



Figure 9.5 A simple four layer architecture showing dependencies

package, a Java GUI (Graphical User Interface) toolkit. The Java Swing package also goes in the presentation layer (see Figure 9.6). The application logic layer contains the control classes. The application layer contains the application or entity classes (Bike, Customer, Hire, etc.). On the assumption that we are using Java and a relational database, the storage layer has the database itself, a JDBC (Java Database Connectivity) package, a Java SQL (Structured Query Language) package and a package of relational classes. The JDBC package is a package of classes that allows a Java application to establish a connection with a relational database. The Java SQL package is needed to manipulate the database. The relational classes package contains a set of classes that structure the application classes into a form that can be handled by a relational database (see below). In a large and complex system each layer may be partitioned into subsystems, so that, for example, the presentation layer might contain the Java Swing package and several packages of interface classes – one for each subsystem.

Implementation diagrams

Component diagrams. The UML has two kinds of implementation diagrams: component diagrams and deployment diagrams. A component diagram represents the actual physical software