Trends in computing

- Computer trends are changes or evolutions in the ways that computers are popularly used world wide.

Growth of the internet (trends of Internet)

- Being integrated in daily life as a communication and information medium
- The internet of things (IoT) is the network of physical devices ("things") like vehicles, buildings and other items embedded with electronics, software, sensors, actuators, and internet connectivity that enable these objects to collect and exchange data and be monitored remotely with mobile devices

- Cloud computing. This is the utilization of computing services, i.e. software as well as hardware as a service over a internet.

Benefits of cloud computing

1. It reduces IT infrastructure cost of the company.
2. It reduces cost of data storage to individual users.
3. It makes maintenance of software and hardware easier as installation is not required on each end user's computer.

Computing trends in education

- Mobile learning. This is the use of mobile devices with internet access and computing capabilities as the information appliance of choice in the classroom.

Benefits of mobile learning

- Provides easy access to learning any place any time
- It facilitates collaborative learning, allowing learners at different locations to get in touch and exchange ideas
- It boosts learner engagement and reduces boredom by bringing several opportunities for social networking

- It encourages self-paced learning, which accommodates slow learners.
- It accommodates all learning styles. ie. Reading, videos, audio podcasts, and research.

Limitations to mobile learning

- Limited connectivity
- Limited access to mobile devices
- Mobile devices can be a distractor to students due to the many other features available to students to use other than mobile learning.

Developments of computing in healthcare

- Connected medical devices, eg insulin pumps and pacemakers that can pick up signals and automatically transmit them to a network for individuals to monitor their general fitness and vital signs.

- Storing of patients data electronically and processing it from multiple points
- Mobile health. the practice of medicine and public health using mobile communication devices, such as mobile phones, tablet computers and PDAs, for health services and information

• Telemedicine/ehealth

 the use of medical information exchanged from one site to another via electronic communications to improve a patient's clinical health status.

1. It allows health care professionals to evaluate, diagnose and treat patients in remote locations using telecommunications technology.

2. It allows patients in remote locations to access medical expertise quickly, efficiently and without travel.

3. It provides more efficient use of limited expert resources. The ration of health worker to patient is very high.

Developments of computing in military

• Use of military Robots

• Use of embedded systems that guide weapons e.g. drones and computer guided missiles to provide accurate support for military and reduce civilian casualties.

• Use of robots to transport military equipment

• Computer enhanced communication which speeds up processes and allow for more fluid decision making by the military.

Trends of computing in industry

- Use of robots in the manufacturing assembly lines
- Carrier robots are used to move heavy equipment and products in the stores
- Use of computer aided manufacturing software to manage manufacturing processes.
- Automated manufacturing processes
- Use of computer aided designing

- 3D printing.
- Cloud manufacturing. consisting of an integrated and inter-connected virtualized service pool (manufacturing cloud) of manufacturing resources and capabilities to provide solutions as service over the internet for all kinds of users involved in the whole lifecycle of manufacturing.

Trends of computing in Homes

- Use of embedded systems in domestic appliances such as fridges and microwave.
- Use of smart phones for communication
- Doing online shopping
- Use of computers for banking
- Use of ICT to do domestic chores
- Control of home security
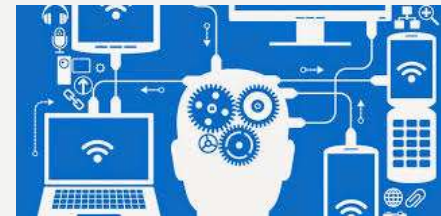
Trends in computing in relation to governance

- e-administration using tools like: integrated human resources and payroll systems, and integrated financial management systems,
- e-services. e.g. requests for public documents, requests for legal documents and certificates, issuing permits and licenses, online tax payment, payment of online services.

- e-democracy. increasing the engagement of citizens in public decisions and actions. e.g. citizen panels, forums and petitions, opinion polls, referendums, online voting.

Trends in computing in commerce

- The use of guided digital assets such as how to do video manuals and step by step on products and services provided to customers to provide detailed information about products.
- Marketing and personalisation, where s configure and personalise their product selection, ability to track online users browsing behaviour and the use of adware.

- Mobile marketing. Mobility and mobile applications that make online transactions easy on mobile devices.
- Social media platforms. Increasing use by e-commerce firms of social media platforms like facebook to reach out to potential customers.

- An online auction, held over the internet.