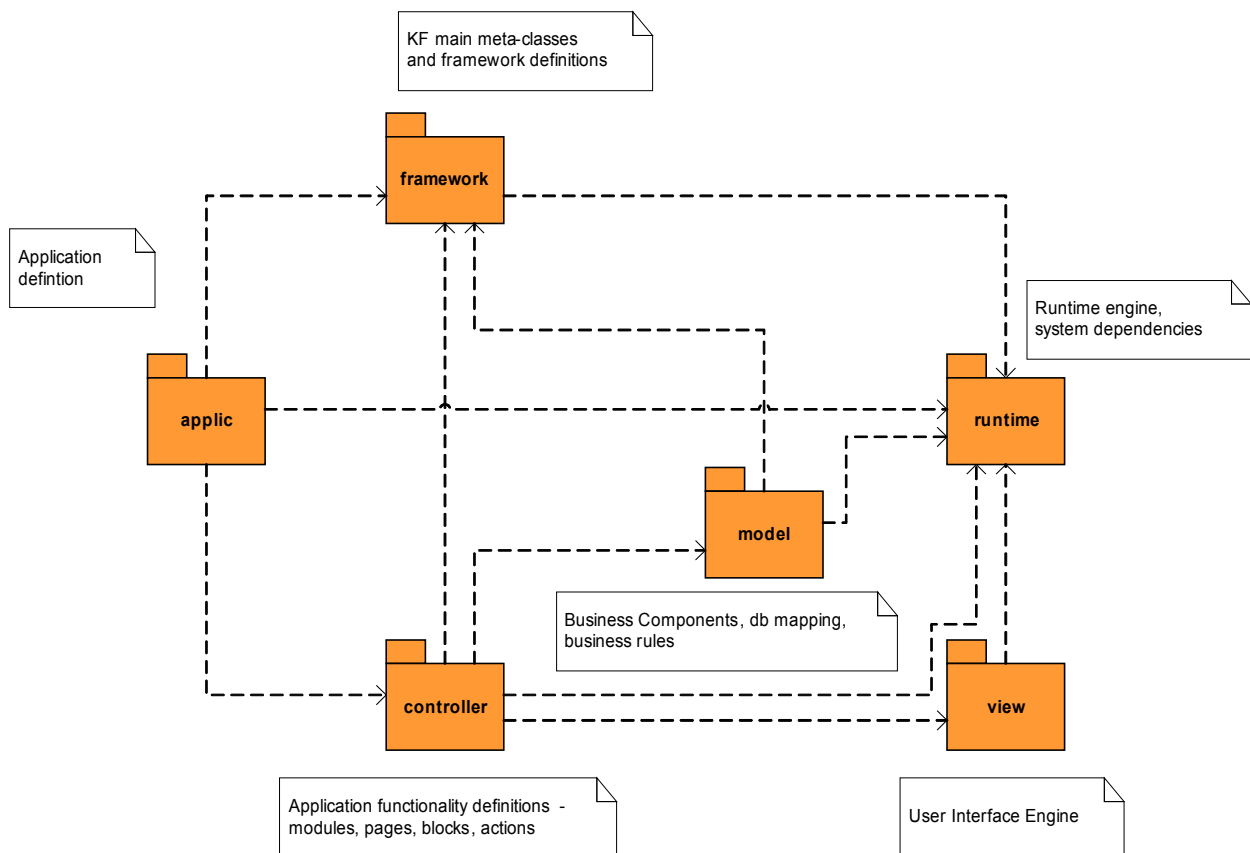


KnowledgeFrame Class Diagrams

The following UML diagrams are available and have been created to document the most fundamental principles of KnowledgeFrame on a conceptual level. The diagrams in this Appendix have been selected to provide an understanding of framework concepts and dependencies. Additional technical documentation is available in KF 5.2 Developer Guide and in KF 5.2 Tutorial. *(Also, all fundamental KF classes are build as regular Java classes or Beans, and can be reverse-engineered to UML when needed; however, these diagrams will typically be very complex and hard-to-read, due to a high number of subclasses and class associations. In our opinion, their inclusion in this document would distract the reader from the fundamental data structures, and would increase understanding of KF 5 internal workings in a significant way).*

E.1 Top Level Package - “com.t4bi.kf”



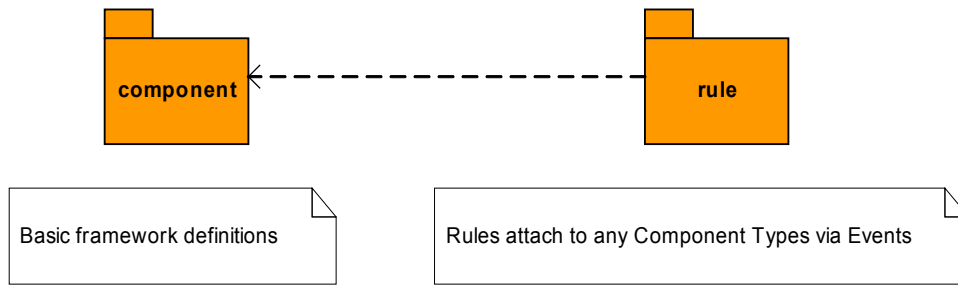
E.2 Application Code Package - “applic”

Package “applic” contains the definition of the application (“site”). This package is essentially a collection of artefacts needed to create a working Web site image from individual application modules. Files in this package include:

- ApplicationConfiguration – various configuration options, methods and settings defining the common behaviour and appearance of the site.
- ApplicationMenu – the hierarchic structure of the Main Menu, with references to Modules and Roles
- KfDoc – a system design documentation facility. The KfDoc facility is built into KF, and executes automatically at system start-up time. It is activated by putting an additional context parameter into **web.xml**, e.g. as follows:

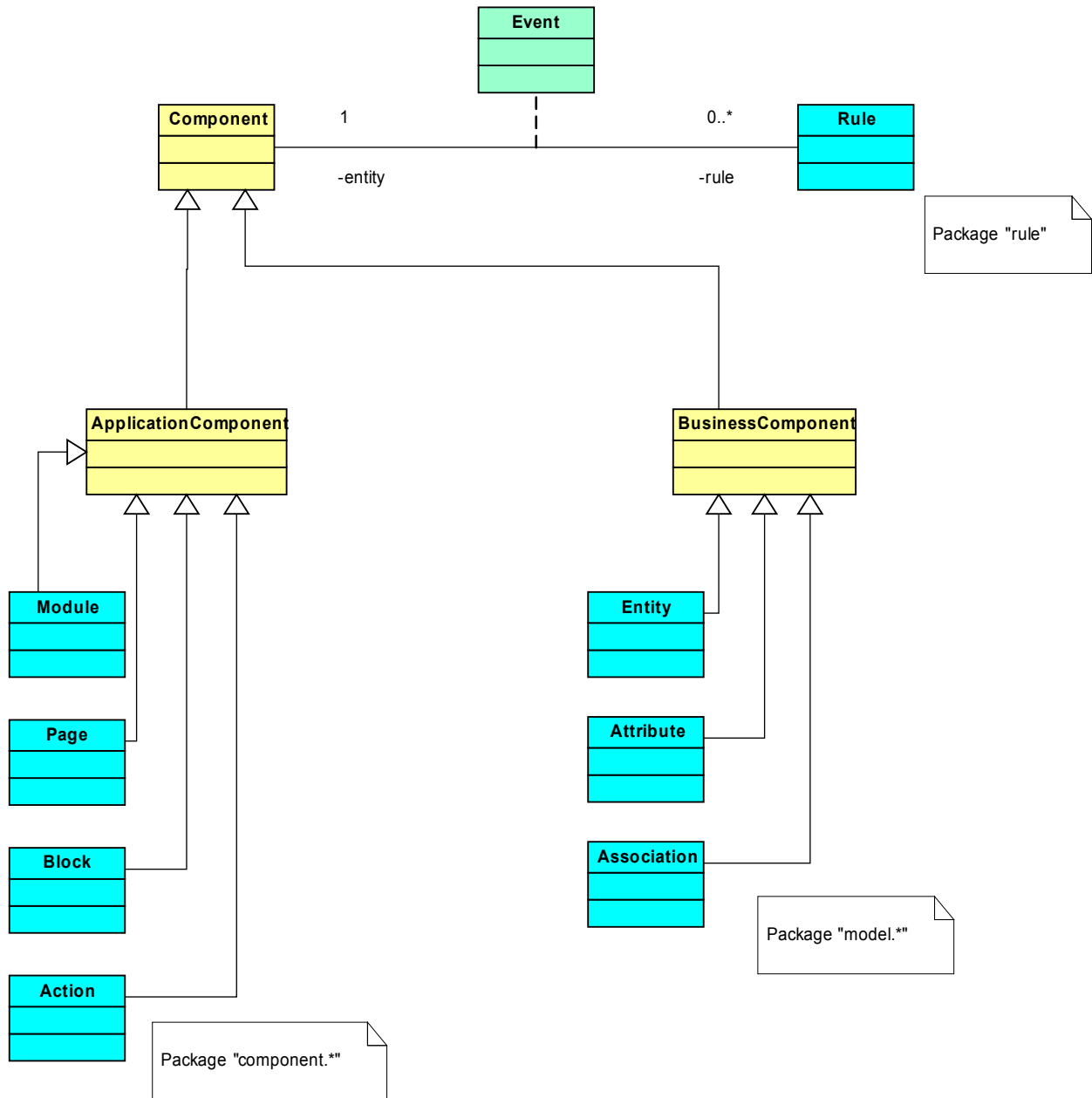
```
<context-param> <param-name>APP_DOCUMENTATION_DIRECTORY</param-name> <param-value>C:\devel\temp\esis_doc\</param-value><description>Directory path for project documentation</description> </context-param>
```
- LoginModule and LoginBlock – implementation of the initial Login screen and application authentication (can be customized)
- HomeModule and Home Block – implementation of Main Menu and cross-module navigation (can be customized)
- Any common constants, code tables and application-wide settings

E.3 KnowledgeFrame Foundation - “framework”

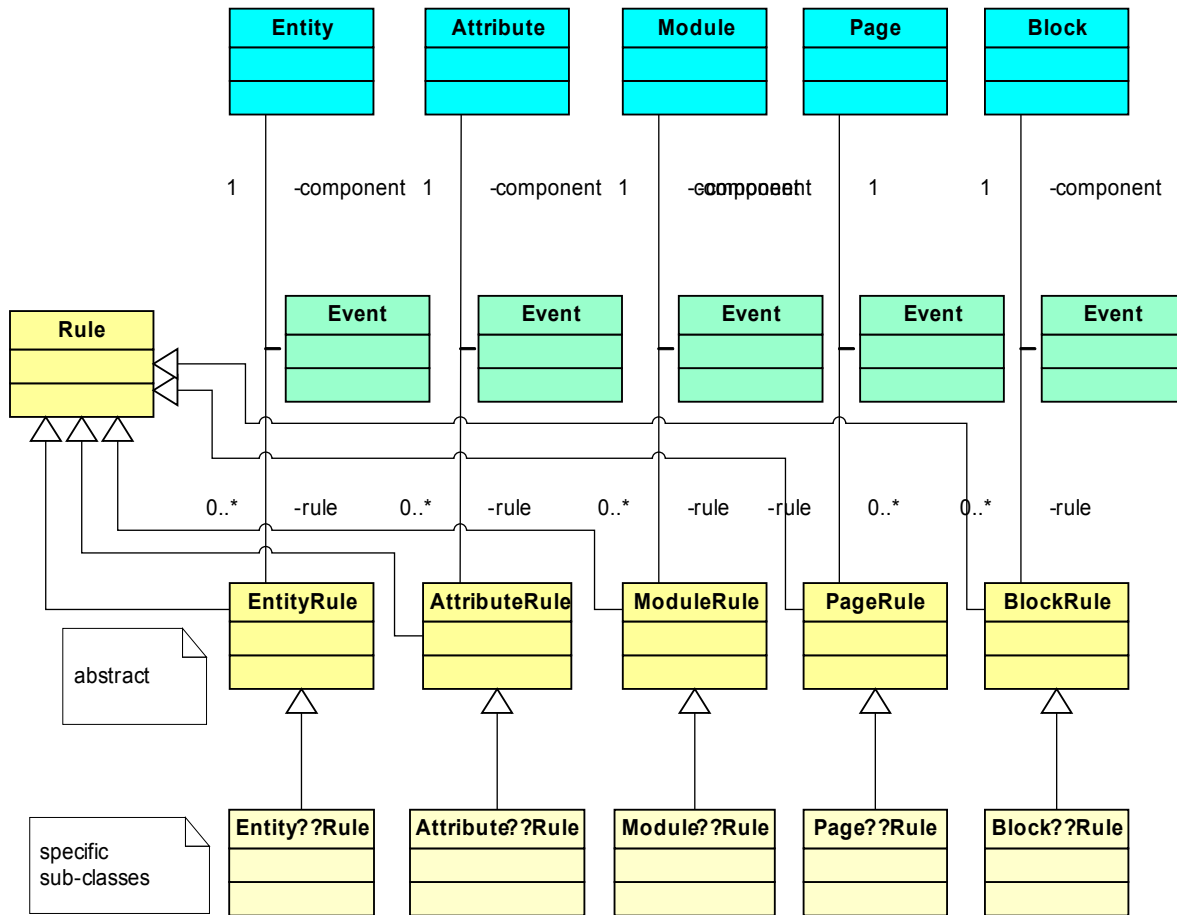


Packages “component” and “rule” are shown below.

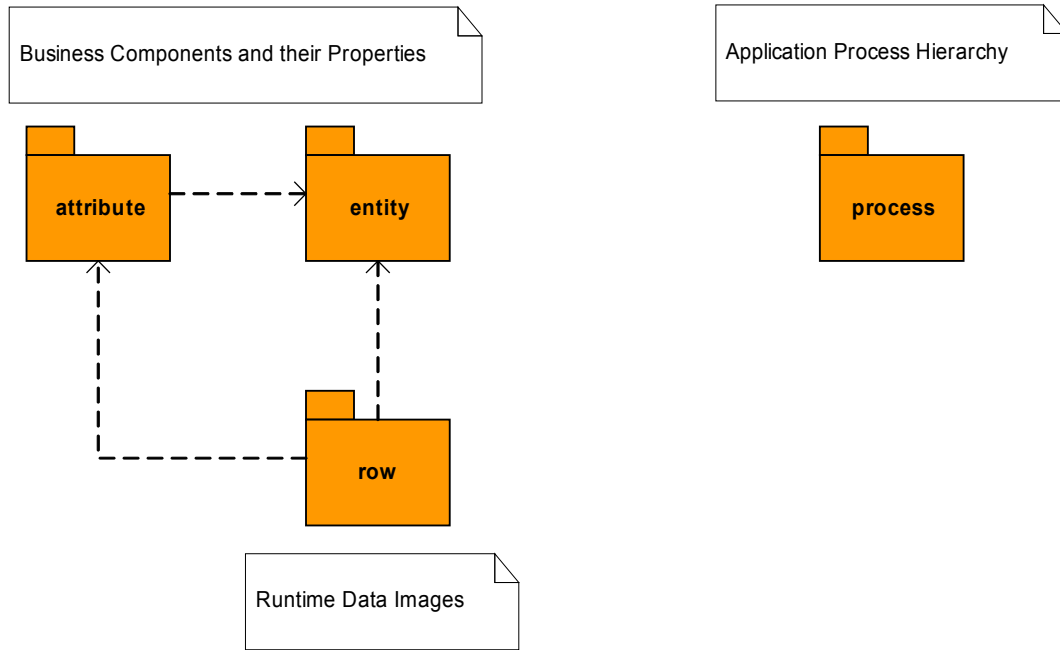
Application and Business Component Definitions – “framework.component”



Business Rule Definitions – “framework.rule”

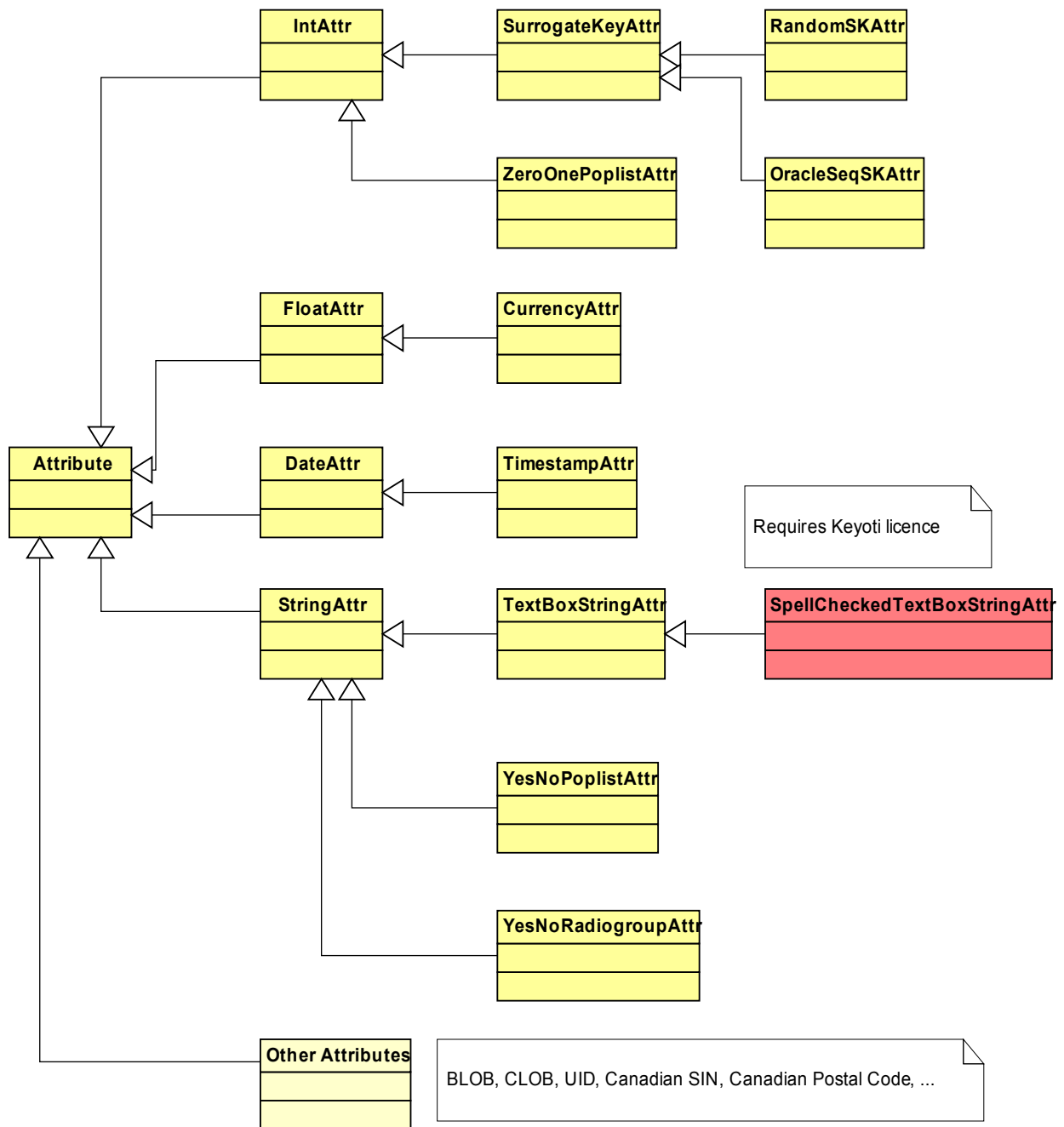


E.4 Database Business Object Mapping - “model”

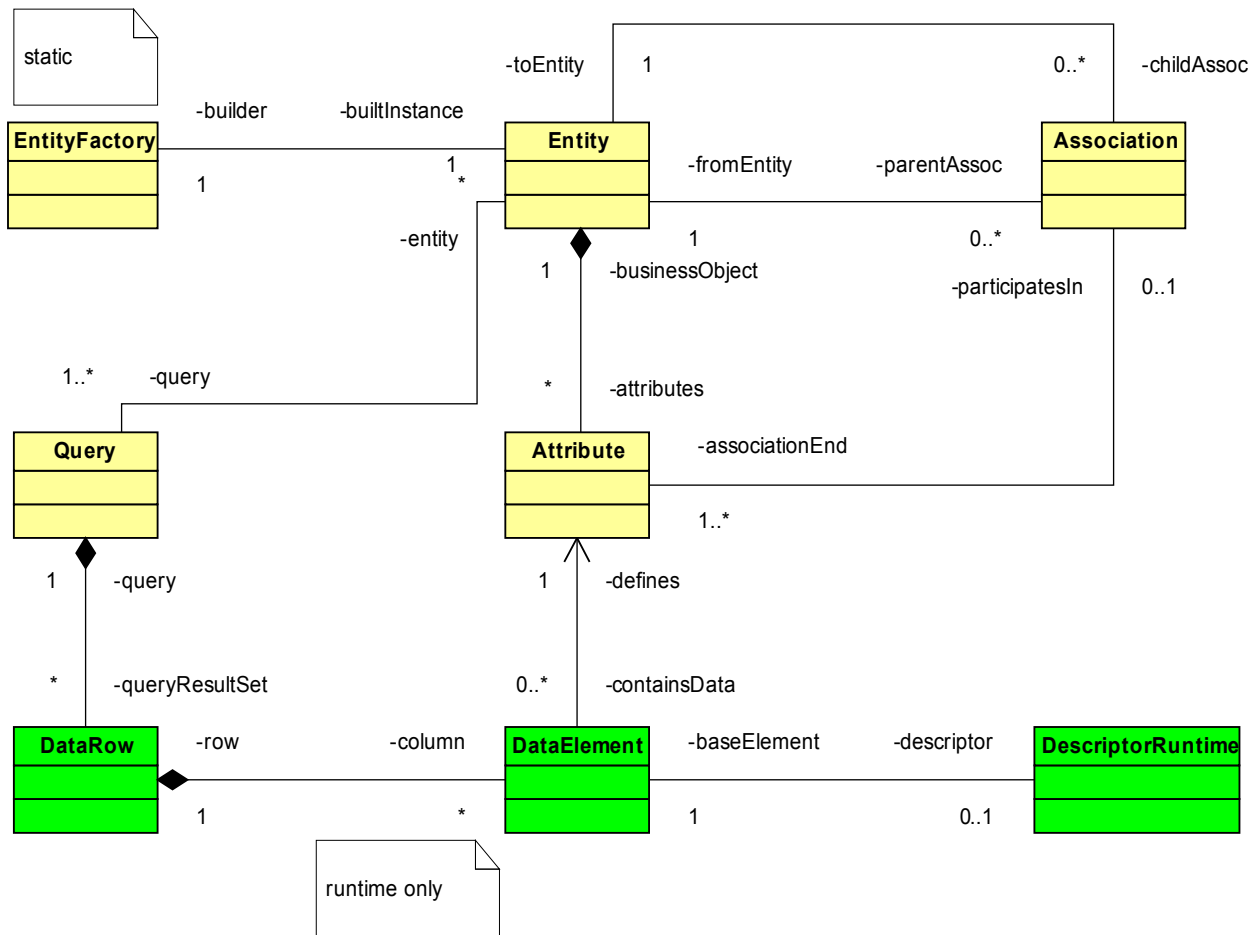


Packages “attribute”, “entity”, “row” and “process” are shown below. Package “domain” contains legacy code and is scheduled for retirement.

Supported Attribute Data-Types – “model.attribute”

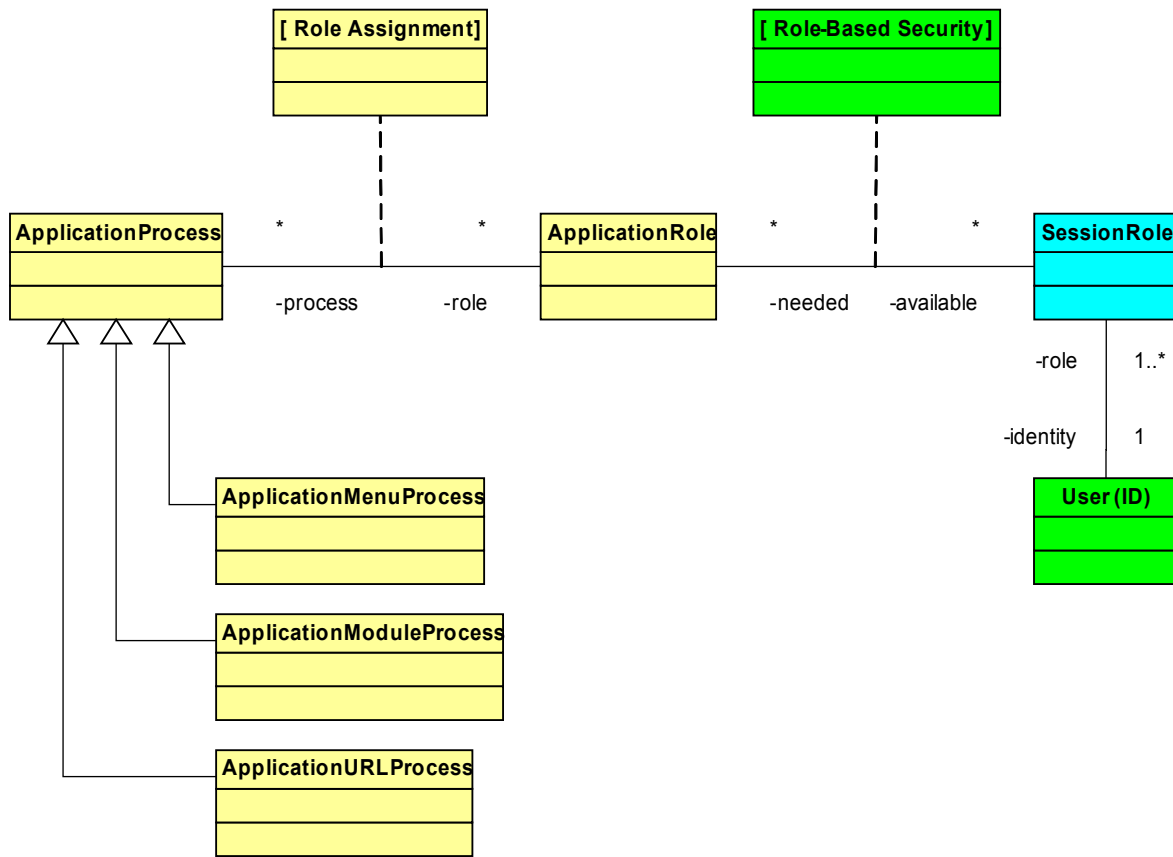


Business Object Definition – “model.entity”

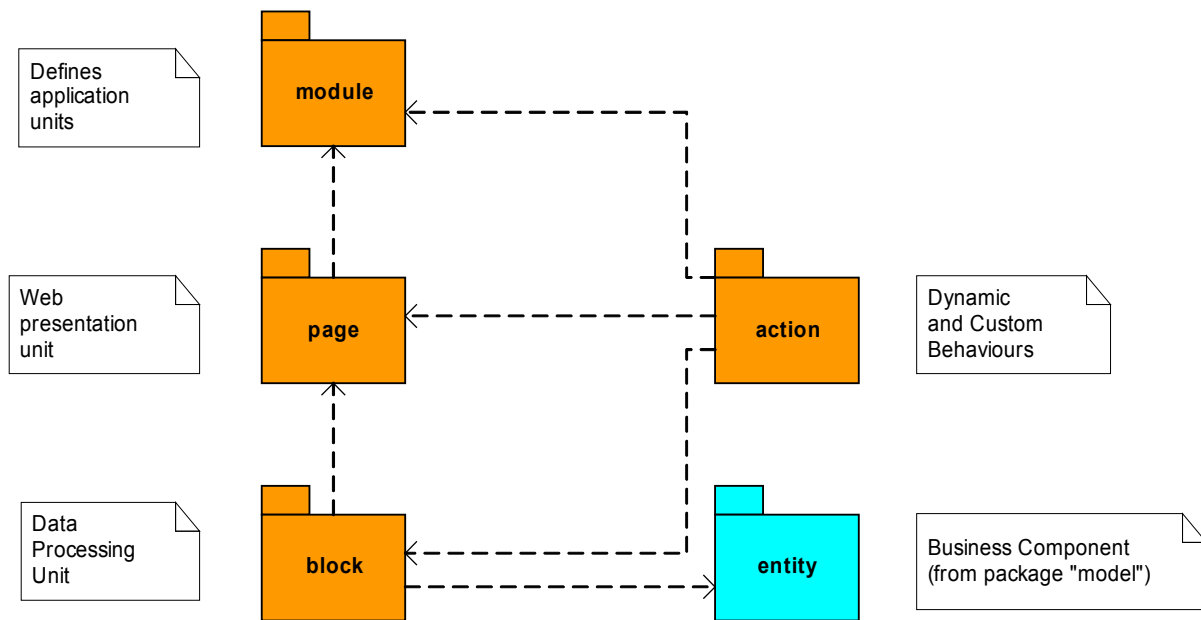


This diagram also represents the data structures for Queries and Data Record manipulation – “model.row”.

Model of Processes and Application Menu – “model.process”

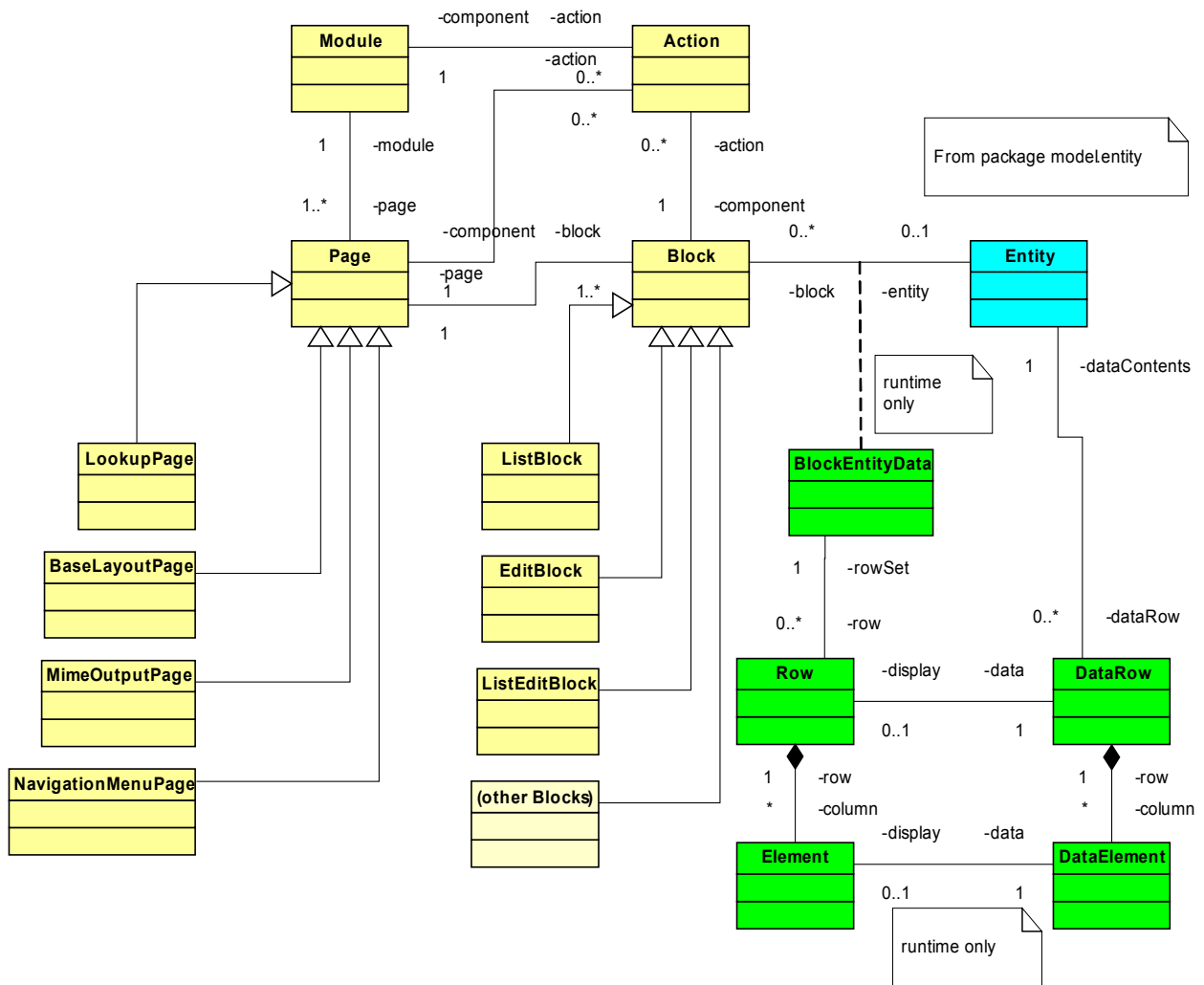


E.5 Application Logic – “controller”

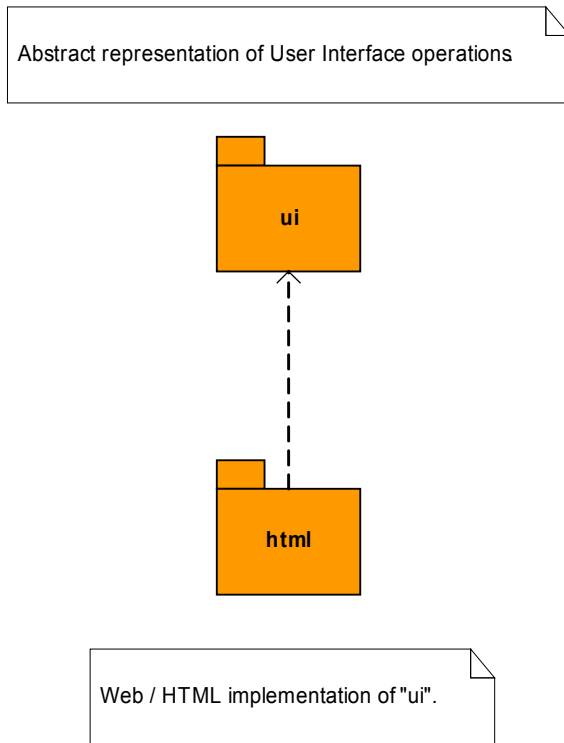


Packages “module”, “page”, “block”, “action” and “row” are shown below.

Application Functional Module Support – “controller.*”

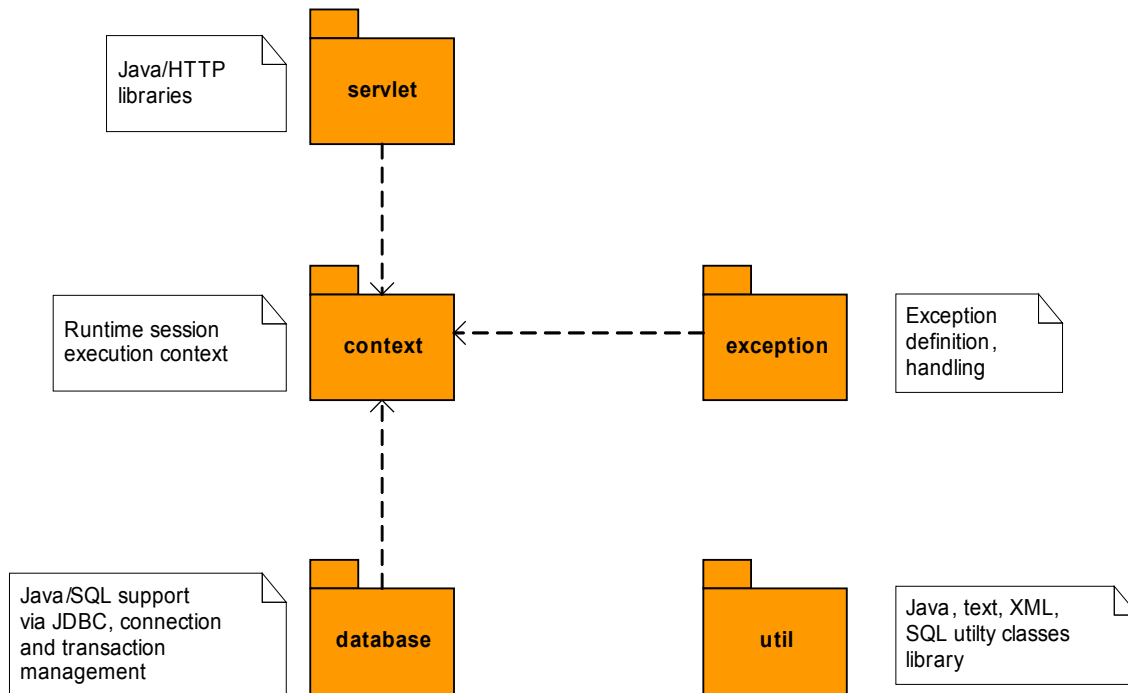


E.6 User Interface and Presentation – “view”



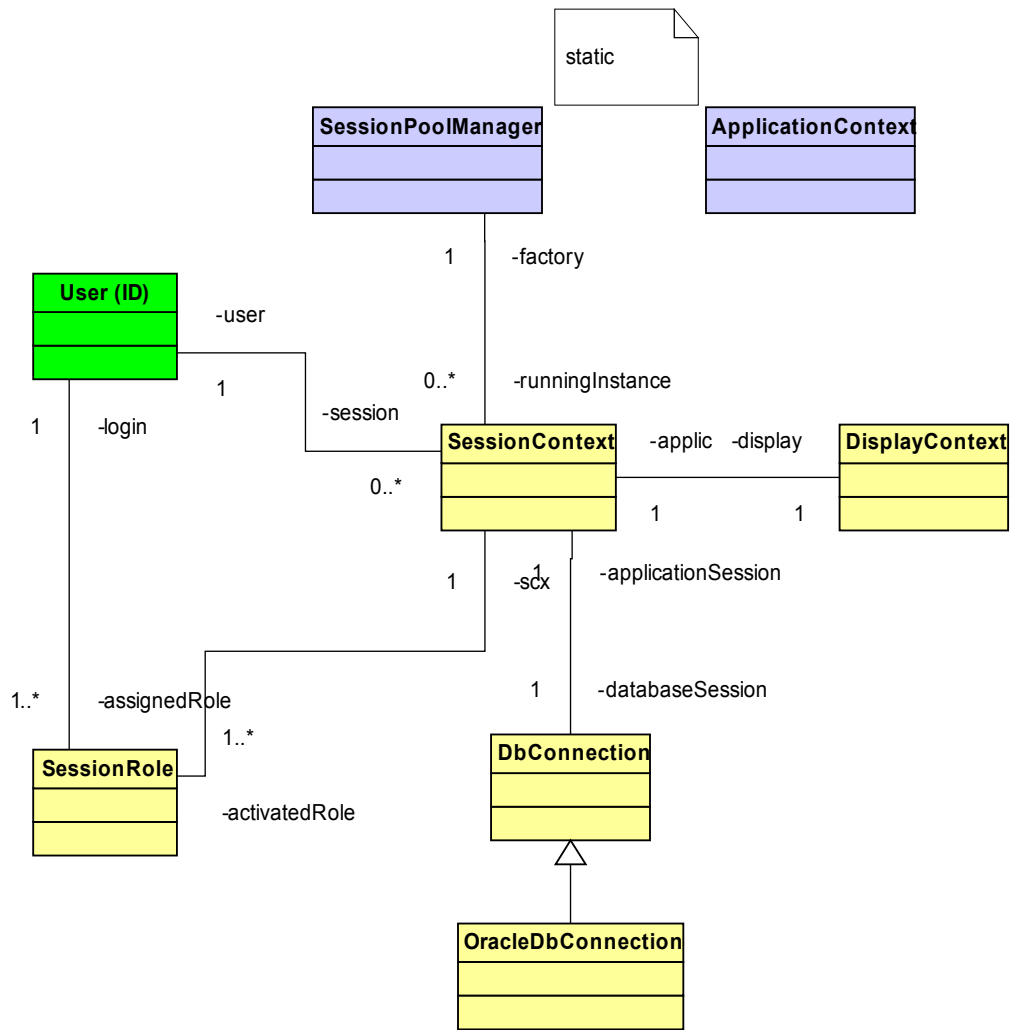
Package “ui” is an abstract subset of “html”, used to define a common subset between HTML presentations and future technologies (XML-based, Java Swing). At present time, only a Web / HTML implementation of “ui” exists.

E.7 Runtime Library and Utilities – “runtime”



Packages “context”, “servlet”, “database” and “exception” are shown below. Package “util” is reserved for miscellaneous Java runtime libraries and utilities (string manipulation, URL encoding etc.).

Context Objects to Maintain Application, Session and Presentation State – “runtime.”



Revision Log

<i>Date</i>	<i>Version</i>	<i>Change Reference</i>	<i>Reviewed by</i>
17-Nov-03	V1.0	Initial release for final review.	
25-Nov-03	V1.1	Re-structured as per C. Douglas's suggestions.	
18-Mar-05	V1.4	Updated to represent the KF status in March 2005	