MOBILE COMPUTING – ASSIGNMENT PRESENTATION

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Topic: Introduction to mobile computing

There are currently more mobile devices accessing the internet than there are humans on Earth. There are 7.9 billion mobile devices compared to 7.4 billion world population (2015). On an average 3.2 billion users access the internet per day and it was predicted that 90% of internet access will be through mobile devices by 2020. Furthermore, personal computing (using desktop/computers) is moving towards mobile computing, and mobile applications account for 47% of internet traffic.

Few examples of mobile devices include smartphones, tablets, e-readers, scanners, Personal Digital Assistant (PDA) etc. Mobile devices consist of a case, RAM, keyboard, network connection, operating system, CPU, video card (also known as a graphics card, responsible for rendering images and videos), screen and applications. Mobile devices have features including size, operating system, access to mobile broadband network (a high-speed network that can transmit large amounts of data over a wide range of frequencies), battery life, GPS (Global Positioning System) capability, accelerometer, gyroscope, camera and touch screen.

What is Mobile computing? - Mobile computing is a technology which enables people to access network service at any place at any time. It uses portable and wireless communication devices. Mobility can refer to both user and device mobility, with **user mobility** being the ability for **users** to move around while maintaining connectivity. For example, a user might move from their office to a conference room and continue to use their laptop or mobile device to access the network and other resources, without having to log in again or lose their connection. **Device mobility** refers to the ability of a **device** to move from one location to another while maintaining network connectivity. For example, a mobile phone might switch between different cellular networks or Wi-Fi hotspots as the user moves around, without losing their connection.

Communication devices can be classified as fixed and wired, mobile and wired, fixed and wireless, or mobile and wireless. Each classification of communication devices can be defined as follows:

- Fixed and wired: These devices are stationary and connected to a wired network such as a desktop computer connected to an ethernet cable.
- Mobile and wired: These devices are portable and connected to a wired network such as a laptop connected to an ethernet cable.
- Fixed and wireless: These devices are stationary and connected to a wireless network, such as a wireless router providing Wi-Fi to devices in a home or office.
- Mobile and wireless: These devices are portable and connected to a wireless network, such as a smartphone or tablet connected to a cellular network (a wireless network that uses radio frequencies to enable mobile communication between devices) or Wi-Fi.