

# 1 Notation

The grammar for the Lando System Specification Sublanguage is written in the EBNF notation. The main elements of the notation that we utilize are:

- Terminals are represented with double or single quotes; e.g. **"explanation"**.
- Optional bits are represented with squared brackets; e.g. [ **"explanation"** text ].
- Repetition is represented with curly braces; e.g. { identifier }
- We use a slightly enhanced notation -  $\{ a \}^+$  to indicate *non-zero* repetitions. This is simply equivalent to:  $a \{ a \}$ .
- For defining terminals, we use the EBNF special form to declare an extended regular expression - for example:  $?\wedge+/?$

# 2 Grammar

lando-source	::=	{ spec-element }	(Lando source)
spec-element	::=	informal-chart   class-dictionary	(Specification Elements)
informal-chart	::=	system-chart   cluster-chart   class-chart   event-chart   scenario-chart   requirements-chart   creation-chart	(Informal Charts)
class-dictionary	::=	"dictionary" name { dictionary-entry } <sup>+</sup> "end"	(Class Dictionary)
dictionary-entry	::=	"class" name "description" text	(Class Dictionary Entry)
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system-chart	::=	"system_chart" name [ "indexing" indexing ] [ "explanation" text ] { cluster-entry } "end"	(System Chart)
cluster-entry	::=	"cluster" name "description" text	(Cluster Entry)
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cluster-chart	::=	"cluster_chart" name [ "indexing" indexing ] [ "explanation" text ] { class-entry } { cluster-entry } "end"	(Cluster Chart)
class-entry	::=	"class" name "description" text	(Class Entry)
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class-chart	::=	"class_chart" name [ "indexing" indexing ] [ "explanation" text ] [ "inherit" name-list ]	

