

# Unit R050: IT in the digital world. Topic Area 3: Data and Testing

## What is data and information?

**Data** is raw facts and figures.

**Information** is data that has been processed and given context and meaning.

## Data uses in different contexts

### Data Types

- Alphanumeric - Combination of letters and numbers
- Boolean – True/False
- Date - Different date formats e.g. 21/01/23
- Numeric
  - **Currency** - e.g. £29.99
  - **Decimal** - e.g. 12.75
  - **Integer** - e.g. whole numbers
  - **Percentages** - e.g. 100%
  - **Real** – any no with or without decimal e.g. to store height/weight
  - **Text** – any character

**Validation and verification are two ways to check that the data entered into a computer is correct.**

**Validation:** is an automatic check to ensure that data entered is sensible and feasible.

**Verification:** To make sure the data is entered exactly matches the original source (double entry and manual checking)

## Data validation tools

Data type check

- **Format check** – checks data is right format example national insurance no
- **Input mask**
- Length check -checks data isn't too short or long
- **Limited choice** -
  - Drop down list
  - Radio buttons
  - Tick list
- **Lookup** – looks up values in table
- **Presence check** – checks the data has been entered into a field
- **Range check** –checks the value falls within a specified range

## Data Collection Methods

**Primary data is collected fresh for a specific purpose**

- Email
- Interview
- Online Questionnaire and survey
- **Secondary data is data already collected** Book
- Government Statistics
- Magazine
- Website

## Storage of collected data

**Logical location:** Cloud, Physical location

**Internal storage device:** Primary Hard Drive, Network Drive

**External storage device**

Portable External Hard Drive Disc (HDD), Portable Solid-State Drive (SSD), Network-attached storage (NAS) device, Portable USB Flash Drives, Portable Wireless Drives

## 3.5 Application of testing to a range of contexts

Testing can be carried out during and at the end.

3 types of testing

Extreme

Invalid

Erroneous

**Types of testing:**

**Technical and User**

**Technical testing** checks the functionality of the solution. *E.g. website links*

**User testing** *E.g. Functionality of HCI*