FACULTY OF ENGINEERING & TECHNOLOGY

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Programming Domains

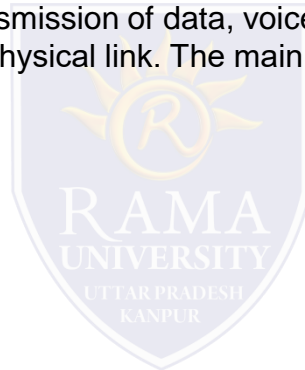   Mobile communication

      Mobile hardware

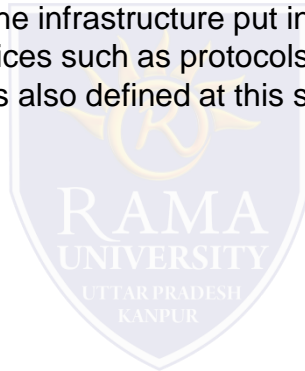   Mobile software

Programming paradigms:

Mobile Computing is a technology that allows transmission of data, voice and video via a computer or any other wireless enabled device without having to be connected to a fixed physical link. The main concept involves −

Mobile communication
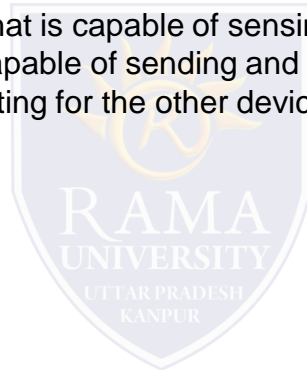Mobile hardware
Mobile software

Mobile communication

The mobile communication in this case, refers to the infrastructure put in place to ensure that seamless and reliable communication goes on. These would include devices such as protocols, services, bandwidth, and portals necessary to facilitate and support the stated services. The data format is also defined at this stage. This ensures that there is no collision with other existing systems which offer the same service.

Mobile hardware

- Mobile hardware includes mobile devices or device components that receive or access the service of mobility. They would range from portable laptops, smartphones, tablet Pc's, Personal Digital Assistants.
- These devices will have a receptor medium that is capable of sensing and receiving signals. These devices are configured to operate in full- duplex, whereby they are capable of sending and receiving signals at the same time. They don't have to wait until one device has finished communicating for the other device to initiate communications.

Mobile software

- Mobile software is the actual program that runs on the mobile hardware. It deals with the characteristics and requirements of mobile applications. This is the engine of the mobile device. In other terms, it is the operating system of the appliance. It's the essential component that operates the mobile device.

- Since portability is the main factor, this type of computing ensures that users are not tied or pinned to a single physical location, but are able to operate from anywhere. It incorporates all aspects of wireless communications.

MCQ

1. Which of the following is the world's first cellular system to specify digital modulation and network level architecture?
   a) GSM
   b) AMPS
   c) CDMA
   d) IS-54

2. Previously in 1980s, GSM stands for _____
   a) Global system for mobile
   b) Groupe special mobile
   c) Global special mobile
   d) Groupe system mobile

3. Who set the standards of GSM?
   a) ITU
   b) AT & T
   c) ETSI
   d) USDC

4. Which of the following does not come under the teleservices of GSM?
   a) Standard mobile telephony
   b) Mobile originated traffic
   c) Base originated traffic
   d) Packet switched traffic

5. Which of the following comes under supplementary ISDN services?
   a) Emergency calling
   b) Packet switched protocols
   c) Call diversion
   d) Standard mobile telephony