

KR Specification

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Kr	$::= \{ "agents" : [\mathbf{agents}], "regions" : [\mathbf{regions}], "key_rs" : [\mathbf{key_rs}],$ $::= "attributes" : [\mathbf{attributes}], "flags" : [\mathbf{flags}],$ $::= "actions" : [\mathbf{actions}], "actions_binder" : [\mathbf{actions_binders}],$ $::= "edges" : [\mathbf{edges}] \}$
agents	$::= \mathbf{agent}, \mathbf{agents} \mid \mathbf{agent} \mid \epsilon$
regions	$::= \mathbf{region}, \mathbf{regions} \mid \mathbf{region} \mid \epsilon$
key_rs	$::= \mathbf{key_r}, \mathbf{key_rs} \mid \mathbf{key_r} \mid \epsilon$
attributes	$::= \mathbf{attribute}, \mathbf{attributes} \mid \mathbf{attribute} \mid \epsilon$
flags	$::= \mathbf{flag}, \mathbf{flags} \mid \mathbf{flag} \mid \epsilon$
actions	$::= \mathbf{action}, \mathbf{actions} \mid \mathbf{action} \mid \epsilon$
actions_binders	$::= \mathbf{actions_binder}, \mathbf{actions_binders} \mid \mathbf{actions_binder} \mid \epsilon$
edges	$::= \mathbf{edge}, \mathbf{edges} \mid \mathbf{edge} \mid \epsilon$
agent	$::= \{ "class" : [\mathbf{class_names}], "name" : \mathbf{string},$ $::= "family" : \mathbf{string}, "abstract" : \mathbf{boolean} \}$
region	$::= \{ "class" : [\mathbf{class_names}], "name" : \mathbf{string}, "ag_name" : \mathbf{string} \}$
key_r	$::= \{ "class" : [\mathbf{class_names}], "name" : \mathbf{string},$ $::= "ag_name" : \mathbf{string}, "region_name" : \mathbf{string} \}$
attribute	$::= \{ "class" : [\mathbf{class_names}], "name" : \mathbf{string},$ $::= "dest_class" : [\mathbf{class_names}], "dest_path" : [\mathbf{path}],$ $::= "val_type" : \mathbf{val_type}, "values" : [\mathbf{att_values}] \}$
flag	$::= \{ \{ "class" : [\mathbf{class_names}], "name" : \mathbf{string},$ $::= "dest_class" : [\mathbf{class_names}], "dest_path" : [\mathbf{path}], "values" : [\mathbf{flag_values}] \} \}$
action	$::= \{ "class" : [\mathbf{class_names}], "name" : \mathbf{string},$ $::= "context" : [\mathbf{context}], "mods" : \mathbf{mod_type} \}$
actions_binder	$::= \{ "class" : [\mathbf{class_names}], "name" : \mathbf{string}, "act_name" : \mathbf{string} \}$
edge	$::= \{ "class" : [\mathbf{class_names}], "in_class" : [\mathbf{class_names}], "in_path" : [\mathbf{path}],$ $::= "out_class" : [\mathbf{class_names}], "out_path" : [\mathbf{path}] \}$
class_names	$::= \mathbf{class_name}, \mathbf{class_names} \mid \mathbf{class_name}$
path	$::= \mathbf{string}, \mathbf{path} \mid \mathbf{string}$
val_type	$::= "int" \mid "float" \mid "string" \mid "bool"$
att_values	$::= \mathbf{val_type:v}, \mathbf{att_values} \mid \mathbf{val_type:v}(\text{where } v \text{ of type } \mathbf{val_type}) \mid \epsilon$
flag_values	$::= \mathbf{string}, \mathbf{flag_values} \mid \mathbf{textstring} \mid \epsilon$
context	$::= \mathbf{el_ctx}, \mathbf{context} \mid \mathbf{el_ctx}$
el_ctx	$::= \{ "el_cl" : [\mathbf{class_names}], "el_path" : [\mathbf{path}], "el_value" : [\mathbf{val_type} : v \mid \epsilon] \}$
mod_type	$::= "incr" \mid "decr" \mid \mathbf{null}$
class_name	$::= "node" \mid "edge" \mid "action" \mid "agent" \mid "key_r" \mid "region" \mid "flag" \mid "attr"$ $::= \mid "bind" \mid "mod" \mid "brk" \mid "synth" \mid "rem" \mid "binder"$

Table 1: Syntax of the KR. Notice that a nugget is a KR with only one main action !

A class is one to three elements long and begin by "node" or "edge". In the case of node, the second is of type "action", "key_r", "region", "agent", "flag", "attr" or "binder". In the case of action, the third one is of type "bind", "mod", "brk", "synth", "rem".