

# Cloud Computing and Ubiquitous Computing Systems

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# What does the term cloud computing mean?

*This is when a computer uses services provided by another organisation's computer systems.*

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Name some well known hosting companies that provide cloud services and find their company logo.

*Amazon, Microsoft, Google and rack space*

# What are the benefits and concerns of cloud storage?

Benefits	Concern
<b>Cost and convenience-</b> you only pay for the storage that you have used. You don't have to provide and maintain the hardware locally.	<b>Reliability of the network-</b> you need to be able to get through to the host to access and process data.
<b>Availability-</b> data and files may be available anywhere in the world where there is an internet connection.	<b>Software-</b> the host might not be using the latest, fastest and most secure version.
	<b>Potentially lower performance-</b> the speed of retrieval of data may be slower than it would be on a local database held in-house.
	<b>Security of data-</b> as files are being stored by the host, you have no control over them. You need to be aware of their security terms and policies.

# What does 'ubiquitous' mean?

Ubiquitous means existing everywhere.

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## Write down a definition for ubiquitous computer systems

Ubiquitous means existing everywhere. Processors can be embedded in any device, including clothing, appliances, vehicles, buildings and people, to connect them to the internet so that the data generated by the processors will be readily available.

# What are some examples of ubiquitous computing?

1. clothing
2. Appliances
3. vehicles
4. Buildings
5. people

# What does RFID stand for?

*The use of a wireless non-contact system that uses radio waves to transfer data from a tag attached to an object or person. The technology is mainly used for purpose of automatic identification and tracking.*

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## What does RFID do and how does it work? (Use an example)

Currently, objects within a ubiquitous computing environment usually contain radio frequency identification (RFID) chips. RFID is a technology that uses radio waves to transfer data to a tag on a person or an object so that the person/object can be identified and tracked. These tags contain information that is stored electronically and which can be transmitted. It is similar to the bar code systems used in supermarkets, but unlike a bar code, RFID does not need to be scanned. An example of a use of RFID is the cat flaps that only open for the animal that has the correct chip in its collar.

# What are the applications of ubiquitous computing?

- Currently, there are computing systems in place which monitor the shelf and warehouse stock. This technology is used by many industries (supermarkets, book and DVD suppliers, car part manufacturers, etc). When the stock reaches a certain minimum level, an order is automatically placed with the appropriate supplier electronically. Mainly this is done by a process where the tills feed product sales to a central computer, which then calculates the present stock. Currently manual checks still have to be made to allow for 'shrinkage' (i.e. loss due to theft or damage).

# What are the futuristic examples of ubiquitous computing?

- A car that can inform the owner when it needs servicing, book itself into the garage and place orders for any parts needed.
- A refrigerator that can monitor its contents, compile an order as food is used and add the items to the user's online shopping account.