means that the whole development process is based round the object – a thing or concept that initially represents something in the real world and eventually ends up as a component of the system code. An object-oriented system is made up of objects that collaborate to achieve the required functionality, what the system has to do.

What sort of person did we have in mind when we wrote this book? Well, ideally, you are highly motivated, interested in how software systems are developed, keen to learn about the object-oriented approach, and prepared to work hard at practising the exercises. In reality, you are probably not sure why you've got the book, except that it appeared on the reading list for one of your modules, you don't know much about software systems, you haven't the first idea what the object-oriented approach is, and if you are a typical student, working hard at exercises may be pretty low on your list of priorities. So it all comes down to a compromise – we'll do our best to make sure that the book is as interesting as possible, and we'll try to write in a style that you'll find easy to understand; we'll also grade the exercises, so that they are not a huge hurdle to be overcome, and provide answers, so that you can see how you are getting on. In return, you will have to read the chapters, think about the material, grit your teeth and do the exercises.

The book describes how a software system is developed using an object-oriented approach, with examples and exercises based on Wheels, the bike hire system used as a case study. Table 1.1 lists the chapters with a very brief summary of how they fit into the structure of the book.

All the chapters in the main body of the book follow a similar structure, introducing the topic of the chapter with examples drawn mainly from the Wheels case study. In a number of the chapters there is a section on technical points – this covers more advanced issues that you can leave out on a first reading, but gives a more complete picture. Many of the chapters also have a section on common problems; this deals with the questions that are most frequently asked by students, and the main difficulties that they have with the topic. At the end of each chapter you will find quick check questions that will help you to recall the material covered and check your understanding. Where appropriate, there are also practical exercises that provide essential practice in the various techniques. You will find the answers to the quick check questions in the relevant chapter, and the answers to the exercises are in a separate section at the end of the book.

Table 1.1 explains the material that is covered in the rest of this book. However, simply reading the chapters will not teach you to