# Charles Babbage

Babbage's birthplace is **disputed**, but according to the Oxford Dictionary of National Biography he was most likely born at 44 Crosby Row, Walworth Road, London, England.A blue plaque on the junction of Larcom Street and Walworth Road **commemorates** the event.

His date of birth was given in his obituary in The Times as 26 December 1792; but then a nephew wrote to **say** that Babbage was born one year earlier, in 1791. The parish register of St. Mary's Newington, London, **shows** that Babbage was baptised on 6 January 1792, **supporting** a birth year of 1791.

Babbage was one of four children of Benjamin Babbage and Betsy Plumleigh Teape. His father was a banking partner of William Praed in **founding** Praed's & Co. of Fleet Street, London, in 1801. In 1808, the Babbage family moved into the old Rowdens house in East Teignmouth. Around the age of eight Babbage was sent to a country school in Alphington near Exeter to recover from a life-threatening fever. For a short time he **attended** King Edward VI Grammar School in Totnes, South Devon, but his health forced him back to private tutors for a time.

Babbage then **joined** the 30-student Holmwood academy, in Baker Street, Enfield, Middlesex, under the Reverend Stephen Freeman. The academy had a library that prompted Babbage's love of mathematics. He studied with two more private tutors after **leaving** the academy. The first was a clergyman near Cambridge; through him Babbage encountered Charles Simeon and his evangelical followers, but the tuition was not what he needed.[11] He was brought home, to study at the Totnes school: this was at age 16 or 17. The second was an Oxford tutor, under whom Babbage reached a level in Classics sufficient to be **accepted** by Cambridge.

**The History of the Computer Mouse**

Today, the mouse is an essential input device for all modern computers but it wasn't so long ago that computers had no mouse and no graphical user interface. Data was **entered** by **typing** commands on a keyboard.

The mouse was **invented** by Douglas Engelbart in 1964 and consisted of a wooden shell, circuit board and two metal wheels that came into contact with the surface it was being used on.

It was 8 years later in 1972 that Bill English **developed** the design further by **inventing** what is known as the "Ball Mouse" that we know today. The ball replaced the wheels and was capable of monitoring movement in any diection. The ball came into contact with two rollers that in turn spun wheels with graduations on them that could be turned into electrical pulses **representing** direction and speed.

At the time Bill English was **working** for Xerox Parc (Palo Alto Research Centre) the research and development centre set-up by Xerox to '**design** the future of computing'. The mouse became part of the ground breaking Xerox Alto computer system which was the first minicomputer system to offer a graphical user interface.

It would be another 8 years before the mouse would be **developed** any further. An optical mouse was developed in around 1980, **eliminating** the ball which often became dirty from rolling round the desktop, negatively **affecting** its operation. However, they were far too expensive to be used widely. In fact it wasn't until around 1998 with the increase in microcontroller **processing** power and the **reduction** in component costs that optical mice became a commercially viable alternative to the ball mouse and infiltrated the mass consumer market.

Today the optical mouse has completely **replaced** the ball mouse being supplied as standard with all new computers.

typewriter into the computer keyboard. The teletype machine, **introduced** in the 1930s, **combined** the technology of the typewriter (**used** as an input and a printing device) with the [telegraph](http://inventors.about.com/library/inventors/bltelegraph.htm). Elsewhere, punched card systems were combined with typewriters to **create** what was called keypunches. Keypunches were the basis of early adding machines and IBM was selling over one million dollars worth of **adding** machines in 1931.

Early computer keyboards were first adapted from the [punch card](http://inventors.about.com/library/inventors/blhollerith.htm) and teletype technologies. In 1946, the [Eniac computer](http://inventors.about.com/library/weekly/aa060298.htm) **used** a punched card reader as its input and output device. In 1948, the Binac computer used an electromechanically **controlled** typewriter to both input data directly onto magnetic tape (for feeding the computer data) and to print results. The emerging electric typewriter further **improved** the technological marriage between the typewriter and the computer.

**Video Display Terminals**

By 1964, MIT, Bell Laboratories and General Electric had collaborated to **create** a computer system called [Multics](http://www.multicians.org/); a time **sharing**, multi-user system. Multics encouraged the **development** of a new user interface, the video display terminal. The video display terminals (VDT) **combined** the technology of the [cathode ray tube](http://inventors.about.com/library/inventors/blcathoderaytube.htm) used in televisions and electric typewriters. Computer users could now see what text they were typing on their display screens making text easier to create, **edit** and **delete**, and computers easier to program and use.

**Computer Keyboards Send Direct Electronic Impulses**

Earlier computer keyboards had been based either on teletype machines or keypunches. There were many electromechanical steps in **transmitting** data between the keyboard and the computer that slowed things down. With VDT technology and electric keyboards, the keyboard's keys could now send electronic impulses directly to the computer and save time. By the late ‘70s and early ‘80s, all computers used electronic keyboards and VDTs. Nevertheless, the layout of the computer keyboard still owes its origin to the inventor of the first typewriter, Christopher Latham Sholes who also invented the QWERTY layout. However, the computer keyboard does have a few extra function keys.