYEES" of the various departments assigned by the admin in an organisation or firm are the super users of the system. The 'VIRTUAL OFFICE' mainly consists of seven modules Administrative module, Login module, Bulletin board, E-forum, Task management module, Project management module, Address book and Documents library. The site's administrator, who has access to the administrative module, may add new employees and provide them passwords. The login module consists of three parts: password change, password reminder, and login registration. where a person may really register and log in using their user ID and password. E-forum is a type of discussion software that enables internal staff members to share work and ideas. The programme includes linkages to other intranet resources so that users can access intranet databases or link out to an intranet or Internet Web page from within a conversation.

The project management module provides task status information to the staff. We may assign a job to an employee, examine the progress of every assignment, and view the report of every work completed today. The major purpose of the address book module is to keep track of all workers' addresses so that we may access them all. The list of papers in the document library is included in the document library module, which also permits publishing of documents. An enterprise intranet application called VIRTUAL OFFICE automates and enhances organisational processes. It is an effective tool for outlining the actions that must be completed, the dependencies that must be upheld, and the permissions that must be received in order to complete projects. It records the details of the employees as well as the tasks that are given to each employee. The "ADMIN" and the "EMPLOYEES" of the various departments assigned by the admin in an organisation or firm are the super users of the system.

1. Introduction

Proposed system is mainly concentrating upon creating virtual Environment for the employees of specific company. We imposed certain security constraints like session Management, anywhere access. And this system would be a Best of its kind. The benefits are these Systems are now available as Software products in the market so that we can buy them and use.

One more Advantage of this system is they will interact and can cooperatively work with the new media technologies like mobiles. The limitation of this system would be all the systems in the Today markets don't have certain security constraints. They are cryptographically poor. High volume of companies using the same address; Lack of government regulation, resulting in fly-by-night providers; Usage by fraudulent companies due to ease of registration; Lack of structured training of service staff, as it is a niche industry The Virtual office is being charactered to decrease the wastage of time for the employee. Employee can interact through online for doing his regular works which will be done at regular conventional office. The primary objective of the virtual office is to fully automate the conventional office. Connecting Employees to the company site through online, the secondary objectives and benefits are : seeking a low-risk substitute for leasing a typical office; testing a novel concept for a product or service; reducing the size of a traditional workplace; abandoning the use of post office boxes; attempting to build a foothold for business in the nation or city of the provider; looking for a company address in a pricey neighborhood for corporate image purposes; seeking a business address to serve as its registered business address in order to comply with a law; requesting assistance from commercial services like answering services; looking for a proxy to pick up mail and packages.

2. Literature Collection
Businesses may get a real address and office-related services from a virtual office without incurring the costs of a long lease and administrative employees. Employees may work remotely with a virtual office while still having access to amenities like a mailing address, phone answering services, meeting spaces, and videoconferencing. The flexible workspace sector includes virtual offices, which provide businesses any mix of services, space, and/or technology without requiring them to incur the capital costs associated with purchasing or renting a traditional office. Another development that may soon have an influence on virtual workplaces is virtual reality technology. Virtual reality applications have the capability of creating offices spaces that are physical spaces within the virtual world where users can meet and work side-by-side [11]. The advantages of the system are.

2.1 Higher productivity
People who work from home are often more productive than those who work in an office. The increased productivity of remote employees can be attributed to a number of factors. Less distractions are one such factor. When you work from home, no one will visit your desk to chat about unimportant topics or engage in a conversation that doesn't concern you. Additionally, a lot of remote jobs let you work past the typical 9 to 5 office hours. When you are more productive, you may work at various times throughout the day. As long as you are finishing your chores on time, even employers won't mind your flexible work schedule.

2.2 Healthier lifestyle
It might be challenging for office workers to maintain a healthy lifestyle. Many people think that their busy schedules prevent them from eating well-balanced meals, especially in the morning and afternoon. When you work from home, you may avoid chores like getting ready for the workplace and

driving to work, among other things. As a consequence, you save a lot of time and put it to good use by leading a healthy lifestyle. You may prepare healthy meals, consume them, and even work out many times during the day. To keep oneself healthy, it is also possible to take quick breaks from work and engage in some physical exercise, such as going for a fast walk.

2.3 Better work-life balance
You can spend more time with your family because you can work from home. You may also make a timetable that will enable you to strike the ideal balance between your personal and professional lives. You can save a lot of time by choosing not to commute to work. You may thus use the time you've saved to spend meaningful time with your partner and children. Remote employees might be happier and more pleased with their professions if they have more time each day to manage their personal lives. Additionally, this helps firms keep a high staff retention rate because it's simple to keep competitive personnel.

2.4 More savings and lesser carbon footprint
Working remotely has the additional benefit of allowing you to save more money annually. Imagine if none of the expenses you have for transportation, parking fines, car upkeep, lunch at a luxury restaurant, etc. exist anymore. When you work remotely, all these savings are possible. As you won't be using your automobile to get to work, not commuting also helps the environment. Additionally, it will enable you to contribute to environmental preservation while also conserving gasoline for the future.
Some of the limitations of using virual office are

2.5 Quality and quantity of output suffers: Yahoo CEO
Marissa Mayer stopped work from home for a reason. She spotted a visible decline in employees' effectiveness and speed. The quality and quantity of work suffer, usually due to the lack of a dedicated setup. Offices were made for a reason after all. Proper equipment, dedicated internet connections, an office-like structured feel are all lacking when your employees are working from home.

2.6 Distracted employees: There is little discipline. How
serious would you be if you knew you had no commute time, and no compulsion to wake up in time to shower, brush, or organize for work? You have to tend to not just your work but also the occasional doorbell, household chores, pets/kids needing attention. Moreover, it's easier to be tempted when you have a television in the next room, or on a dull day you can look over your screen and see your comfy bed.

2.7 No scope for teamwork/brainstorming: How do you
organize brainstorming sessions, meetings, or encourage team spirit when the entire team is scattered and the only interface is through Skype? Sometimes it takes a team to achieve a breakthrough in a major problem. Five people in different places are more likely to pass the ball to one another rather than keep it rolling.

2.8 Team can lose track easily: This is somewhat an end
product of a distracted workforce. It's easier to lose track of your progress. Workplace success is based on one very important factor that most people ignore: competition. You can't expect your employees to deliver more every time if

they are not driven by the urge to be more successful than their peers.

2.9 Communication needs extra effort: It's very annoying sometimes getting your point across on the phone or on video chat or email. Many important points and ideas are left out since all discussions are scheduled, and you can't just jump cabins to talk anytime. Effective communication is definitely not impossible, but it does take an added amount of motivation.

2.10 Loss of synergy: I learned of synergy through textbooks but experienced it firsthand only when I started working. There is something about a bunch of people working towards the same goal and sharing in a belief that cannot be attained by remote communication. The synergy that's created in a workplace, the collaboration, is unparalleled. There is a reason certain people call their colleagues their family—this concern for common wellbeing is what can sometimes be the propelling force for a business. It's important to remember that the impact of all these factors is proportional to the size of your operations. A larger virtual workforce will be more difficult to manage as compared to a small team. But these are all risks that can be very well mitigated by careful planning and oversight. The essence of running a smooth virtual setup lies in how strong your team's communication is, and how well you break down the deliverables.

3. Materials and Methods
The Application starts with a login page, which is an html file where the user can
Login to the company's website where he can access his account details, he can do his Work of doing project tasks there, where he can have an access to the company's
Database with some constraints basing on his designation. There is link in the page for the Registration of New user and another link for the forget password for the employees who have forgot their password. After entering the user details there is an Authentication of the user can be done using login page. After the login session has been completed he can access to the home page where all the tasks regarding the employees like view task status, project status and Bulletin board, E-forum. After doing his work the logout details of the employee will be stored in the database where we can access those details for further use.

3.1 Administration
The simplification of administrative procedures frees up more time for resource management. This project information will help management make sure that initiatives currently being worked on inside the company are strategically linked to the business and are given the necessary attention. Additionally, it enables management to assess the project's management efficiency.
When researching, starting, and managing projects, a business that chooses to use a standardised Process or approach will get a lot of advantages. Among these advantages are:
- It offers a consistent approach to projects inside a company and raises project success rates, which leads to cost savings.
- It improves organizational project managers' abilities and creates a shared knowledge base, which lowers project risks.

3.2 User Role
- Employee can login with his id and password.
- He can view his details and can modify if any changes needed. This is called as "Employee Details".
- He can view the "Documents" which are needed for his project.
- He can view the "Announcements" which are given by the Administrator.
- If he has any problem, he can create a "Forum" which can solve by the other employees if they know. If he know he can also give solution to the others problem in Forum.
- He must update the current "Status" of the project and modifications done on that day.

3.3 Project Specification
The Portal Administrator role would typically be allocated to an individual working in the project office. If your organization does not have a project office, it should be someone who is involved in the overall prioritization, administration and management of projects and who has authority in these areas.
Virtual office contains a documentation repository per project and a general repository of project management templates that can be used by the project managers and team members. The repository enables all team members to upload specific documentation relating to the project i.e. project plans, minutes of meetings, specification documentation, training documentation, agreements with suppliers etc.
This feature makes it simple for team members to share documentation among themselves and helps to guarantee that everyone in the team always has access to the most recent version. It eliminates the needless sending of huge papers to several team members and the possibility that records may go missing. A project's success depends on having current, pertinent documentation.

3.4 Project Review
The cost of using project portal is based on the number of users requiring access to the portal with annual and monthly payment options available.
Costs are also dependant on:
- Implementation assistance required
- Amount of disk space required
- System administration services
- Hosting requirements (on-site hosting is available)
- Customization requirements
- Support requirements

Project Virtual Office mainly deals with maintaining, storing the employee and project details in databases. And to automate the tasks in the conventional office that are usually done by the employees. The employees can login into the site and can do their work.

3.5 Module Description
The 'Virtual Office' mainly consists of seven modules
- Administrative Module
- Login module
- Bulletin board
- E-forum
- Project management module
- Address book
- Documents library

3.5.1 Administrative Module
In the administrative module administrator the admin may be the owner of the site, he can create a new employee and can assign a password to them.

3.5.2 Login module
Login module consists of Login Registration, Changing password, Password Reminder. Where actually a new user can register and the existing user can login with user id and password.

3.5.3 Bulletin Board
The bulletin board, where all employees may view the articles posted on the notice board, is a crucial component. They can post their own articles in addition to viewing others'. It only serves as a notice board where one may find out everything about the events taking place in all departments. A bulletin board, also known as a pin board, notice board, or pin board in British English, is a location where individuals may post open messages, such as advertisements for goods for sale or purchase, event announcements, or informational postings. Messages can be added and removed from bulletin boards by using materials like cork, or they can be posted on computers so that anybody can leave and remove messages for others to read and view.
In universities, bulletin boards are particularly common. Many have dozens, if not hundreds or thousands, of public bulletin boards that are utilised for everything from official announcements to marketing by neighbourhood businesses and extracurricular organisations. Cork boards are frequently affixed to corridors in dorms, busy halls, lobbies, and freestanding kiosks to make it easier to post announcements. In places where there are few official boards, lampposts, bollards, trees, and walls at various campuses frequently turn into impromptu staging grounds for posturing.

3.5.4 E-Forum
E-forum is a type of discussion software that enables internal staff members to share work and ideas. The programme includes linkages to other intranet resources so that users can access intranet databases or link out to an intranet or Internet Web page from within a conversation. There are several forum software solutions accessible online. Electronic mailing lists immediately distribute new messages to subscribers, whereas forums need members to visit the website and check for new entries, which is a key distinction between the two. Many contemporary forums have "e-mail notification" features that let users opt to be informed of new posts in a thread, as well as web feeds that let users view a summary of the new postings using aggregator software, because users may miss comments in topics they are interested in. Newsgroup participation requires the use of supplementary software called a newsreader, which is the major distinction between newsgroups and forums. Typically, no additional software is needed to access or participate in forums besides a web browser.

3.5.5 Project Management Module
The staff receives information about task status through the project management module. We may allocate a task to a worker, check on the status of each assignment, and see a summary of all work done today. The project can be divided up among multiple office workers. The project manager, for instance, can go at data on employee work hours.

3.5.6 Address Book
The major purpose of the address book module is to keep track of all workers' addresses so that we may access them all.

3.5.7 Documents Library
The list of papers in the document library is included in the document library module, which also permits publishing of documents. Filling out fields before uploading a document on any online page for Virtual Office, click the "Upload Document" option. As thoroughly as you can, complete the fields. Keep in mind that the details you provide will be used to help other users—or perhaps you—find the document in the future:

1. Document Title
A brief document name.

2. Document Description
A brief description of the contents of the document.

3. Owner
The user who is currently uploading this document. This field is filled in automatically by the Virtual Office, which recognizes each user? NOTE: If this User is not you, you should log out and log in again as yourself.

4. Category
The document category that best fits the document you are uploading.
Document categories are used simply to facilitate searching by dividing the Documents contained in the Virtual Office into logical groups. Only the Virtual Office administrator can add or edit the list of document categories.

5. File
To upload a file from your local computer, click the button and then find the file there. A valid 3-letter extension should always be included in filenames to prevent users from experiencing difficulties when downloading the item. Before adding suspicious files to the virtual office, rename them.

6. Who may view this file
A list of the groups you want to be able to view this file. A document will by default be available to all groups, allowing any other user to download it. By choosing only those groups from the list, you may limit who can download the file. Holding down the "Control" key while clicking on each option allows you to pick and deselect numerous groups at once.

7. Who may replace or delete this file
The project management module provides task status information to the staff. We may assign a job to an employee, examine the progress of every assignment, and view the report of every work completed today. We can assign the project responsibilities to several office workers. The project manager can examine information about the employees' hours worked, for example.

4. Results

Fig 1: Main Screen

Fig 2: Various menu options showing window
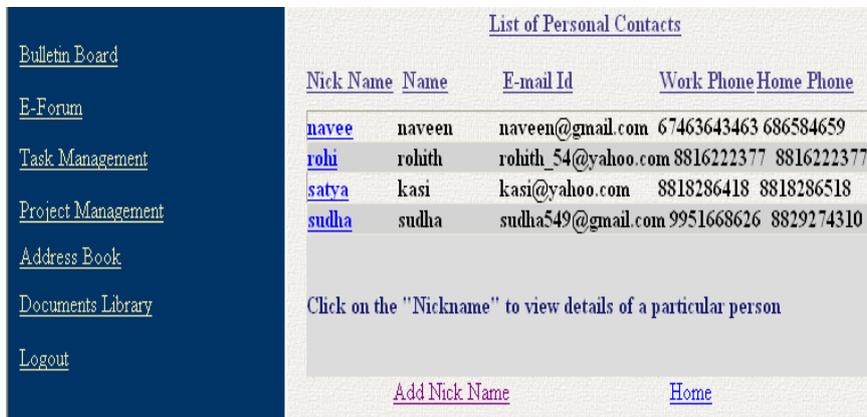

Fig 3: List of Personal Contacts

Fig 4: E-Forum Discussion form

Fig 5: Article Submission form

5. Conclusion

The application was tested and implemented successfully. The system behavior was found to be as expected in the problem definition. By this application employees in the organization can easily update their day to day work and they can easily clarify their doubts and get the information what ever he want for example details of their other employees and can view different documents and Articles what are available and they can post and update their own Articles and documents and by this department heads or who are super users get the details of employees and their daily work progress and status of work assigned, and details So by this The Employees can now use the online system to do their usual work in the office. We focus mostly on intranet applications that can be used within the same workplace, but we are working to get them online so that employees may access their workspace from home. We can set up a chat room for staff to use, which will aid them in working on projects.

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