Assignment No. 2

Q.1 a) What is meant by GOMS ? Give an example.

→ (1) GOMS stands for Goals, operators, methods and selection rules is a method derived from human computer interaction and constructs a description of human performance.

(2) The goal is what the user wants to accomplish

(3) GOMS is a model of human performance and it can be used to improve human-computer interaction efficiency by eliminating useless or unnecessary interaction.

(4) Goals (G) as a task to do eg. 'send e-mail'

(5) Operators (O) as all actions needed to achieve the goals eg. "amount of mouse clicks to send e-mail."

(6) Methods (M) as a group of operator eg. "move mouse to send button, click on the button"

(7) Selection (S) as a user decision approach eg "move mouse to send button, click on the button"

Q.1 b) Define cognitive complexity theory. Give an example.

→ (1) Cognitive complexity refer to the no. of mental structures an individual uses, how abstract they are and how they interact to shape his discernment or as individual difference

variable linked with a wide range of communication skill and associated abilities.

(2) Individuals with high cognitive complexity have the capacity to analyze a situation to discern various constituent elements & explore connections and possible relationships among the elements.

(3) These individuals think in a multidimensional way.

(4) The assumptions of the complexity theory is that the more an event can be differentiated and parts considered in novel relationship, the more sophisticated the response and successful the solution.

(3) Individuals with high cognitive complexity are open to new information, attracted to other individuals of high complexity, highly flexibility, socially influential, problem solver and generally good leaders.

Q.2 a) Describe in detail about hypertext, multimedia, www?

→ * Hypertext: →

(1) Hypertext allows document to be linked in a nonlinear fashion.

(2) Hypertext is text which is not constructed to be linear and it contains links to

other texts which is known as hyperlinks.

(3) A hypertext consist of two different parts: Anchor and links.

(4) Hypertext directed information only generates the related information.

* Multimedia: ⟶

(1) Multimedia refers to using computers to integrate text, graphics, animation, audio & video into one application

(2) The word multi and media are combined to form the word multimedia.

(3) It is the type of medium that allows information to be easily transferred from one location to another.

(4) multimedia is the presentation of text, picture, audio and video with links and tools that allow user to navigate, engage, create and communicate using a computer.

* WWW: ⟶

(1) The www consist of a worldwide collection of electronic documents called web pages.

(2) It is basically a system of internet servers that support specially formatted documents.

(3) Formatted document called HTML that support link to other document.

(4) Component of WWW :

- URL
- HTTP
- HTML

Q.2 b) Differentiate bet" linear vs hyper text in communication

→	Linear text	Hyper text
(1)	Linear text is sequential and linear fashion	(1) It is non-linear in structure
(2)	The reading experience in linear text is straight forward and linear.	The reading experience in hypertext is more dynamic & interactive.
(3)	It often used for traditional forms of written communication, such as books and formal report	It is commonly used in digital and online content.
(4)	It typically established through the organization of the text and the reader's sequential progression	It provides contextualization through links.

Q 3a) Briefly explain about mobile application medium types.

→ The mobile medium type is the type of application frame work or mobile technology that presents content or information to the user. It is a technical approach regarding which type of medium to use.

This decision is determined by the impact it will have on the user experience.

SMS :→

① The most basic mobile application you can create is an SMS application.

② Although it might seem odd to consider text message applications, they are nonetheless a designed experience.

③ Given the ubiquity of device that support SMS, these application can be useful tools when integrated with other mobile application types.

For example,

Sending the keyword - Freebie 11 to a hypothetical short code - 12345 11

Q.3b) Given detail description about mobile ecosystem.

→ Mobile ecosystems can be broadly characterised as comprising the following core set of products.

mobile devices: Smartphones and tablets which can connect to the internet

There are some mobile ecosystem in HCI:

① Devices: →

The mobiles ecosystems encompasses a wide range of devices, including smartphones, tablets, wearables.

② OS and platforms: →

mobile devices run on various OS such as android, IOS and others. Each OS provides a unique set of user interface.

③ Application: →

Mobile apps play a central role in the mobile ecosystem.

④ App stores: →

App stores such as Apple App store, Google play store.

⑤ User Interface (UI): →

Mobile UI are designed to be touch centric and user friendly.

(5) Connectivity :→

Mobile devices are designed to be constantly connected, whether through cellular networks.

There are other ecosystems in HCI are:

(1) location based services
(2) Sensors.
(3) Accessibility.
(4) Security & privacy.
(5) Ecosystem partners.

Q.44) what is mobile information Architecture? Explain it with neat diagram.

→ Mobile information Architecture refers to the organization and structure of information and content on mobile applications and websites.

The key elements of mobile information architecture :→

(1) Content Hierarchy :→

Structuring content in a logical and hierarchical manner.

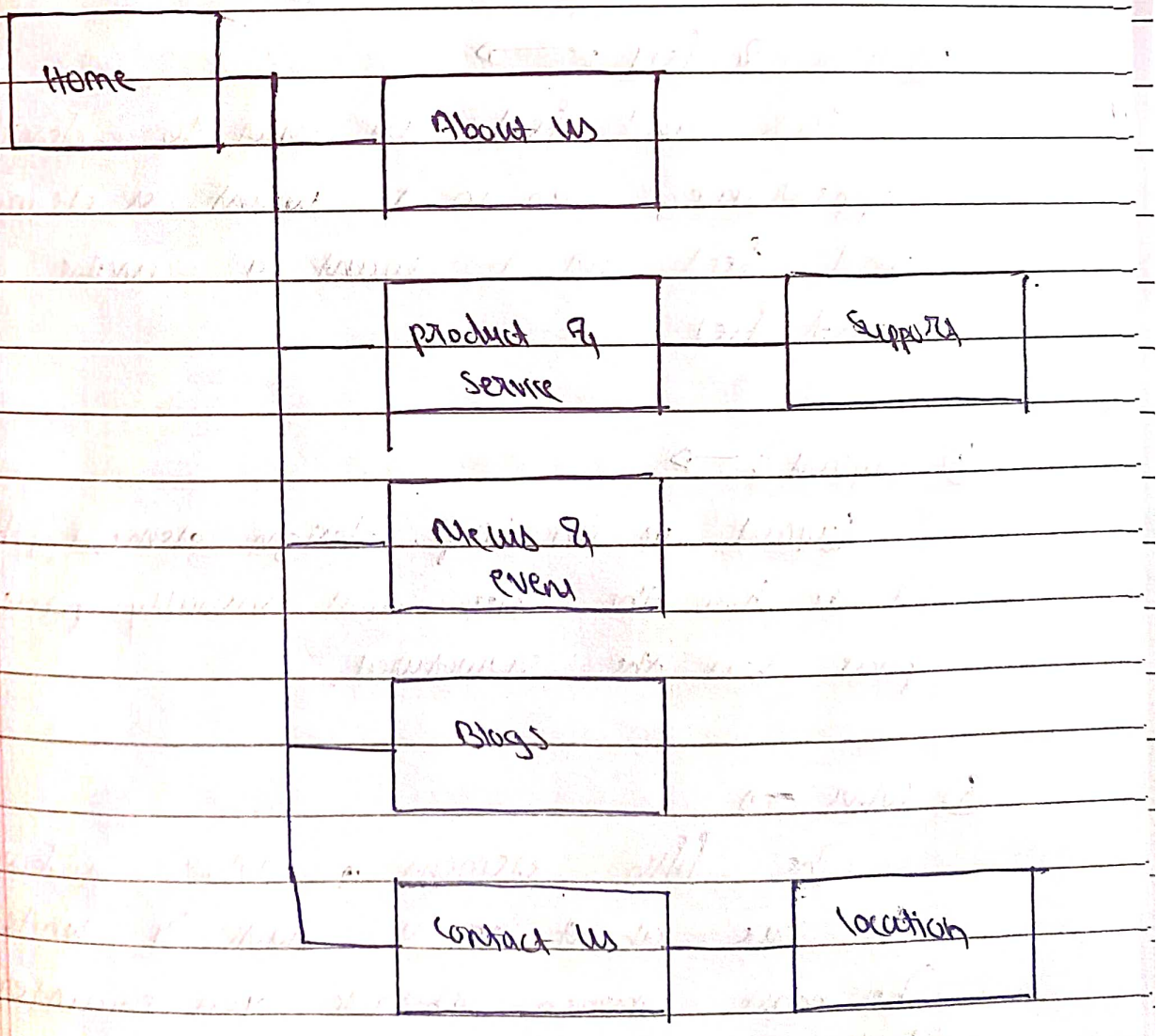
(2) Navigation :→

Designing intuitive navigation menus &

control) to help users move between different sections.

③ Search functionality :→
Implementing effective search features that allows users to quickly locate specific information or products.

④ Labels and taxonomy :→
Assigning clear and consistent labels to content.



Q.46) Explain about elements of mobile design.

→ There are five elements of mobile design are:

(1) context :→

The context is core to the mobile experience. As the designer it is your job to make sure that the user can figure out how to address context using your app.

(2) message :→

It is the overall mental impression you create explicitly through visual design.

(3) look & feel :→

Look and feel is used to describe appearance, as in I want a clean look and feel or I want a usable look and feel.

(4) Layout :→

Layout is an imp. design element, because it is how the user will visually process the page's both the structural.

(5) Color :→

The fifth element, color is hard to talk about in a black & white book. The most common obstacle you encounter when dealing with color in mobile stream.

Q5a) Explain in detail about drag and drop operations.

→ Move the pointer to the object press and hold down, the button on the mouse or other pointing device to 'grab' the object. "Drag" the object to desired location by moving the pointer to. this one "Drop" the object by releasing the button.

working: →

① Dragging:

- Initiation :- The drag and drop process usually begins when the user select an object, file or text by clicking on it.

- Feedback :- As the user starts dragging a visual representation of the selected item is created.

- constraints :- The cursor typically remains within the boundaries of the application or windows and the dragged.

② Dropping :→

- Target selection :- To complete the drag & drop operation, the user must identify the target location where they want the place the dragged item.

- Hovering :- As the user approaches a potential drop target, the system often provides visual cues to indicate whether the drop is allowed or not.

- Release :- When the user is satisfied with the target location, the release the mouse button.

Q.5 b) Describe in detail in about direct selection ?

→ Direct selection in the context of human computer Interaction refers to a user interface design method that allows user to directly interact with on screen objects or elements such as buttons, icons or links to perform actions or make selections.

Directed selection is a user interface technique where user interact with graphical elements on the screen by directly pointing.

Types of directed selection.

1. point & click
2. drag & drop
3. Touch screen interaction
4. usability & efficiency
5. Gestures and multi-Touch
6. Feedback
7. challenges.

Q.64) Explain in detail about contextual tools ?

→ Contextual tools in HCI refers to software or hardware elements that help the system understand and adapt to the user context.

Types of contextual tools :-

① Sensors :→
Devices like GPS, accelerometers, gyroscope.

② User profiling :→
Collecting data about habit and behaviour of system.

③ Context - aware software :→
Applications and system that adjust their behaviour based on user context.

④ Contextual user interface :→
Adaptive interface that change their layout and content based on context.

Usage of contextual tools :→

a) Adaptive content
b) location based services
c) Contextual Recommandation
d) Situational Awareness.

Q.6 b) Describe in detail about overlay and its types?

→ An overlay is graphical or informational layer that is placed on top of an existing image, video or screen content to provide additional information.

There are some types of overlays:-

① Text overlay :→

The text overlay are used to display textual information on top of an image or video.

ex: date and time stams on photos.

② Overlay :→

It is placing one image on top of another to create a composite image to add branding elements.

ex. watermarking images.

③ Video overlay :→

Video overlays are used to superimpose one video on top of another, often for picture in picture effects.

Ex. Gaming streams with a webcam view in a corner.

(4) Interactive overlay :→

Interactive overlays enable user interaction by adding clickable elements, buttons.

ex.:- Touchscreen interface on ATMs.

(5) Augmented Reality (AR) overlay :→

It overlays blend digital content with real world through a devices camera view.

ex.: pokemon Go's virtual creatures in the real world.