**Topic 6 Networks**

***Types of networks (wired, wireless, LAN, WAN, MAN, PAN).***

**A Computer Network is a group of two or more interconnected computer systems that use common connection protocols for sharing various resources and files. Data in a network with wired connections travels from one device to another over cables, phone lines and high-speed optic cables. Wired connections are fast, secure and simple to configure. An example of wired network technology is Ethernet. . A wireless network transports data through the air, eliminating the need for cables. Wireless connections transport data as RF signals (radio frequency signals), microwaves and infrared light beams. Satellites - for long distances, Wi-Fi - for medium-range distances, Bluetooth - for short distances.**

**Networks can be classified according to their size and geographic scope (PAN, LAN, MAN, WAN).**

**A PAN (PERSONAL AREA NETWORK) allows you to connect smart devices or consumer electronics within a radius of 10 meters without using wires or cables. A LAN (LOCAL AREA NETWORK) is a data network that connects personal computers within a very limited area – usually in the same building. A MAN (METROPOLITEN AREA NETWORK) covers a campus or city and is widely used in cable television networks available throughout the city. A WAN (WIDE AREA NETWORK) covers a large geographical area and consists of several small networks.**

***Network topologies.***

**Networks can be classified according to their topology, or layout: In a bus network, all the computers are connected to a main cable called bus. In a star network, all data flows through a central hub, a common connection point for the devices in the network. In a ring network, all devices are connected to one another in a closed loop configuration, or ring. There are also mixed topologies, such as three, a group of stars connected to a central bus.**

***Web basics.***

**Components The Internet consists of many systems that offer different facilities to users, www, the World Wide Web, is a network of documents that works in a hypertext environment, i.e. using text that contains links, hyperlinks to other documents**

***The Internet technology. IoT.***

**The Internet of Things (IoT) is the concept of basically connecting any device with an on and off switch to the Internet (and/or to each other). This includes everything from cellphones, coffee makers, washing machines, headphones, lamps, wearable devices and almost anything else you can think of.**