Mary Cool

First female commercial

Although mathematics was Mary Coombs's favourite subject at school, it was not the one she chose for her degree, opting instead for French with history as a subsidiary. Yet in her early twenties she was not only the first non-mathematics graduate to write programs for the world's first business computer, Lyons Electronic Office (Leo), she was also the first woman to do so.

Coombs was in the right place at the right time. J Lyons & Co, the family-owned teashop business, was forward-looking on the technological front. Its senior managers were already considering electronic computers as a way of assessing sales trends in the days before a market research department had been properly developed. When she joined the company in 1952 as a management trainee it was only a few months after Leo had run its first business application.

Her father, William Blood, worked for J Lyons as a senior medical officer — later her sister would work there too. William played bridge with Lyons colleagues and through them learnt that the division working on the Leo computers was looking to hire additional programmers. His daughter, who was operating a calculating machine in Lyons's statistical office, jumped at the opportunity.
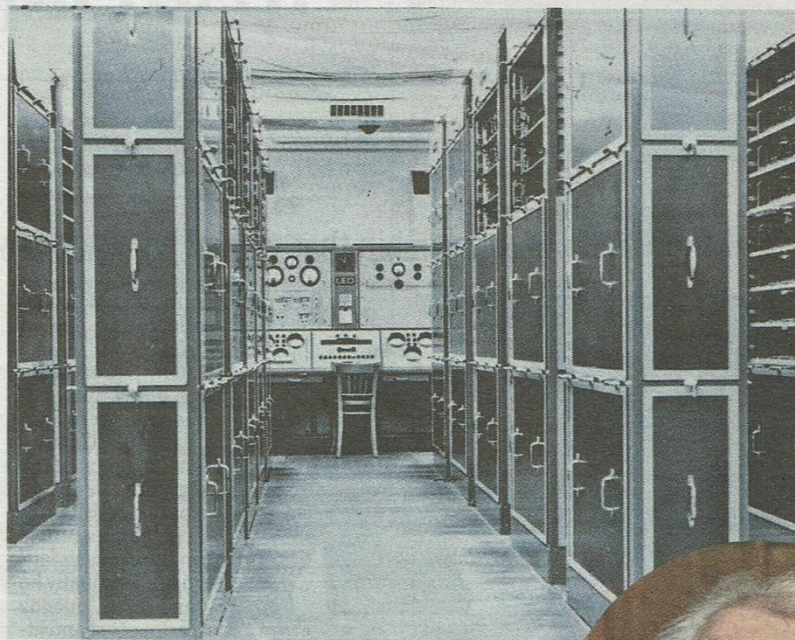
These were exciting times. "We were all engaged in a big adventure," she said. She was asked to take an aptitude test followed by a four-day introductory computer course, the only woman in a class of 12. At the end of the course she was chosen to join three other male programmers working on Leo — John Grover, Leo Fantl, who was one of the first to pioneer PAYE tax calculations in payroll systems, and Derek Hemy. The team automatically calculated payroll for the J Lyons employees as well as for Ford UK and the Met Office.

Her mathematical education to date had been in imperial weights and measures and in the new department she soon learnt binary arithmetic and flow charts. Modelled on the Electronic Delay Storage Automatic Calculator (Edsac) developed by Cambridge, Leo was launched in November 1951 and

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programmer, known as Scary Mary, who wrote software for the Leo computer u

The Lyons Electronic Office computer was introduced in 1951. Coombs was one of its four programmers

took up a whole room at the Lyons headquarters at Cadby Hall, Hammersmith. The Queen came to visit.

It used just 2KB of memory, which meant that every single instruction that was put in had to work for itself. Hours were spent saving a single instruction a fraction of a second, even a thousandth of a second. Yet the result

Her maths education had only been in imperial weights and measures

was that the payroll, as well as accounting, stock and cost control and statistics, was calculated in a superfast time of six seconds per employee, including calculating the income tax from scratch.

The computer had 6,000 valves and the circuits were tested every morning; when something went wrong, it involved going round the loop as each valve was tapped to find which one was faulty. "Life was a continual challenge to actually get a completed program that would actually work," she recalled. "We spent one very long session trying to find an intermittent error. Eventually it was found that it was interference from the manager's lift."

Coombs continued to work for J Lyons as the Leo II and Leo III were built. She spent most of her time as a supervisor locating and repairing coding errors in the programs that others wrote, but she also developed programs for internal use and as part of the business computing service offered by the company: this included tax tables for the Inland Revenue, Met Office work and the calculation of ballistics for the army. She often worked overtime and yet was on a different salary level from her male

colleagues. Leo Computers eventually passed to International Computers Ltd and ultimately Fujitsu and were in use until 1981.

Born in 1929 in Muswell Hill, north London, Coombs was the elder daughter of a GP. William Blood had a leg wound from the First World War and it had been so poorly operated on that he resolved to become a doctor to do a better job. The osteomyelitis eventually caused too much trouble for him to continue with his rounds as a GP and so he left to work for J Lyons as one of its first industrial medical officers. Her mother, Ruth, who had met William while doing clerical work at the London Hospital, raised the family.

William was popular with his patients but demanding of his two daughters, Mary and Ruth. As a teenager Coombs expressed an interest in becoming a nurse, and was promptly urged by her father to become a doctor. She thought about teaching young children, which required only that she attend a college of education, but it was firmly suggested that she go to university. With her sister, who became a microbiologist and bacteriologist, she went to Putney High School and then on to St Paul's Girls' School. She graduated from Queen Mary College, now Queen Mary University of London.

With her father working at J Lyons, Coombs took a holiday job with the company while a student, but after graduating she taught English for a year at a secondary school in Lausanne, Switzerland, as part of a Ministry of Education exchange project. She was summoned home to Barnes, southwest London, by her father, who missed her, and with no teaching positions available she applied to J Lyons to become a management trainee.

Her career path as a computer programmer changed when she met John

used by J Lyons & Co

Coombs, who worked briefly in the same department. They married in 1955, moved to High Wycombe, Buckinghamshire, and had a daughter, Anne, who had special needs. Anne died at the age of six. By then the couple had adopted another child, Andrew, who works as a gardener, and went on to adopt another two: Paul, who is in the construction industry, and Gillian, a housewife.

Family commitments meant that Coombs ceased full-time programming in 1964 but she continued to work part-time editing computer manuals. For a few months she ran a computer programming course for disabled residents at the Princess Marina Care Centre in Beaconsfield. It was not until 1969 that she ended her formal connection with the Leo team.

Although Coombs is remembered for her programming, her career cut three ways. She went back to teaching, and worked at a local private girls' prep school. She retired from teaching in 1987, having had educational disagreements with the head teacher with whom she shared a class, but continued to teach piano and run the church choir. Her final position was as a buyer in the water treatment industry.

Coombs was known for her competence. She measured up well in a crisis and was never known to present a front that was anything less than cheerful and positive. Yet she could be brisk and direct in manner, which in some quarters earned her the nickname "Scary Mary".

In retirement she combined caring for her mother for eight years with being a dedicated gardener and looking after a string of labradors of every colour. John predeceased her in 2012.

Had it not been for family life, she admitted that she would have continued to work in computing until her retirement and seen through a career from its very beginnings. As she noted in her later years: "I doubt any of us anticipated just how far computers would go."

Mary Coombs, computer programmer, was born on February 4, 1929. She died of congestive heart failure on February 28, 2022, aged 93