1 Types and components of computer systems

When you have finished this module, you will be able to:

- define and give examples of hardware and software, and describe the difference between them
- identify the main hardware components of a computer system
- identify the need for an operating system, and describe various user interfaces associated with operating systems
- identify different types of computer ranging from mainframes to PDAs.

Overview

As you look around the world today, you will see information and communication technology (ICT) being used almost everywhere. This module will help you to learn and understand more about different ICT systems, what these systems can do and how they affect society.

One of the first electronic computers was invented in the 1940s by a team of code breakers working at Bletchley Park in the UK. They were trying to decode messages sent by German forces during World War II. The machine was called Colossus (Figure 1.1).

In the years since then, many different types of computers have been developed – mainframes, personal computers and laptops. More recently smartphones, mobile phones that are also computers, have become prevalent (Figure 1.2).

Not so obvious are the computers embedded in equipment such as automatic washing machines or the control systems for greenhouses or factories. You will learn about all these applications of ICT in this course.

This first module focuses on basic computer systems and their components. First you will learn about hardware and software, and the difference between them. You will look at the main hardware components of a computer system, then at some of the different operating systems (software) that computers need in order to work.
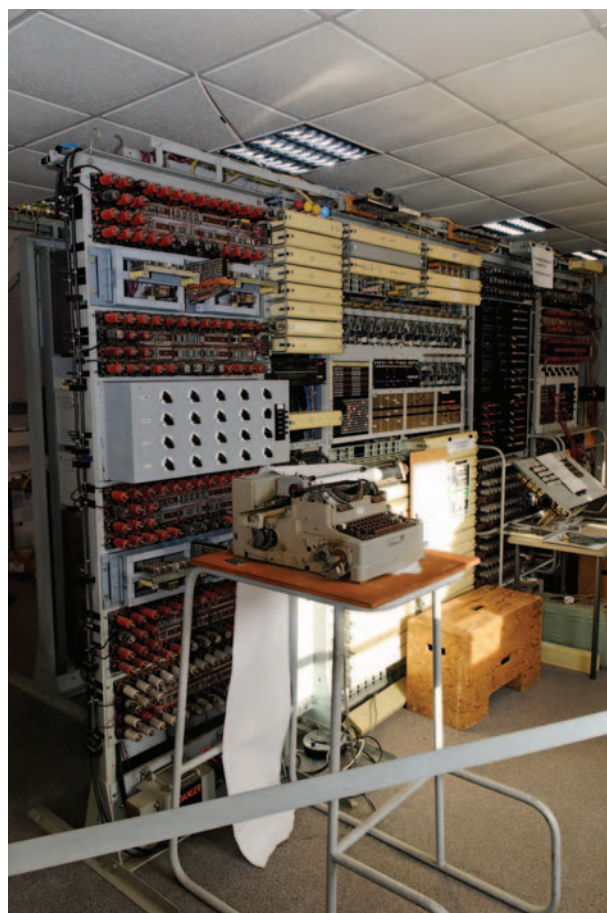

Figure 1.1 The Colossus machine at Bletchley Park, UK, was one of the first electronic computers. It was invented in the 1940s. Because valves (large electronic components) were used, Colossus was huge, filling the room.

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