



# Types of Computers



There are many different types of computers ranging from giant super computers to small hand-held personal organisers.



# Types of Computers

- SUPER COMPUTERS
- MAINFRAME COMPUTERS
- PERSONAL COMPUTER
- LAPTOPS
- NETBOOKS
- TABLETS
- SMART PHONES
- EMBEDDED COMPUTERS

# Super Computer



# Super Computers

- Super computers are the fastest and most expensive computers in the world. (\$100 million)
- Used for
  - One particular job
  - large scientific research projects
  - weather modeling and forecasting
  - drug research
  - Military weapon research

**They generate so much heat, need special environmental conditions.**

# Examples for Super computer

**Tianhe-2 (China)**



**Titan (U.S.A.)**



**K Computer (Japan)**

**SAGA-220 (India)**



**Juqueen (Germany)**

# Mainframe Computer





# Mainframe Computers

Mainframe computers are large, powerful computers that can carry out many different task for many different people at the same time.

- Are slower than super computers
- Far less expensive than super computers
- Can execute billions of instructions per second
- Usually connected to large number of peripherals (printer, disk drivers...)
- Used to support thousands of terminals in a network.



# Mainframe Computers

- They are used by large companies such as..
- **Utility companies** (gas, electricity)
- **Banks** – for managing thousands of customers
- **Insurance companies**
- **Airlines** – for dealing with tickets, cancellation.
- **Police** – for storing crime records

# Personal Computers

- Used in small offices, school, home etc.
- Modern PCs are very powerful and now relatively cheap.
- They are not portable
- Used for
  - Running office applications
  - For CAD designing
  - Creating and playing music
  - Accessing internet
  - Entertainment



# Laptop Computers



- A laptop is a portable computer small enough to carry around with you.
- Have an integrated keyboard and a touchpad and screen
- Have a powerful rechargeable battery
- Have same processing power and memory as PCs
- Their processors produce less heat and consumes less power than desktop computers

# Netbooks



- Smaller and lighter than a laptop
- Typically around 10" screen size
- May use a flash memory instead of a traditional hard disk
- Have much less memory and less processing power than laptops

# Tablet computers

- Is a mobile, thin device with a flat surface
- Screen view can change automatically from landscape to portrait and vice versa (gyroscope)
- Have Wi-Fi, Bluetooth, GPS etc



# Smart Phones



- Recently mobiles phones have developed into smart phones
- Contain GPS, Wi-Fi, Bluetooth
- Supports thousands of applications
- Internet, music, video, camera .....
- Gyroscope for auto rotation of screen

# Embedded computers

- Embedded computer is a single chip that contains all of the elements that are essential for a computer.  
ie
  - RAM
  - ROM
  - CPU
  - INPUT
  - OUTPUT
  - CLOCK
- Another name given for embedded computer is **Micro controller**



# Examples..

- All of the following contain an embedded computer in it..
- Televisions
- Washing machines
- Microwave oven
- Dish washers
- Cars
- Robots

