



SNS COLLEGE OF TECHNOLOGY



(AN AUTONOMOUS INSTITUTION)

COIMBATORE – 35

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

UNIT II

BUILDING BLOCKS OF MOBILE APPS-I

Syllabus:

App user interface designing – mobile UI resources (Layout, UI elements, Draw-able, Menu), Activity-states and life cycle, interaction amongst activities. App functionality beyond user interface - Threads, Async task, Services–statesandlifecycle, Notifications.

App user interface designing

User interface design

User interface design or UI design generally refers to the visual layout of the elements that a user might interact with in a website, or technological product. This could be the control buttons of a radio, or the visual layout of a webpage. User interface designs must not only be attractive to potential users, but must also be functional and created with users in mind.

User interface design important for usability

User interface design can dramatically affect the usability and user experience of an application. If a user interface design is too complex or not adapted to targeted users, the user may not be able to find the information or service they are looking for. In website design, this can affect conversion rates. The layout of a user interface design should also be clearly set out for users so that elements can be found in a logical position by the user.

To optimize user interface design

User interface designs should be optimized so that the user can operate an application as quickly and easily as possible. Many experts believe that UI design should be simple and intuitive, often using metaphors from non-computer systems. With a more intuitive user interface design, users will be able to navigate around a website easily, finding the product or service they want quickly.

One way to check the intuitiveness of a user interface design is through usability testing. The feedback from usability testing can then be used to optimize the user interface design of a prototype or final product.

To Design A Mobile App Using User Interface Design Principles

The Structure Principle

Design should organize the user interface purposefully, in meaningful and useful ways based on clear, consistent models that are apparent and recognizable to users, putting related things together and separating unrelated things, differentiating dissimilar things and making similar things resemble one another. The structure principle is concerned with overall user interface architecture.

The Simplicity Principle

The design should make simple, common tasks easy, communicating clearly and simply in the user's own language, and providing good shortcuts that are meaningfully related to longer procedures.

The Visibility Principle

The design should make all needed options and materials for a given task visible without distracting the user with extraneous or redundant information. Good designs don't overwhelm users with alternatives or confuse them with unneeded information.

The Feedback Principle

The design should keep users informed of actions or interpretations, changes of state or condition, and errors or exceptions that are relevant and of interest to the user through clear, concise, and unambiguous language familiar to users.

The Tolerance Principle

The design should be flexible and tolerant, reducing the cost of mistakes and misuse by allowing undoing and redoing, while also preventing errors wherever possible by tolerating varied inputs and sequences and by interpreting all reasonable actions.

The Reuse Principle

The design should reuse internal and external components and behaviors, maintaining consistency with purpose rather than merely arbitrary consistency, thus reducing the need for users to rethink and remember.