RLMCA 381

ASSIGNMENT 3

CLOUD COMPUTING

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INTMCA S6

1. Discuss the major operating systems used in smart phones and explain their key features.

   Smartphones have revolutionized the way we communicate, work, and play. Central to this revolution is the operating system (OS) each phone uses, defining the user experience, capabilities, and device compatibility.

➢ Google Android
- Open Source & Customizable: Built on the Linux kernel, Android provides a customizable interface, allowing manufacturers to modify its appearance and functionality.
- Google Play Store: This is the central repository for apps, games, and other content.
- Device Diversity: Used by various brands, Android devices come in multiple price ranges and specifications.

➢ Apple iOS
- Exclusive to Apple: Proprietary OS only for Apple devices, offering a consistent user experience.
- Apple App Store: The only official platform for iOS apps, known for its stringent review process.
- Ecosystem Integration: iOS interfaces seamlessly with other Apple products like Macs, iPads, and Apple Watch.

➢ RIM BlackBerry
- Business-Oriented: Originally known for its focus on email and enterprise solutions.
- BlackBerry Hub: Centralized communication portal for emails, messages, and notifications.
- Physical Keyboard: Distinctive feature of many BlackBerry phones, prioritizing typing efficiency.

➢ Symbian
- Legacy Platform: Once a dominant OS, primarily used by Nokia.
- Multitasking: Offered efficient multitasking and was known for its robustness.
- Nokia Ovi Store: The primary app store for Symbian devices, though it lost relevance with the rise of Android and iOS.

➢ Windows
- Live Tiles: Interface featured dynamically updating tiles instead of static icons.
- OneCore: Aimed for universal apps that could run across phones, tablets, and PCs.
- Integration with Microsoft Services: Seamless access to services like OneDrive, Office, and Cortana.

2. Explain various components used by Mobile Web Services for Service Discovery.

Mobile Web Services have advanced significantly with the proliferation of smartphones, enhancing user experiences and streamlining application processes. Service Discovery in Mobile Web Services is crucial to provide users with services relevant to their immediate context. Let's delve into the components that play a vital role in this discovery.

➢ Context-aware services

- These services tailor the user experience based on the current context of a user. The context can include factors like location, time, device capabilities, and user preferences. By understanding the context, the services can provide more relevant and timely information or functionality to the user.

➢ MEMS (Micro-Electro-Mechanical Systems)

- MEMS are miniaturized mechanical and electro-mechanical elements (sensors and actuators) that can detect changes in the environment. In the realm of mobile services, MEMS, especially sensors, play a vital role in collecting data about a user's surroundings and movements, aiding in better service discovery.

➢ Location awareness

- This involves the ability of a service or application to detect and use the current geographical position of the mobile device to tailor the provided services. GPS, Wi-Fi triangulation, and cell tower triangulation are common methods. Location-awareness ensures that services, like restaurant recommendations or weather updates, are immediately relevant to the user's current location.

➢ Push services

- Push services enable servers to send data or notifications to a mobile device without waiting for the device to request the data. This is crucial for timely delivery of updates, notifications, and services based on real-time changes in context.

➢ The BlackBerry Push Service

- Specific to BlackBerry devices, this service allows developers to send data to BlackBerry devices instantly. For example, emails on BlackBerry devices were delivered in real-time due to this push service, ensuring immediate service delivery and notification.

➢ The Lemonade Profile

- Lemonade is an enhancement of the Internet Message Access Protocol (IMAP) and SMTP (Simple Mail Transfer Protocol) for mobile email services. The Lemonade Profile allows mobile devices to efficiently handle email services by supporting operations like quick message view and server-side search. It aids in streamlining email discovery and interaction on mobile devices.