

# THE MEMORY SYSTEM

## INTRODUCTION

- ☞ Programs and the data they operate on are held in the memory of the computer.
- ☞ The execution speed of programs is highly dependent on the speed with which instructions and data can be transferred between the processor and the memory.
- ☞ It is also important to have a large memory to facilitate the execution of programs that are large and deal with huge amounts of data.
- ☞ Ideally, the memory would be fast, large and inexpensive. Unfortunately, it is impossible to meet all three of these requirements simultaneously. Increase in speed and size are achieved at increased cost.
- ☞ Much work has gone into developing clever structures that improve the apparent speed and size of the memory, yet keep the cost reasonable.