INDIAN SCHOOL MUSCAT

INFORMATION TECHNOLOGY(802)
UNIT-2
OPERATING WEB

POWER CAPSULE

Operating Web

1. What is Web based application ?

An application that can be accessed via a web browser, over a network connection is called a web-based application.

2. What is the advantage of a web based application?
A web-based application provides the convenience of availability 24x7 from anywhere having an internet connection across the world.

3. Give some examples where web based applications are used.
Reservation of tickets and bookings, e governance, online shopping with the provision of making payments online using credit/debit cards, and learning using online tutorials, tests etc.

4. What are the two categories of web based online applications ?

- Applications that require financial online transactions(eg. The online reservation system, online shopping, and bill payments)
- Applications that provide information and allow interaction via filling forms, posting query, viewing information, sending mail or chatting(eg. e-governance and online tutorial and tests).

Advantages of Online Reservation System

5. What are the Advantages for consumers?

Convenient: The user/consumer can book tickets anytime anywhere. All the user needs is just computer, Internet access, cards (credit, debit, etc.) for payment. The user saves time. Making changes to bookings like, cancellation,upgradation is also easy.

Price Comparison:

online booking allows the customer   to check the prices, compare them and get the best deal.   **Security:** Most online reservation sites require the user   to create their profile and provide them with a username and password. The information thus remains secure until their password is secure.

Confirmation of Reservation: When a booking is done,

the confirmation of the booking just takes a few seconds. It is fast and secure.

Making Choices: In online booking, the user can see the arrangement of seats,select a particular seat, etc **Time Saving:** Online reservation consumes very less time in contrast to long queues at the counter. **Discount Scheme:** The users can avail the special discount schemes provided by the service provider like, season discount, advance booking discount and frequent user discount.

6.What are the advantages for Providers?

Requires Less Staffing: Less man-power is required as every task is done through computers.

No Spatial Restrictions: The organization which is providing online reservation can choose their office space depending on their needs. Online reservation also reduces the bills for office rent, electricity, etc. although initial costs need to be incurred on setting up the website and maintaining it. **Global Access:** Online reservation is available to anyone irrespective of their physical location. The scope of access to the online reservation becomes large as anyone who has access to the Internet can search for the reservation site and book the tickets.

7.What are the precautions to be taken while Performing Online Transactions?

- Make a password complex, like mix case, use numbers and special characters. This decreases ability of automated attacks by trying different character combinations.
- Be cautious not to leave passwords around and do not share them with friends.
- Never use names of near and dear ones as passwords.

8.What is meant by E-Governance?

E-Governance or electronic governance is the use of electronic i.e. information and communication technology (ICT) tools for governance by the government for the citizens.

The ICT tools include the Internet, Local Area Network (LAN), mobiles, etc. The use of ICT facilitates providing access to information for the citizens by the government. The government has set up ICT enabled services, like, registration of birth/death certificate, booking of railway tickets, RTI application submission, etc.

9. What are the advantages of E-governance? ·

E-governance empowers the citizens socially and economically, and enhances their lives by providing them with quality information and better services.

- It enables citizens to access information directly, without paying any money to a middleman.
- It ushers transparency in the system.

10. What are the services of the e-governance?

Portal can be broadly classified into two categories :

- to provide information

- to provide online services.

11. Name the first e-governance sIte in India. In which year?

The first e-Governance site was **NICNET** in 1987 - the national satellite-based computer network.

This was followed by the launch of the District Information   System of the National Informatics Centre **(DISNIC)** program to computerize all district offices in the country for which free hardware and software was offered to the State Governments.

12. Write examples of e-governance sites in India.

Some of the key e-governance sites of India are as follows:

1. india.gov.in (The National Portal of India) : This is the
National Portal of India, which provides a single
window access to information and services being provided
by the various Indian Government entities

2.goidirectory.nic.in (Government of India Web Directory) :
This portal is a one point source to access all
Indian Government websites at all levels and from all sectors.
It includes sites of different states and union territories of
India, sites of government departments like judiciary and
legislature. It also provides information about the various
sectors like education and agriculture.

13. What do you mean by Online shopping ?

It is an e-commerce application where the customer can purchase goods over the Internet.

There are several websites where the customer can go for online shopping.

The customer can view the goods that are displayed along with the details of the goods. The customer can select the goods to be purchased and store them in their online shopping basket. The payment for the goods is to be made using debit or credit card. The goods are then delivered at the address specified by the customer.

14. What are the benefits of Online Shopping (situations where online shopping is beneficial)

- The customer does not have enough time to visit a store and purchase goods.
- The store where you will get what you need may be very far off.
- The money spent in travelling to the store, parking the car, etc., is much more than overhead if any in online shopping.
- The product you may require is not available at your market.
- You want to send a product to your friend; you can do online shopping and provide the receiver's address. You

save your time and energy for delivery of the product to your friend's house located in a different city.

- You do not have time during the shopping hours. You can do online shopping from your office, home, a friend's place, anywhere, any time. Thus there are no fixed shopping hours.
- Online shopping also has bargain offers for the customer delight.
- Some online stores allow customers to rate their services and the items. This can be used to know the quality of service an online store is providing you. You can also know about the popularity of the item you are purchasing.

Since online shopping involves use of credit card or debit card for payments, and there is a need to create a user account. The precautions to be taken when doing online shopping are same as that of online transactions.

15. How are the Bill payments made in online shopping?

Online shoppers generally make payments using their debit card or credit card. However, different websites enable the user to make payments via alternative methods like net banking, e-gift voucher, cash on delivery and wire transfer.

16. What are Online Courses, Tutorials and Tests?

Online courses and tutorials help the user in learning like using software, video game, or a lesson. In online tutoring, the students and the teachers are at physically different locations, connected to each other via Internet.

17.What are the benefits of Online learning ?

- It provides freedom to the learner to learn at their convenient location, convenient time and at their own pace of learning.
- There is no discrimination of age, caste, gender, background, or the qualification of the learner.
- The tutorials may be enriched with audio and video information, which makes learning more enjoyable and attractive.
- Tutorials and tests are available for almost all topics, sometimes in regional languages also.

18. What is meant by Project Management - Web Based Application Development ?

Web based application development involves the process of developing web applications.

19.What is a web application?

A web application is a program that is stored on a remote server. It is online and is delivered over the Internet through a web browser interface. A web application may be of different kinds, like, a quiz, a game, or a bill calculator.

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20.What do you mean by a project in web application?

A project is a task that is undertaken to create a unique product, service, or result.

21.What are the key characteristics of a project?

- A project has a beginning and an end. The extent of the project is defined. It has boundaries.
- A project requires finite resources that are required to complete the project.
- A project has a specific time frame. It has a definite beginning and end dates.
- A project is complete when its end objectives are achieved. The objective is specific and identifiable.

22. What is meant by Project Management?

It is the process of achieving the objectives of the project through a set of activities defined within the time frame, to produce the end result. It is the application of knowledge, skills, tools, and techniques to meet the project requirements.

23. What are the different phases in a Web Application Project?

The process of development of web based applications is broadly categorized in four phases. During the development process, one needs to follow the following four main phases of development:

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1) Requirements Definition Phase
2) Design Phase
3) Implementation Phase
4) Testing Phase

In addition to this there is a 5th phase, Planning and Monitoring phase

24.Explain the Requirement Definition Phase

In this phase we identify the problem statement for which the web application is to be developed. Identify the scope of the problem. The following issues need to be addressed in this phase.

(a) Feasibility: Is the project feasible?

(i) Check whether the project is technically feasible (is it possible to do it?).

(ii) Check whether the project is economically feasible (is it profitable?).

(iii) If feasible, proceed further, otherwise there is no need to proceed with the project.

(b) Scope: The focus is on **"what"** the application must do. To define the scope of the application,

(i) Compile a detailed list with a clear description of application features.

(ii) Establish the goals that the solution must achieve.

(iii) Recognizing the limitations that are placed on the project.

25.Explain the Design Phase.

The focus is on **"how"** the application is to be designed. This consists of design of:

(a) A Map of the Web Application Site:

It contains essential information about the structure of the site - the pages and the relationships between them. Thus, we have a map with pages and a path connecting them. We have to simply implement the pages and follow the path to connect them.

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(b) Database: Design the application database.
(i) Identify the database tables that will be required in the application.

(ii) Decide the table structures: For each table we need to identity the attributes of the tables, their data types, the size of the columns in the tables, the relationship between tables.

(c) Page Structure: Design the structure of page. Identify the main sections of the page like header, main content and sidebar.

26. Explain the Implementation Phase .
Create backend database, frontend and the connectivity between them.

a) **Backend Database:** Create the database and write SQL code defining tables, attributes and relationships, as per the requirement of the application.

b) **Frontend:** Develop the frontend of the application as per the requirement. Use the Page Structure and the Page Layout you defined in Design phase to implement the frontend code. Identify the inputs that are required to be taken from the user in the Front-End of the application. Decide the kind of buttons
you will provide to the user, to minimize the user's typing effort, like, Radio buttons, checkbox, list and combo box.

c) **Data Connectivity:** Establish the data connectivity between the Front-End interface and Back-End Database.

27. Explain the Testing Phase.

Test the complete application (Front-End and Back-End) with multiple sample sets of data. Find all the application bugs and fix them. Test each page of the application and test each feature of the application. Since fixing an error involves modifying the code, validate the modified code also. After final validation, the application is ready for release.