



BUSINESS DATA COMMUNICATION AND NETWORKING

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**THE TAJ GROUP OF HERITAGE
HOTELS**



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CHAPTER:- 1

THE TAJ GROUP OF HERITAGE HOTELS

THE TAJ GROUP OF HERITAGE HOTELS

INTRODUCTION & OVERVIEW:

India is popularly known for the land of its hospitality to advocate its ongoing trend of hospitality tradition we are bringing our new venture to the world the “Taj Group of Heritage Hotels” A curation of authentic living palaces and landmark hotels, Taj Hotels is the hallmark of iconic hospitality across the globe. The brand is recognized for its warm and intuitive service and is the undisputed leader in Indian hospitality

For vacationers from some distance and vast, it presents the relief and peace in its endless coloration and care like that only a mom can give. Like a desirable old buddy it can maintain secrets, protects you and deliver you solace in times of need. Just like the Banyan tree, we at The Taj Group of Hotels try to be the haven that every world vacationer deserves.

For us hospitality is about making humans at ease even though they are a long way away from their alleviation zone and home. Whether it's the use of technology creatively and efficaciously or virtually greeting you any time of the day, we have solely your fine hobby at heart.

We intention to perpetually be your Banyan tree of hospitality, a area the place each person is welcome, specific and truly important.

With being the shareholder in your happiness we grant a range of the resorts with the cuisines framing from all over the world. Reliving the old regular royal generation of hospitality with our 8 big campuses across all over the globe in the 5 continents with a dense and diverged network which braces the amenities given by way of us to our customers.

PRIMARY PURPOSE:

The Taj Group of Heritage Hotels are renowned worldwide for their Spectacular commitment towards providing lavish hospitality. Each of the luxury hotels sets an example of opulence—born from flavorful local culture and world-class amenities. At Taj, guests from around the world find comfort in the stately, tastefully designed rooms, offering unhindered views of the destination, while providing convenient in-room facilities.

Culinary experience is provided by the Taj Group unlike any other hotels as because of their ability, which is their distinct discerning aspect. Exotic global cuisine and Most of our award-appreciated restaurants serve both, with a masterfully balanced taste.

Fulfilling the purpose of a guest's visit takes top priority at Taj group. Be it a significant meeting, a crucial conference, a much-awaited get-together, or an affair of a lifetime—a wedding; at Taj, occasions turn into memories. Plush banquets adapt seamlessly to the nature of the event, while functioning with incredible efficiency and poise, displaying Taj's group spirit of hospitality at its crest.

The primary purpose of the Taj group of Heritage Hotels is to grant travelers with food, shelter, refreshment, and comparable offerings and goods, supplying on a commercial foundation issue that are typically

Furnished inside households, however unavailable to people on a ride away from home. To serve the customers for the vicinity for commercial enterprise exchanges, centers of sociability, places of public meeting and deliberation, ornamental showcases, political headquarters, vacation spots, and everlasting residences, wedding ceremonies, receptions, conferences, workshops and many more events.

Employment Opportunities:

Various career opportunities provided by the Taj group of heritage Hotels to the employees as there are numerous positions available in various distinct department as in Hotel Management Department the positions of Hotel General manager, a significant positions as he look upon on functioning of hotel smoothly. Many jobs are under his belt. Other Positions which are likely to be related to the hotel management/administration of the hotel are Back office assistant, Catering Sales Manager, Director of Hotel Sales, Director of Marketing and Sales, Lodging Manager, Sales and Marketing Manager, Group Sales Manager, Guest Room Sales Manager, Hotel Manager, Shift Leader, Shift Manager, Spa Manager, Wedding Sales Manager.

Department of Event Planning has a variety of positions like Events Manager, Executive Conference Manager, Executive Meeting Manager, Meeting and Convention Planner, Meeting Coordinator, Meeting Manager, Meeting Planner, Meeting Specialist, Special Events Manager, Wedding Coordinator.

Department of Food operations have these many several jobs in its department. These include executive chef which includes managerial role that handles a lot of work behind the scenes in the hospitality industry. Anything related to the food operation has been looked by an executive chef in several places like restaurants, casinos, or any other place that serve food. His aim is to guide all cooks, sous chefs, and other kitchen employees. They typically prepare and order all of the food, plan the meals, in the kitchen. Other jobs in the Food Operations Department are Cafe Manager, Catering Manager, Chef, Cook, Food and Beverage Manager, Kitchen Manager, Pastry Chef, Restaurant Manager, Sous Chef etc.

The Front of the House Jobs includes majorly Concierges who directly negotiates with the customers. While acting as liaisons he provides guests with particular services they request. Other jobs under the

category is Casino Host, Cruise Ship Attendant, Front Desk Associate, Front Desk Supervisor, Front Office Attendant, Front-of-House Manager, Gaming Dealer, Guest Relations Manager, Guest Services Associate, Guest Services Supervisor, Hotel Clerk, Hotel Receptionist, Reservationist, Reservations Agent.

The jobs of support staff are as follows which includes housekeeping as they act as the director of housekeeping, Director of Maintenance, Director of Operations, Executive Housekeeper, Housekeeper, Housekeeping Aide, Housekeeping Supervisor, Lead Housekeeper, Maid, Maintenance Supervisor, and Maintenance Worker.

The job of support staff includes Baggage Porter, Bell Attendant, Bellhop, Bellman, Driver, Parking Lot Attendant, Valet, Valet Attendant, Valet Parking Attendant, Back Waiter, Banquet Server, Bar back, Barista, Bartender, Busser, Cafe Manager, Catering Assistant, Food Runner, Food Server, Head Waiter, Host, Hostess, Maître d', Server, and Sommelier.

Welcoming Guests and Customer:

There are distinct kinds of customers and clients served by the Taj Group of Heritage Hotels are Tourists, Families, Business Travelers and Health tourists, Solo Travelers, Delegates and Conventioneers etc.

Customer for attending wedding planner booked the hotel for their functions and gain advantage of all the facilities provided by us. Not only this, but also foreigner who are willing to voyage on certain places chose to live in our hotel for enjoy lavish lifestyle and culinary cuisines.

All age group of people are welcomed as a guest and overwhelmed as a customers. Children find exciting to attend our hotels as it includes several game activities in the game zone. Moreover They feel cherished to celebrate their birthday party in our hotel.

Furthermore, Officers, Managers and Accountants of various companies come to our hotels to organize their meetings or celebrate their farewell party as they find our hotel to be cheerful and with all facilities. Hence

Positive feedback has been provided by all the guest and customers, who all attended our hotels irrespective of any place.

The Taj Group of Heritage Hotels is overwhelmed to announce that our hotels have 6 campuses all around the globe in 4 continents which includes several states and cities in India and distinct countries of world.

They are as follows:

1. Narsinghpur, India
2. Ahmedabad, India
3. Mumbai, India
4. Dubai, UAE
5. Thailand
6. Malaysia, Asia

The worldwide map of the location of the Taj Group of Heritage Hotels is below:-

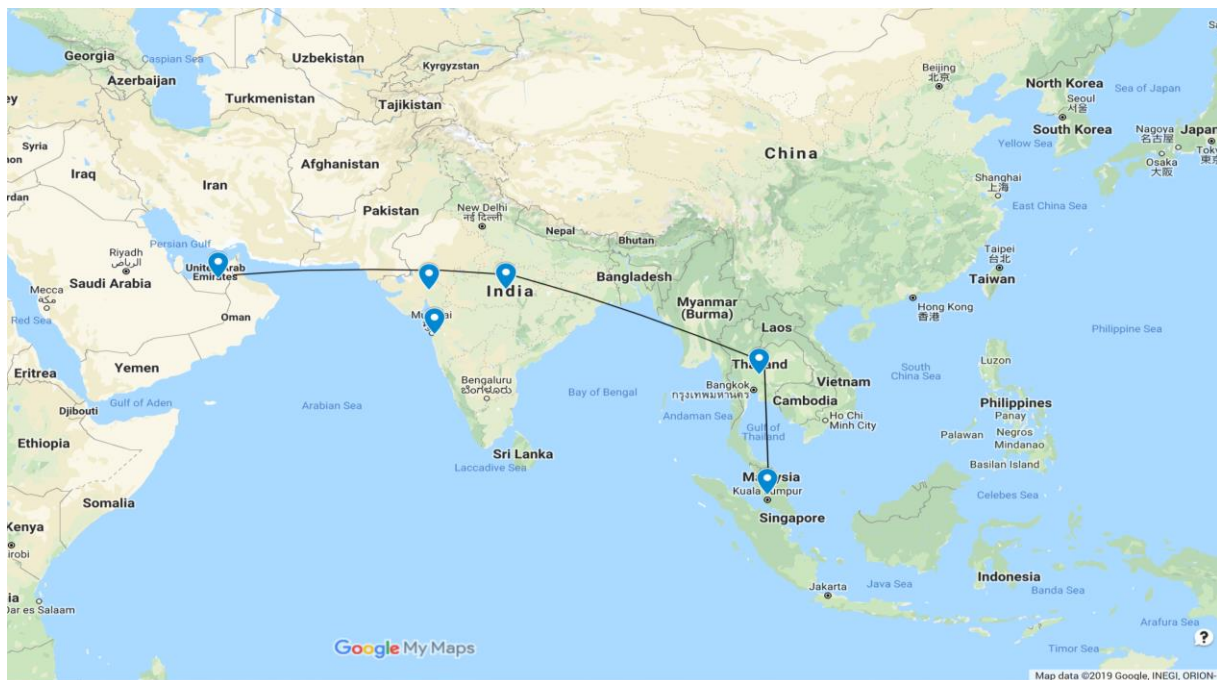


Fig 1:- Worldwide Campuses of the Taj Group of Hotels.

The locations of The Taj group of hotels in India in map:

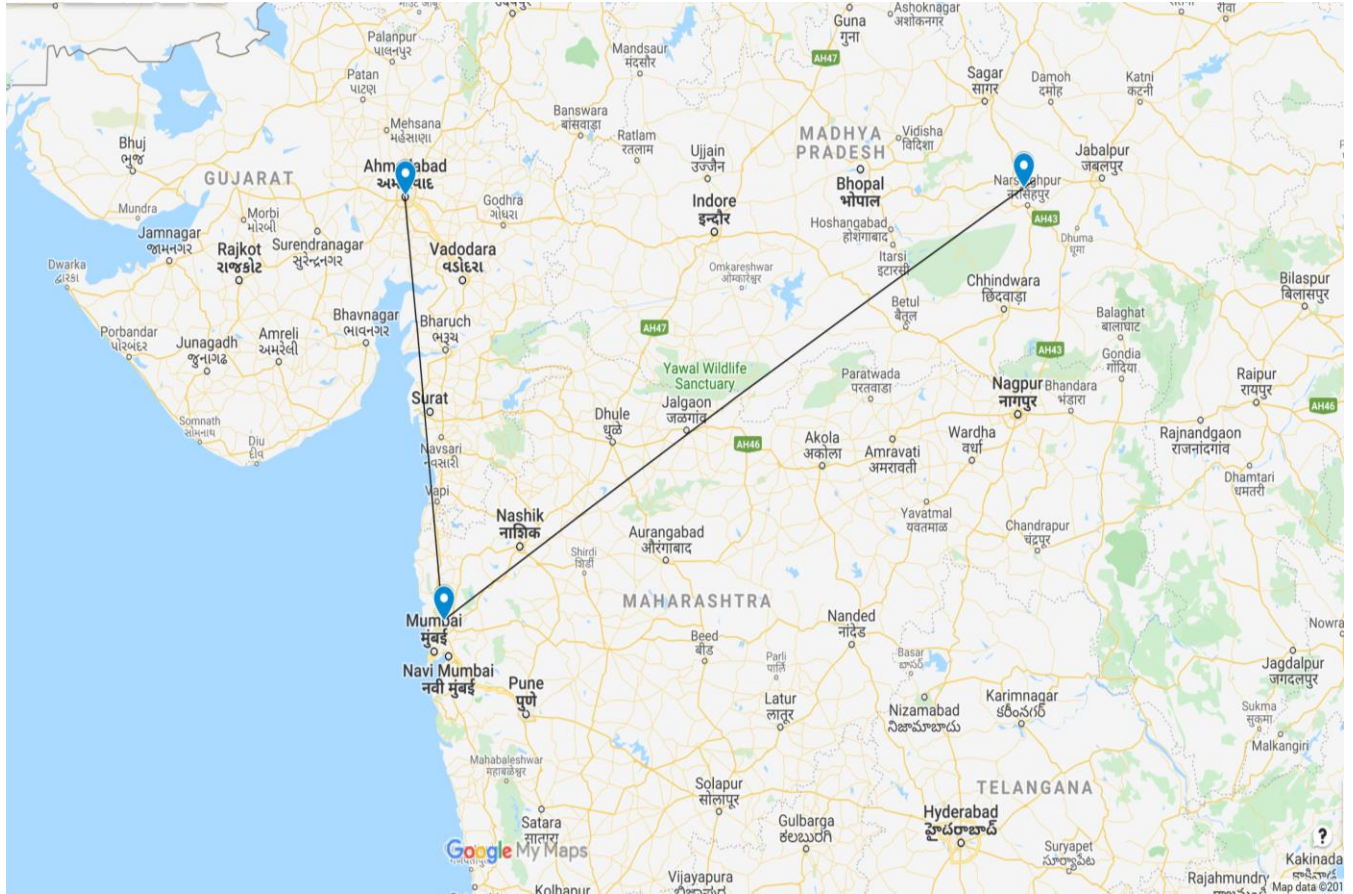


Fig 2:- India Campuses of the Taj Group of Hotels.

There are 3 campuses in India for The Taj Group of Heritage Hotels, mainly in Mumbai, Ahmedabad and Narsinghpur.

1). Mumbai Campus

Mumbai is the heart of The Bollywood Film Industry in India as well as India's largest city. It has a huge campus of our Hotel The Taj Group of Heritage Hotel. This metropolitan city has everything to offer to tourists and business delegates. The Mumbai campus of the Taj group of heritage hotel has the hotel plan as below:

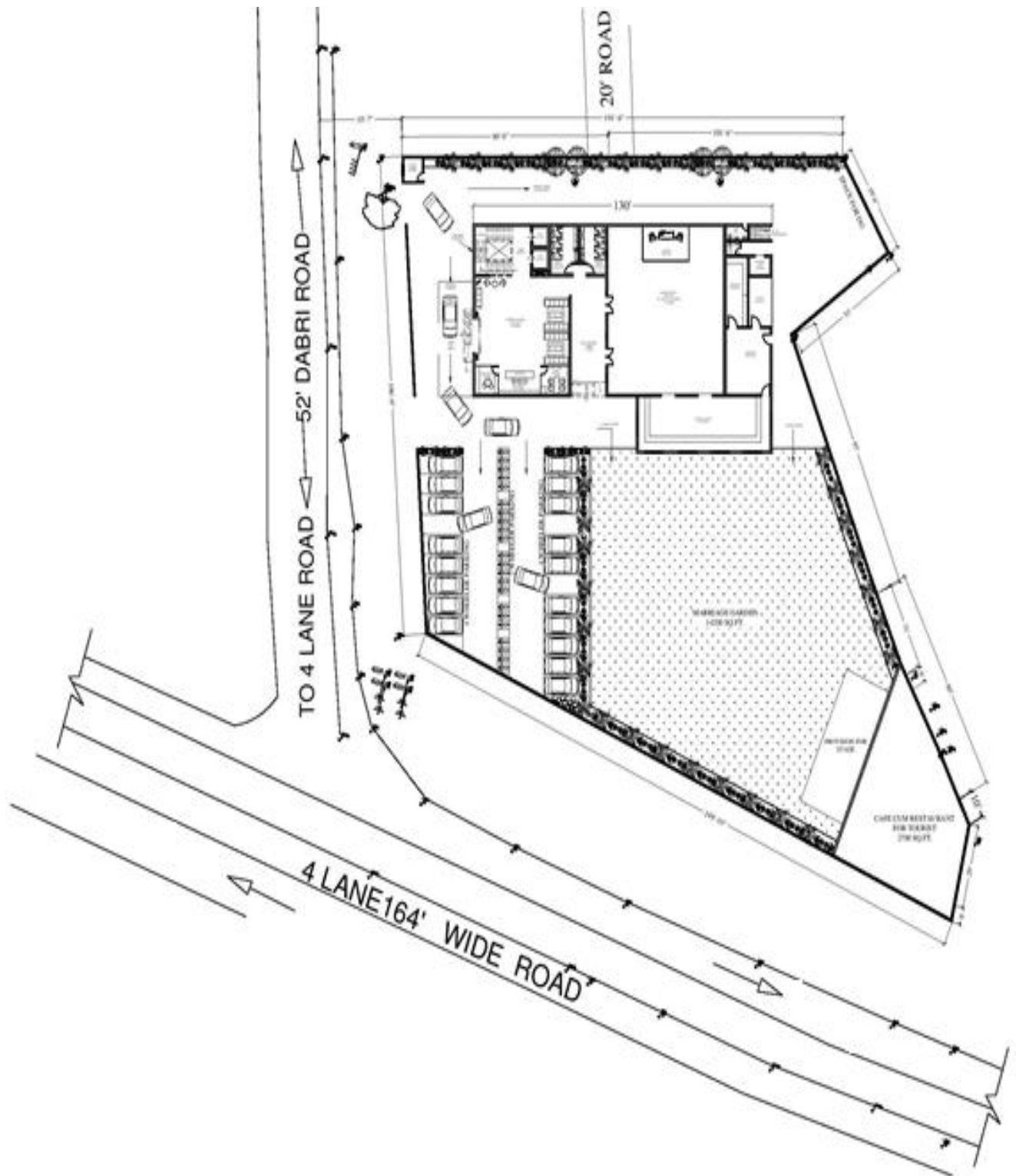


Fig 3:- The Hotel Campus Plan Of Mumbai campus.

The layout plan of hotel “The Taj group Of Heritage Hotels”.

Hotel Infrastructure of the Mumbai campus is as follows:

1.) The Mumbai campus has around 10 buildings and every building has similar layout plan. So, here is the description of layout plan of one building at Mumbai campus. Every building is separated with the same distance of around 400 feet that is 130 m with each other. And it is located close together with around 30 feet which is 14 m from each other. The above plan consists of two main entries one in Marriage garden and the other is in waiting lounge which is connected with the Banquet hall, which is other half separated with the dining area.

2). Other than this, the left of marriage garden there is a multilevel automated four wheeler parking slot and to the right of it there is café cum restaurants. Our hotel plan is designed as if it left no stone unturned to make it efficient in all aspects for our customers.

3). Above marriage garden, there is main building of the hotel.

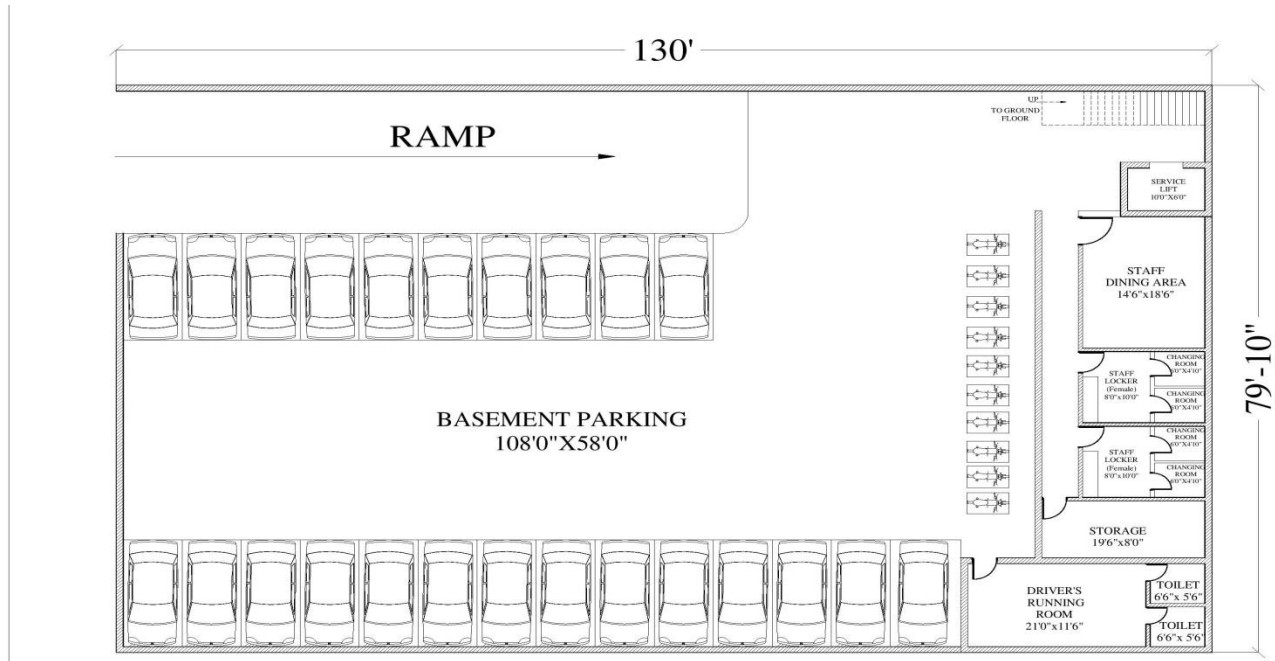


Fig 4:- Basement Layout of the The Taj group of heritage hotels at Mumbai Campus.

4). The Taj group of heritage hotel contain a huge area of Basement parking . It has basement parking also, which has several specification such as **(130'x 79'-10")** in size. In the right top corner is the way to go upstairs in first floor. And besides it there is a staff dining areas, rest rooms with storage areas.



Fig 5:- The Ground Floor Plan of the Main Hotel Campus of the Taj group of hotels at Mumbai.

5). The Ground Floor of the main building consists of Pre function lobby, waiting longe,Banquet hall, Dine in arena, service lift, kitchen , lobby besides waiting longe, service lift ,storage, back office, counter, reception and wash.

6). After the main hotel building there is a parking slot and the marriage garden besides it. There is a huge Dine in area (100 m x 80 m) and the banquet hall with the stage to host a reception or any other lavish party at the hotel.

7). There is a pre function lobby 50 ft (15m) for hosting small parties including birthday parties. And a waiting lounge for the customer or guest to chill rest and relax with the small lobby connected to it.

8). It has a back office and director's cabin situated in the waiting lounge towards the right and left of it with the counter in center. The back office block has the offices of Sales and Marketing department, Finance department, Human Resource department, IT department.

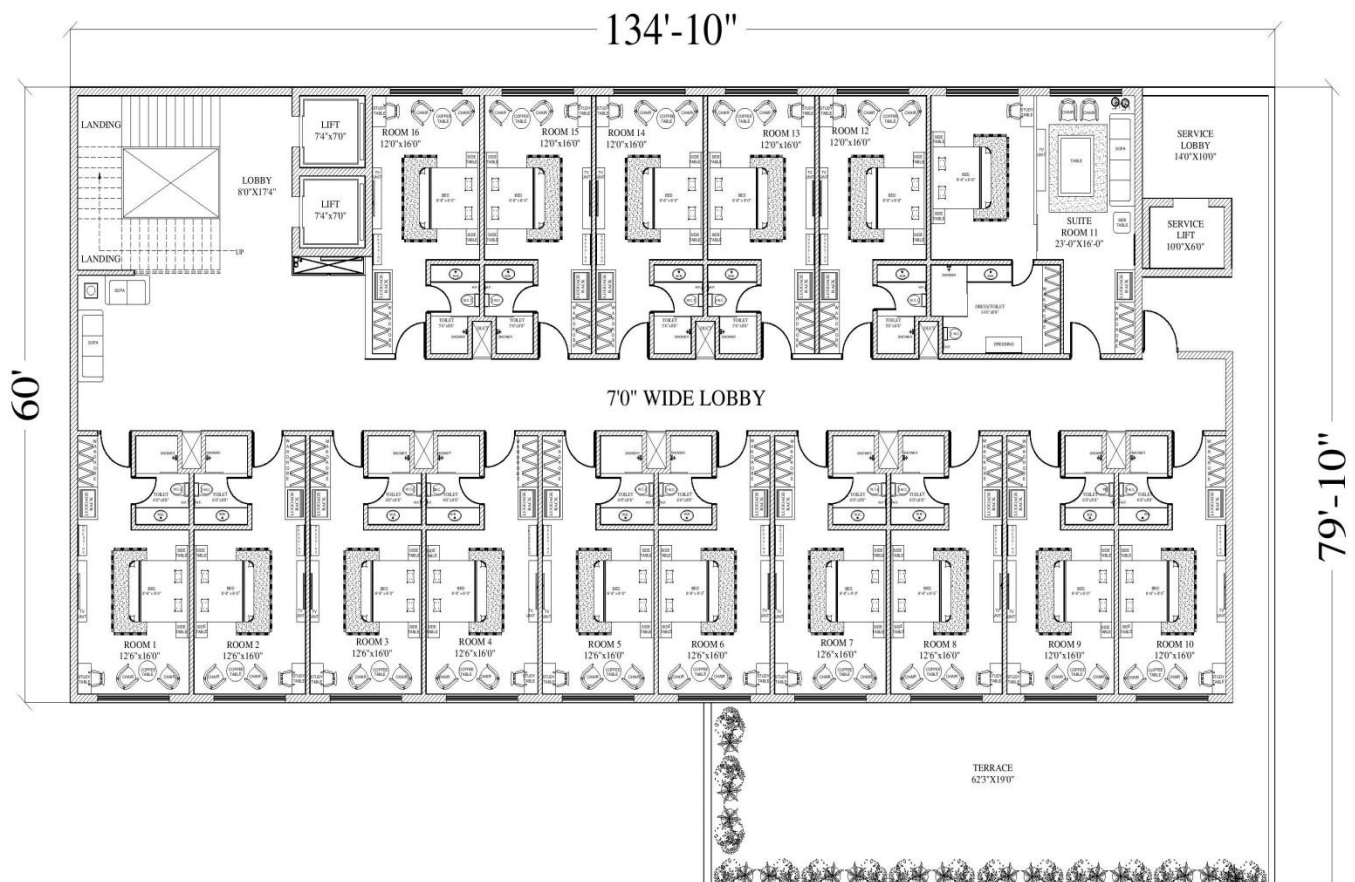


Fig 6:- First Floor Plan at Mumbai campus.

9). The First floor of the Hotel The Taj group of Heritage hotels, which contains 16 rooms and the wide lobby of **70'' size** in between the rooms. And a terrace behind it. The Taj group of hotels has around Ten floors and each floor after first floor is designed like this infrastructure.

10). The second floor is of **size (134x79)m, with 16 rooms in each floors**, each room has rest room , double bed, TV unit, coffee table with two chair, study table, two side table, wardrobe, dressing and luggage rack.

11).The Hotel also has one reserved room on the ground floor specially, where all the networking equipment's are stored.

12).The hotel also has a conference room located on the Eighth Floor.

13).The hotel also has the DSL high speed Internet available for the public use.

14).The length of the main hotel building is **130 mt, breadth is 80 mt**.

2. Ahmedabad Campus: It is **29.33 Km or 18.31 miles** away from Mumbai campus. It is a building of 16 floors and 21 rooms in each floor. Campus plan is similar to the Mumbai campus.

3. Narsinghpur Campus: It is **31.41 Km or 21.20 miles** away from Mumbai campus. It is a building of 15 floors and 18 rooms in each floor. Campus plan is similar to the Mumbai campus.

4. Dubai: It is in UAE country. And it is **18000 miles or 2400 kilometers** away from main campus at Mumbai.

5. Thailand: It is in south east Asia. And it is **17500 miles or 2350 kilometers** away from main campus at Mumbai.

6. Malaysia: It is in North east Asia. And it is **19000 miles or 2500 kilometers** away from main campus at Mumbai.

7. Thailand to Malaysia: Thailand and Malaysia campus is in distance with **2690 miles** away from the main campus.

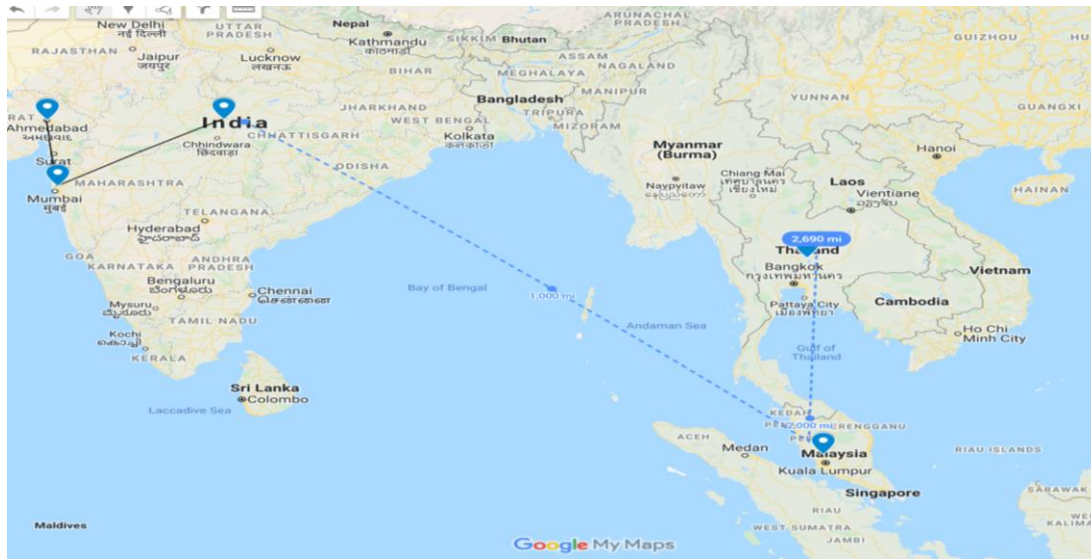


Fig7: Campuses distance between India, Thailand and Malaysia

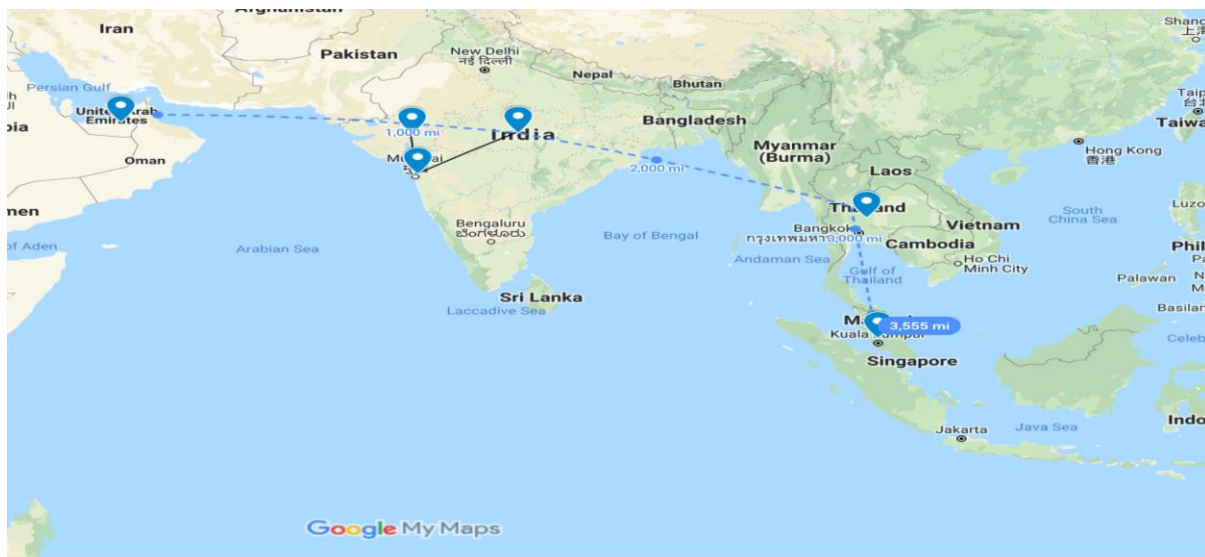


Fig 8: This map shows the distance all of the six campuses with each other throughout the network.

CHAPTER 2

APPLICATION

REQUIREMENTS

Requirements of Applications:

As compared to other industries, the hotel industry required less no. of applications. The Taj Group of heritage hotel requires having several applications:

1.) Official Website of the Taj group of hotels (www.tajgrouphotels.com)

To make easier for the customers the taj group of heritage hotels comes up with the approach of having a website. Which makes convenient for every individual customers or guest to get all the details about it. It is mainly concentrated on client server architecture. In this generally every process or network is the client or server. Either customers or clients are the primary users of the customers.

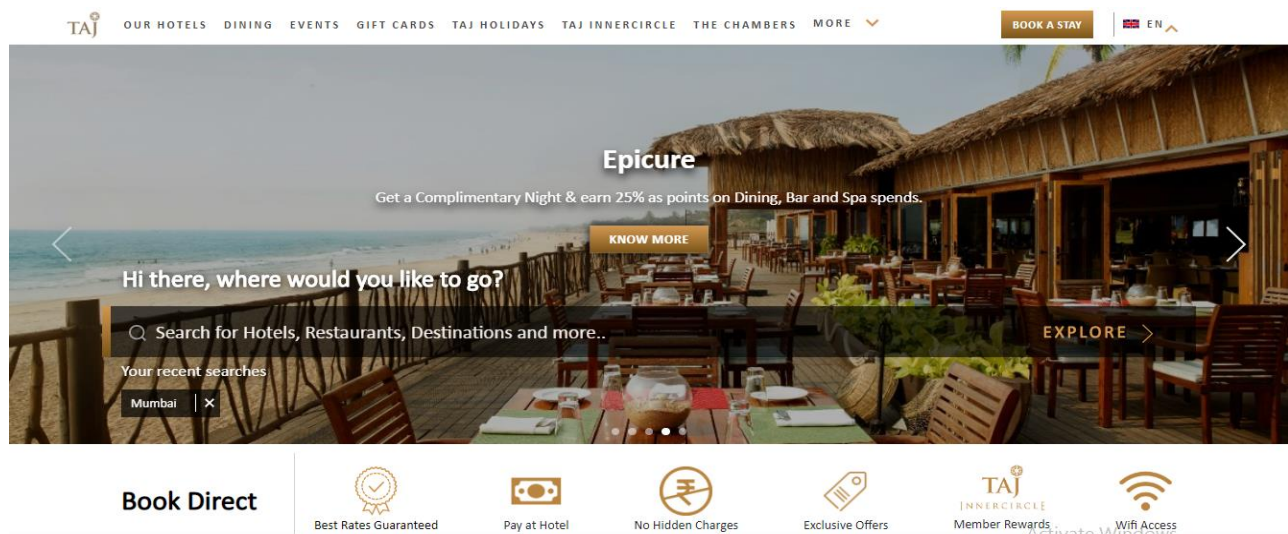


Fig 9: This is how our website looks like, The Taj Hotels

2.) Mobile Application 1/iOS Application 1:- The Taj hotels

With the growing technology everyone is busy. In this fastest growing world everybody wants everything just by one touch, so to catch the people attention The Taj Group of Hotels come up with the mobile application based on client application to book the rooms and avail

discount offers on their bookings. In this application the client and server are interconnected. The primary users of the android app are the customers and the clients. The features of the android application includes following terms:-

- a) **Search Toolbar:** As the customer starts looking for the hotel he/she start searching by including several parameters. Such as Destination, Date, Number of people, Number of rooms, cost or accommodation type.
- b) **Booking and Cancellation:** Once the customer has booked a hotel, he/she are brought to an simple and convenient payment portal to make the payment, using various online payment options such as Credit/Debit Card, PayPal, Braintree, and Stripe. If a customer desires to cancel the booking in this case most hotel booking services offer free cancellation policy until the last 24 hours. Hence it's efficient for the customers instead can cause complications for hotel owners or OTAs, as mostly cancellations are done a day or two before the due date.
- c) **Accommodation View:** Customer often wants the glimpse of the hotel accommodation before going for any choice. So our app has this facility to offer pictures, an overview of room, accommodation offers, pool view, room status, photo gallery, suggestions, maps, social media buttons, etc
- d) **Sign In / Registration for new user:** Here the user can create their own account in order to book the hotel. User information is stored, such as their booking history, wish-list, chosen language & currency and more. Here they receive discounts and personalized offers based on data app owner collected from their profile.
- e) **Hotel Account/Merchant end account:** In this the information related to hotels is stored and available rooms, prices, information

about offers, deals, and discounts, all information related to hotel is stored etc.

- f) **Gateway of payment:** After having confirmed about the accommodation in the hotel, the customers can make payment by using the payment portal with the help of various payment mode offered with in the app ranging from PayPal and distinct debit/e cards.
- g) **About Us (hotel related information):** All the basic information related to hotel will be there in the app such as all campuses throughout the world, Number of rooms available, Prices, Discounts, promotions , Amenities and everything else related to hotel.
- h) **Career Portal:** This portal includes all the employment opportunities for the people who are willing to work in the hotel for different positions. To make best out of them.
- i) **Contact Information:** This portal includes all the contact information of the hotel, where it resides, all campuses address and at which location it is easily accessible by the customers.
- j) **Menu Options:** This includes all the menu option of all the different varieties of food for every meal like breakfast, lunch, dinner as well as mocktails and cocktail's.
- k) **Instant Messenger:** It Sends instant alerts notifications to the app users while informing them about their booking, check-in/check-out time, new offers, discounts, and what not.
- l) **Receipt created online:** After making payment online by the user for their accommodation. An Online Receipt on their mobile phone has been sent, which can be shown at hotel reception upon their arrival.

- m) **CRM Integration:** This integration of this technology is crucial in case of hotel booking app where the customer experience is everything cozy and to ensure customer feel-at-home.
- n) **Marketing and promotion Tools:** N number of marketing tools are available out there which are Chat, paid social networking advertising, Email marketing, push notifications, and many more.
- o) **Push Notifications:** Sends instant alerts to the app users inform them about their booking, check-in/check-out time, new offers, discounts, and what not.



Fig 10: Here is the Mock Up design For Our Hotel Application.

3). Mobile Application 2/ IoS Application 2 :- The Taj Hotels

This android application is also based on the client server architecture. It has been initiated for the staff members of the hotel. They are the primary users of this application. Who are interconnected to each other through this application.

4). How users can use the application, use case view:

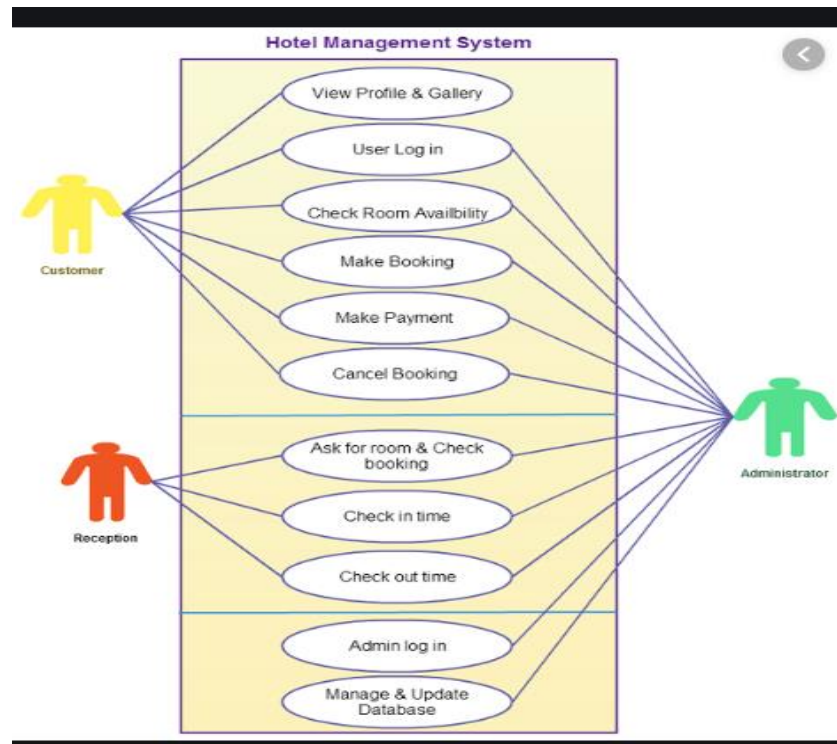


Fig 11: Use case for the user making booking for the hotel room.

This is how, Our staff, customer and Hotel Administrator will manage the flow of , booking , ordering and accepting takes place with the help of our online application. How customer make ordering, and payment respective to their orders online with the help of our application.

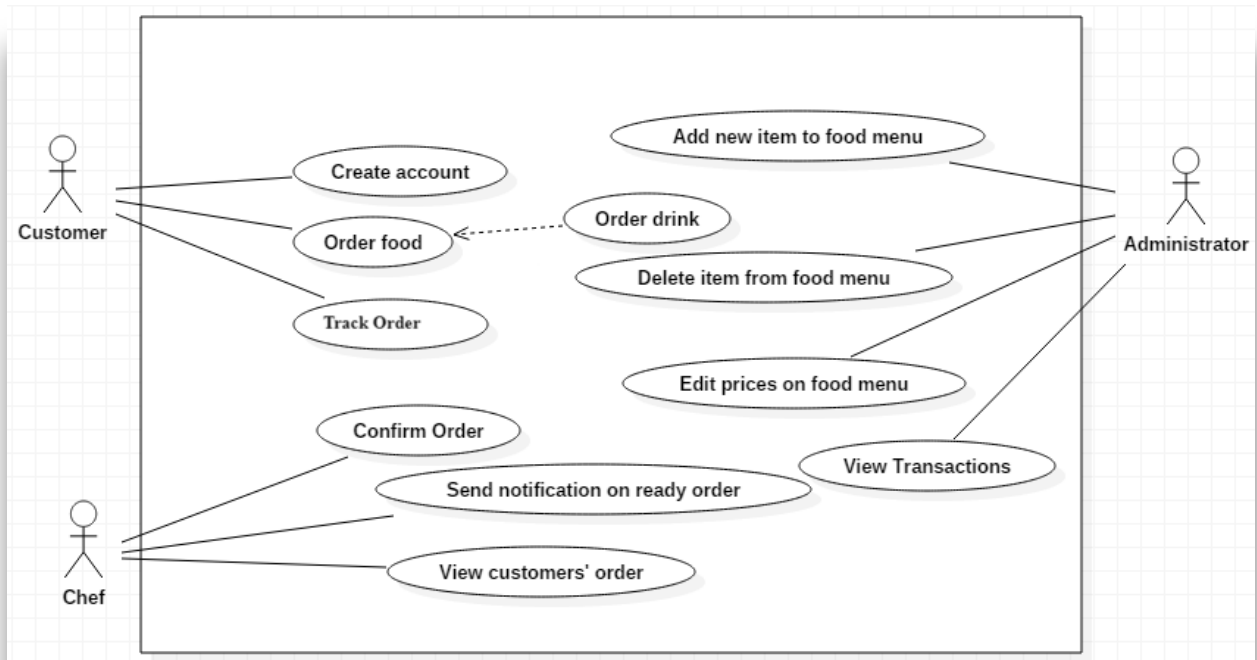


Fig 12: Use case diagram of the user booking menu online through The taj online android application.

This is the use case, of how customer can order their menu online by seating in hotel place in there room, they can get food by application in door steps.

Real world Requirements:

- a) The bandwidth of around 450 mbps download and 450 mbps upload is required for the hotel of 110 rooms so in the Taj Group of Hotels we provide four different connection ports in each direction to provide our clients the best quality service in terms of technology too. 5 GHz spectrum is used in the hotel premises.
- b) The number of users at a given location at a time can be over two thousand.

CHAPTER 3

DESIGN OF LOCAL AREA NETWORK

LOCAL AREA NETWORK DESIGN

The building of Mumbai campus is flourished with the following technologies:-

1. In the hotel, all rooms are acquired with TV units.
2. All the rooms have wireless internet accessibility.
3. All the garden area and lobby have access to wireless internet connection.
4. It is also required that Conference room has wireless internet with the accessibility of Video conference.
5. The Taj Group of heritage hotel ensures the free internet facility and accessibility to the guests in the rooms.
6. The hotel management staff and the guests are on different networks.
7. There are total of sixty users on the hotel management who uses computers.
8. A hotel management server has the separate setup for the use of hotel management staff which is not accessible by the guests.
9. The DHCP Server provides the separate IP addresses to the guests and the Hotel Management staff.
10. A server machine is on the Ground floor for managing the hotel management application software.
11. A webserver is on First floor which allows and ensures the access from outside the hotel network.
12. The guests and hotel management ought to be having two different IP networks. The proposed IP community for visitors is 202.168.4.0/24 and for resort administration is 202.168.3.0/24.
13. For the separate community setting, a VLAN based infrastructure is on the first flooring to segregate the guest and administration networks.

14. The visitors are disallowed to have the accessibility of Hotel administration application server through the configuration of An Access manipulate lists.
15. A single DHCP server with a couple of scopes is in located on the first ground in order to provide differential IP addresses to the customers and guests.
16. Access points are configured and hooked up on each ground or placed on strategic factors to allow un-interrupted wireless connectivity to all guests in their rooms.
17. Access points are configured and installed in the lobby and Garden area.
18. The wireless communication in the lobby and Garden area is secured and protected with encryption algorithms such as WPA/WPA2.

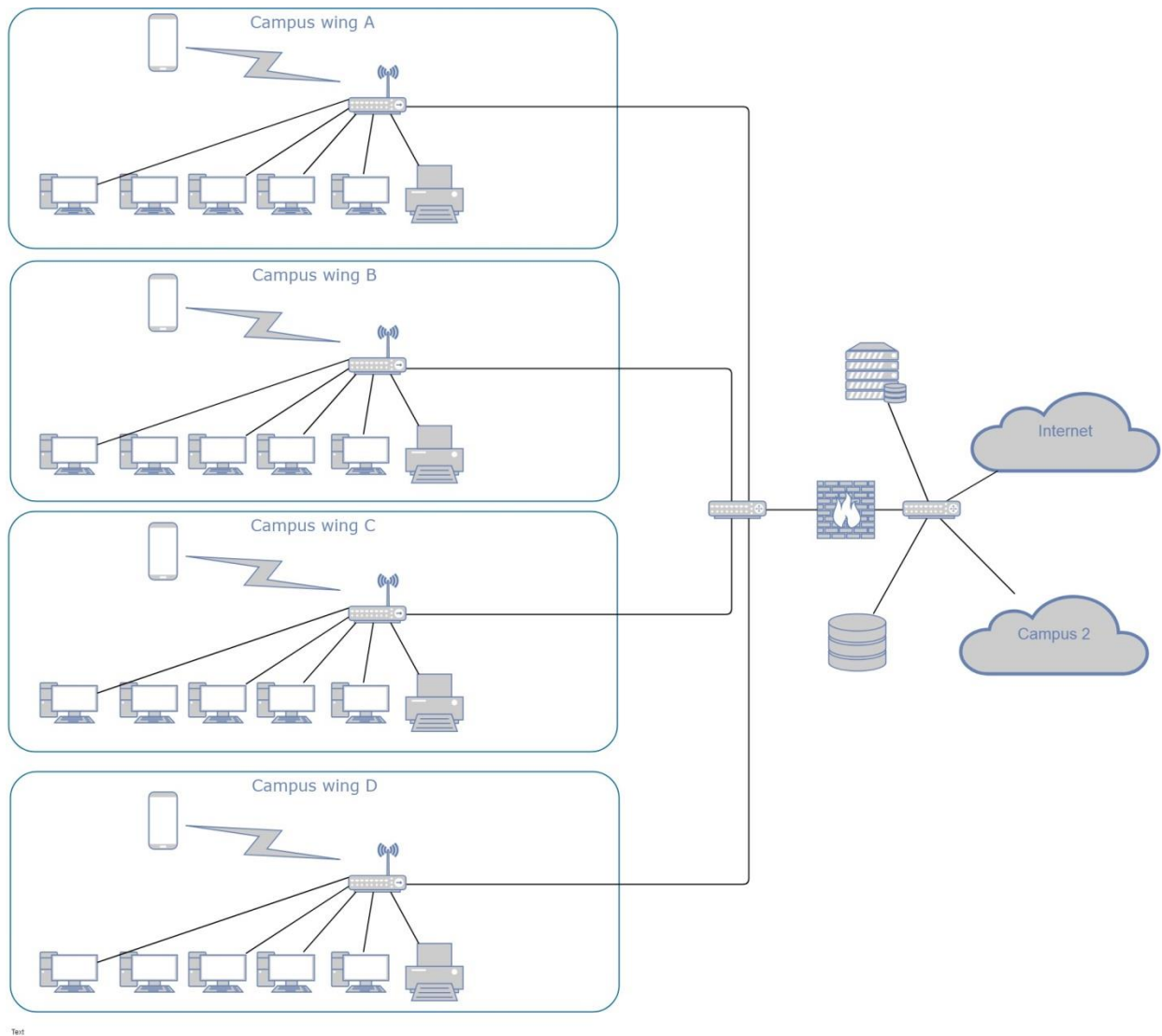


Fig 13:- LAN Diagram of the Mumbai Campus.

There are four different LAN connections described in the LAN diagram as Campus wings, they are described as below:-

1. Campus Wing A:-

The Mobile devices, Laptops of the customers and the staff on the first 4 floors and the ground floor of campus are connected to the LAN 1.

2.Campus Wing B:-The Mobile devices, Laptops of the customers and the staff on the 5 to 7 floors of the campus are connected to the LAN 2.

3. Campus Wing C:-

The Mobile devices, Laptops of the customers and the staff on the 7 to 9 floors of the campus are connected to the LAN 3.

4. Campus Wing D:-

The Mobile devices, Laptops of the customers and the staff on the 9 to 10 floors and the terrace of campus are connected to the LAN 4.

LAN provides an internet connection to hotel management staff router and to the primary router. Staff router provides internet wireless and wired to Garden area and lobby. The primary router has wireless connection by access point to all the guests in the Banquet hall.

In swimming pool there is a wireless repeater repeats access point of primary routers signal. Also primary router link 20 switches as LAN. Each one of all the switches connects laptops and provides a wireless access point.

The devices used are as follows:-

1. Five Routers of type:

CISCO LINKSYS RV01610/100 32 PORT VPN ROUTER-B2

2. 28 Switches of type:

Switch Cisco SF 100-24-24-port 10/100 SR224T

3. 58 wireless access point of type:

DAP-2310

4. 5 repeaters of type:

Amped Wireless SR300 High Power Wireless- 300N Smart repeater – 10 base-T.

CHAPTER 4

LOCAL BACKBONE NETWORK DESIGN

LOCAL AREA BACKBONE NETWORK

The resort gives round 300 rooms. Therefore, it is assumed that the network quality without delay influences client pleasure and for this motive the hotel's network must have sufficient bandwidth assets and have to provide continuous, high-speed transmissions. In order to improve a hotel's service, attain a high star rating, and grant value-added services, the fundamental network ought to raise voice, video, and facts offerings whilst ensuring wi-fi service safety and the QoS of voice services. The interior motel workplace community bears the services of the management, and financial systems, which requires that the network must supply high bandwidth, link redundancy, and security design.

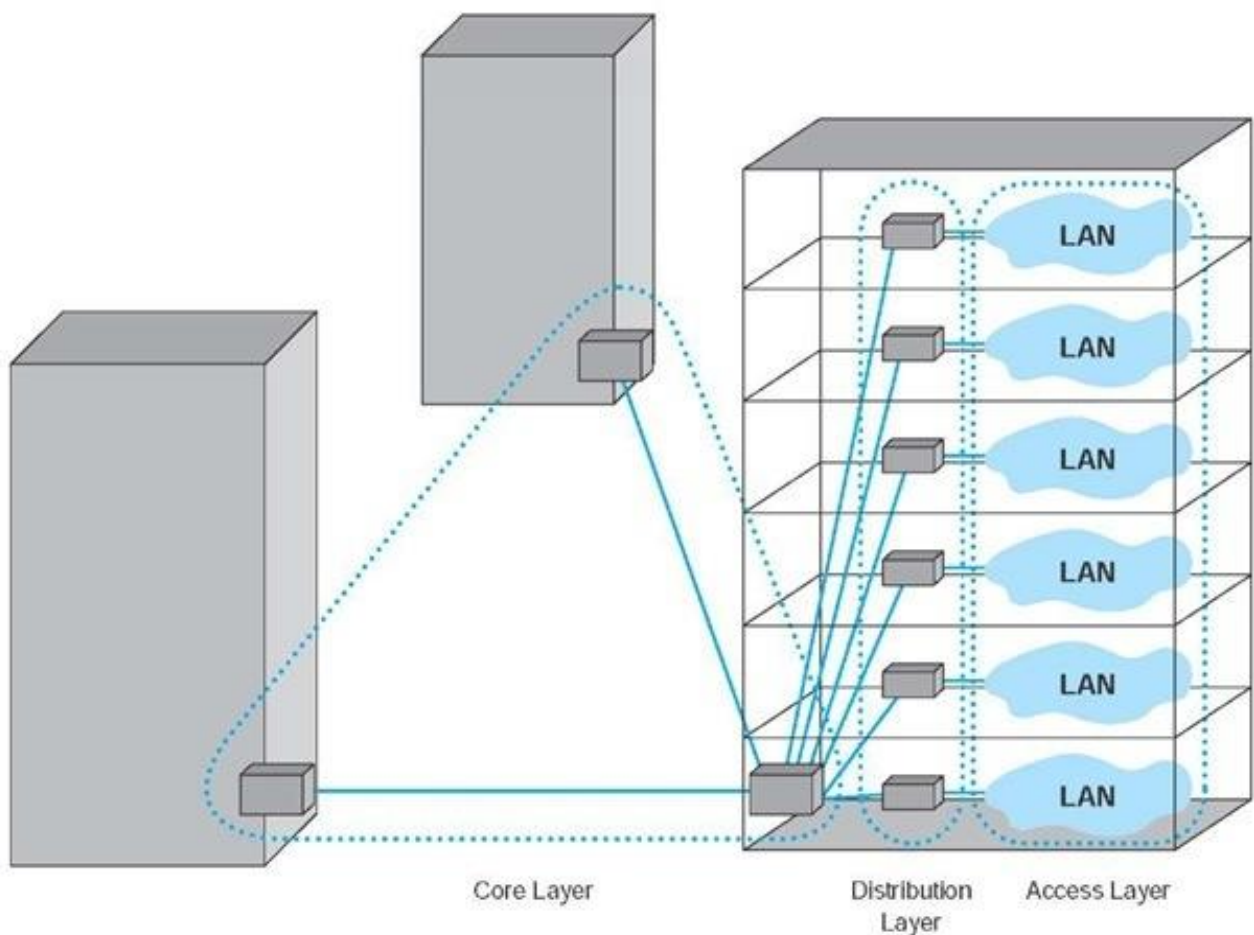


Fig 14: local area backbone network design of Mumbai campus.

The advantages of the fine integration of the room service, lodge management systems and isolating services such as: the sketch ensures the security of the inside motel network and client services, lessens community construction and maintenance costs, and shrinks egress hyperlink hire fees with the aid of the use of a VPN. The AR G3 sequence of routers such as the AR3200 and AR2200 series.

The horizontal subsystem employs the APs or access switches to join to every of the carrier systems with the middle of telecommunications room.

The S7700 core switch controls wireless users via a built in AC board. The aggregation switches carry splendid performance, competence, and consistency using redundancy and load balancing.

CHAPTER 4-1

WAN BACKBONE

NETWORK DESIGN

WAN BACKBONE NETWORK DESIGN

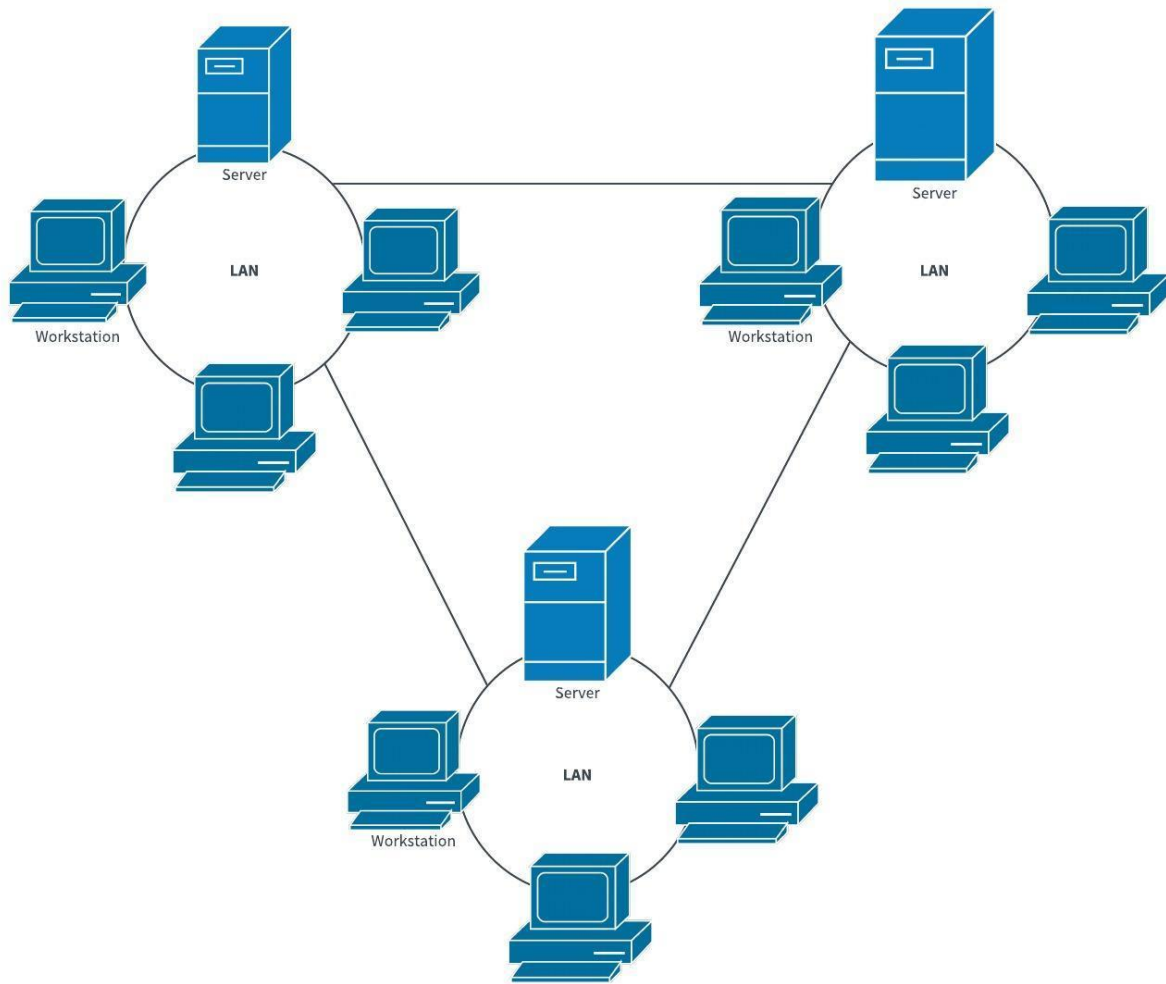


Fig 15: WAN Network design of Mumbai campus

A WAN is a information communications community that operates beyond the geographic scope of a LAN. WANs differ from LANs in countless ways. Whereas a LAN connects computers, peripherals, and other devices in a single constructing or other small geographic area, a WAN permits the transmission of facts throughout higher geographic distances. In addition, an business enterprise must subscribe to a WAN carrier issuer to use WAN

Provider community services. LANs normally are owned by the organization or enterprise that makes use of them.

WANs use facilities provided by a service provider, or carrier, such as a telephone or cable company, to join the places of an company to each other, to areas of different organizations, to exterior services, and to remote users.

A mesh network is a local network topology in which the infrastructure nodes connect directly. This lack of dependency on one node lets in for each node to participate in the relay of information. Mesh networks dynamically self-organize and self-configure, which can limit set up overhead. The ability to self-configure allows dynamic distribution of workloads, specifically in the event that a few nodes must fail. This in turn contributes to fault-tolerance and decreased upkeep costs.

CHAPTER 5

NETWORK SECURITY AND MANAGEMENT

NETWORK SECURITY AND MANAGEMENT

To ensure the secured communication between the hotels, the hotel network has following security requirements.

Hotel campuses

Internal network security

- Defense against viruses, junk mail, and attacks at the Internet egress
- Hotel website push
- Examining customer online behavior

In order to meet these security requirements. A new generation level hotel security is the solution that incorporates the basic network and multiple security measures. Connecting branches and the head office

- Using the VPN, Hotel chains join to every other. The VPN establishes a tunneling protocols over the web and public network and serves as the gateway between the clients and the inner network. However, it secures data from being theft throughout the method of transmission as the proposed solution applies identity authentication and statistics encryption applied sciences to forestall facts from being accessed or tampered with by means of the unauthorized and unknown customers which ensures records integrity, confidentiality, and validity. The VPN lets in resort customers and administrative departments to remotely access inside resources, which reduces prices and ensures security.
- Integration of Service

- Firewall and IPsec VPN functions is provided by the head office which has AR3200s. To transmit voice, video and data services the HQoS can also be applied.
- Backup of 3G

The expansion of 3G services makes sure the cost-effective link that can replace the original dual-line backup mode.

- Border security-firewall deployment

The Hotel protection proposed answer controls every vicinity through keeping apart the physical areas and service areas. Firewalls are deployed to guarantee the protection between the core switches and Internet routers. The egress routers, firewalls, and core switches adopt a redundancy sketch to enhance reliability based on the size and protection requirements of the inn network. Firewalls supply the capabilities and assurance for complete safety defense. The firewall access manipulate coverage permits Internet users to access only the detailed interfaces of the DMZ servers. Internet get entry to is controlled through their IP addresses and the safety zones are divided in order to avoid protection threats. The answer defends the whole network, applications, or information towards the threats and other dangers. Firewalls make sure the border safety at distinctive community layers.

Internal Network Security

Different security points are deployed at the core layer to defend interior network security; for example, the get right of entry to layer can use MAC Forced Forwarding (MFF) with the intention to forestall unauthorized access. The core layer can use IP supply guards to keep away from IP spoofing attacks and put in force DHCP packet rate with the aim of limiting to stop DHCP flooding attacks. Strict ARP gaining knowledge of or ARP gateway anti-collision can be configured on

gateways to protect towards attacks from bogus gateways, and ARP source suppression can guard the gateways from ARP flooding attacks . In 802.11 networks, consumers can authenticate with an AP the usage of many methods. The following are some of the most common ability of connecting to a WLAN. It is really worth noting that the degree of security provided varies under the extraordinary methods. These techniques are listed in order of the level of security which they provide, beginning with the oldest and normally regular as least secure. A similar impervious key is described statically on the AP and the user. If the two keys shape a match, the user is provided with the accessibility to the network. It ought to be stored in mind that the system of authentication in the aforementioned techniques halts at the AP. PSK and open authentication are regarded as legacy systems as they can't be scaled nor they are totally impenetrable or protected. Open authentication is usually the general setting and does no longer screen or check the customers in any manner. Any consumer can log in to the community except having to achieve the verification of any type. Naturally, the SSID turns into the sole authentication required on such a network. The pre-shared authentication key makes use of a complete WEP certificates that is saved on the AP and the client. The AP does no longer render any sort of resistance to avert unauthorized get entry to in case when a person desires to create a hyperlink with a wi-fi LAN.

- Internet egress access redirection

The internet web page redirects customers to the portal page, which shows promotional statistics for the motel brand and promotes the image of the motel with the expansion of the hotel's patron care provider by, for example, including hyperlinks to airports and weather information.

- Online information security management of a customer

Customer on-line conduct can be recorded, tracked, analyzed, and queried based totally on the VLAN ID as the VLAN is assigned to every room however, each room is recognized by means of the VLAN ID. Isolating exclusive user kinds (grouped through their purposeful requirements) into VLAN network segments and firewalling between VLANs will extensively make bigger security. Furthermore, remote customers may also solely get admission to exactly the assets they require, which helps with basic IT resource administration and lowered aid requirements. Different person businesses are isolated from one some other for in addition safety of peer-to-peer breaches. As WLANs scale out greater users, the VLANs isolate community visitors to help manage as nicely as limit the bottlenecks related with large, flat networks. As utility adoption and utilization increases, this administration technique will grant most manage of bandwidth, and sooner or later cost.

The monitoring software program is additionally deployed as required by means of the police station on the administration server. The S5700 switches record facts to the police station in actual time based on the VLAN IDs of lodge rooms pertaining to the port mirroring function, client on-line behavior. This proposed answer helps the police station to hold the energetic manage over the inn customers.

The WLAN get admission to is convenient for guests or visitors who particularly require Internet accessibility to do their jobs such as brief administrative staff, teachers, or consultants who can also carry laptops. District WLAN get admission to need to be segregated to limit security exposures and conflicts of interest. However, it is suggested that VLANs need to be used as the price

high-quality way to segregate visitors and divert them to the Internet. VLANs are convenient to set up and are supported by means of the fundamental LAN gear providers, such as the smart routers and firewalls. The high-quality structures furnish a browser touchdown web page and will register customers "on the fly" or with a password furnished for guests. Make certain that company signal a person compliance agreement before activating visitor access. Guest users have to be required to click "yes" on a browser screen that indicates they agree to phrases of privateness and conduct, and will be held accused and responsible in case of their unethical actions. This feature have to no longer be bypassed for the convenience of guests.

- Anti-Virus (A/V)

A/V protects and curtails threats, and is integral for all laptops due to the fact new viruses proliferate each day and unfold even more quickly. There be a centralized controlled of A/V so as to reveal the definitions effectively. If not, definitions may not be updated and laptops would sooner or later get a virus. MacAfee, Symantec, Trend Micro, Computer Associates and many other companies have central control and monitoring. Despite offerings for stand alone, commonly client versions, do not implement these as they do not have central management and require upkeep and updates.

- Voice Proposed Solution

The proposed answer offers lively services to administration functions. The solution integrates the resort management system and includes AR routers, SoftCo IP voice built-in switches, get right of entry to units agents, and terminals. The voice solution gives the following services:

- Checking in and checking out

- Updating room status
- Restricting guests' call rights in rooms

These offerings help clients enhance room management, improve efficiency, and optimize hotel operations. The proposed 5 famous person lodge solution involves the core voice switch, Property Management System (PMS), Property Management System Interface (PMSI), and Voice Mail System (VMS).

The voice solution gives the following functions:

- Provides check-in and check-out services.
- Provides a PMSI interface for receiving commands from the PMS to report call details and facilitate the wake-up service.
- Manages the mini bar and prints consumption bills.
- Enables message services and new message notifications.
- Provides printable archives of adjustments to room status.
- Integrates the resort console machine and the lodge administration gadget to furnish quite a number services such as call restriction, voice recording, local tackle book, and data retrieval.
- Provides a motel reservation service that permits lodge team of workers to question guest archives along with check-in records.

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OVERALL ORGANIZATION:

My Project The Taj Group of Heritage Hotel is well organized and detailed project as it includes various latest technologies and designs which are as follows:

- 1.) In my project for map design, to show the campuses location I used the mymap software to create it.
- 2). For Hotel layout designs, I used software Skyware and innroad which is a cloud based property management solutions designed to serve properties of all types and sizes including hotels, enterprises, resorts, inns, motels and boutiques.
- 3). For website designs, I make use of Google templates and bootstrapping technologies.
- 4). For Mobile Applications design I make use of Balsamiq software , which is used for mobile application mockups design.
- 5). For use case and ERD diagrams, I make use of software LucidCharts.

These are the software and technologies I make used of to make my project successful and convenient.

CONCLUSIONS:

This project helps me to grow my skills of networking. The network designs for the “The Taj Group of Heritage Hotels” are designed in this project.

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