

DISTRIBUTED MANAGEMENT

THREE APPROACHES ARE BEING DEFINED

MIB BASED

- EXPRESSION MIB
- EVENT MIB
- NOTIFICATION LOG MIB

SCRIPT BASED

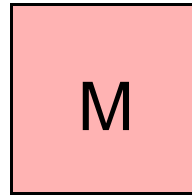
- SCRIPT MIB
- SCHEDULE MIB

REMOTE OPERATIONS BASED

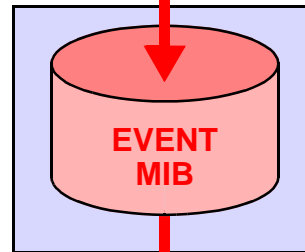
- REMOTE OPERATIONS MIB

EXPRESSION AND EVENT MIB

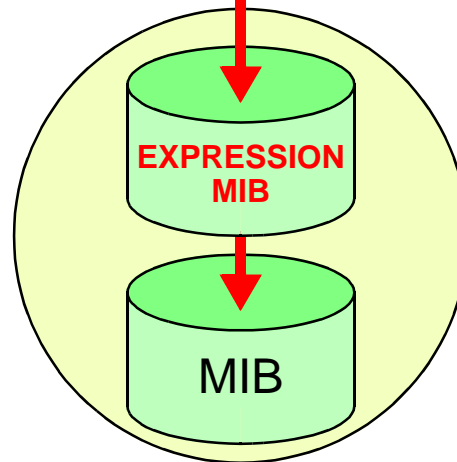
**TOP LEVEL
MANAGER**



**INTERMEDIATE LEVEL
MANAGER**



AGENT



EXPRESSION AND EVENT MIB: CHARACTERISTICS

- STANDARD MIB APPROACH
- RESEMBLES THE OLD SNMPv2 M2M MIB

EXPRESSION MIB:

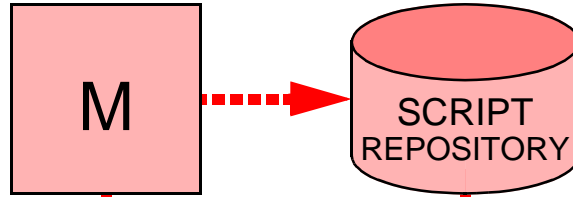
- INPUT ARE (WILDCARDED) VARIABLES OF A (LOCAL) MIB
- OPERATES ON ABSOLUTE AS WELL AS DELTA VALUES
 - RICH SET OF EXPRESSIONS
 - THE OUTPUT IS STORED IN THE *VALUE TABLE*
- THIS TABLE MAY SERVE AS INPUT FOR OTHER EXPRESSIONS

EVENT MIB:

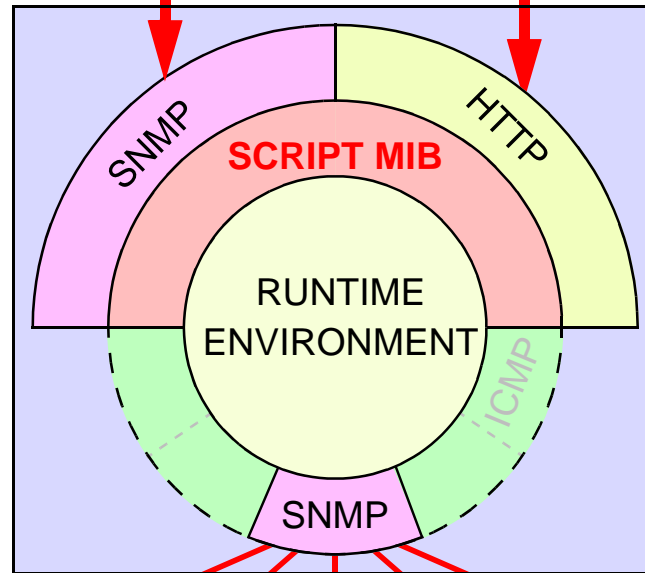
- INPUT ARE VARIABLES OF A (REMOTE) MIB
- TRIGGERS ON CHANGES, OR TRESHOLD CROSSING
- GENERATES A NOTIFICATION OR SET OPERATION

SCRIPT MIB

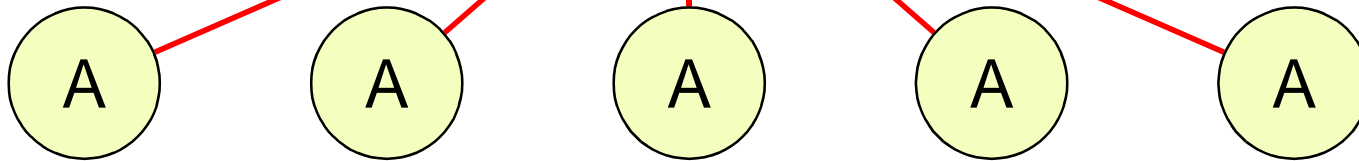
**TOP LEVEL
MANAGER**



**INTERMEDIATE LEVEL
MANAGER**



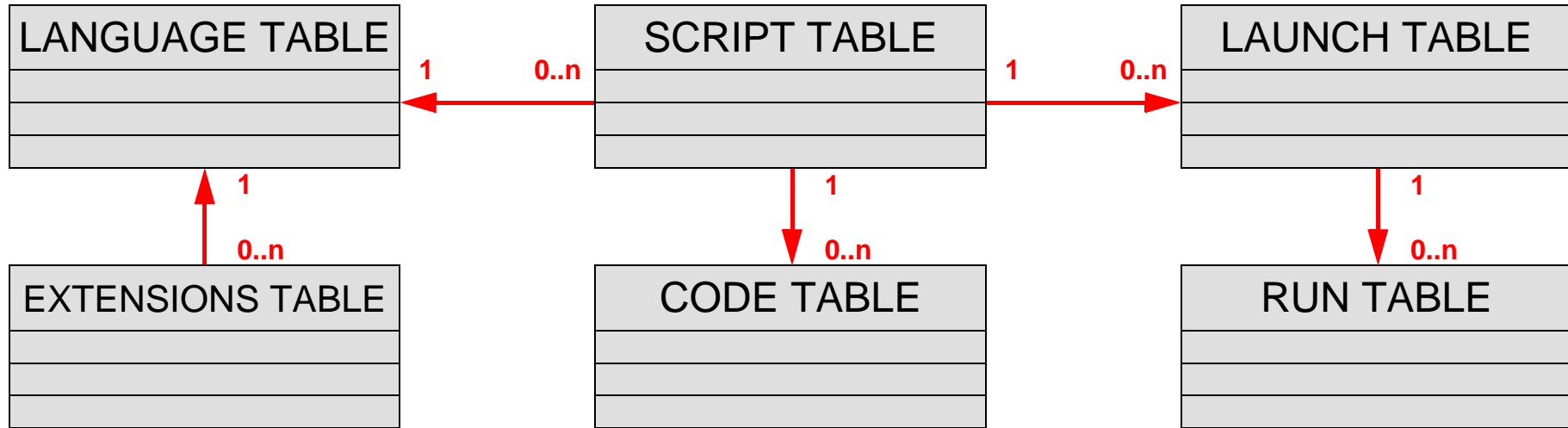
AGENTS



SCRIPT MIB: CHARACTERISTICS

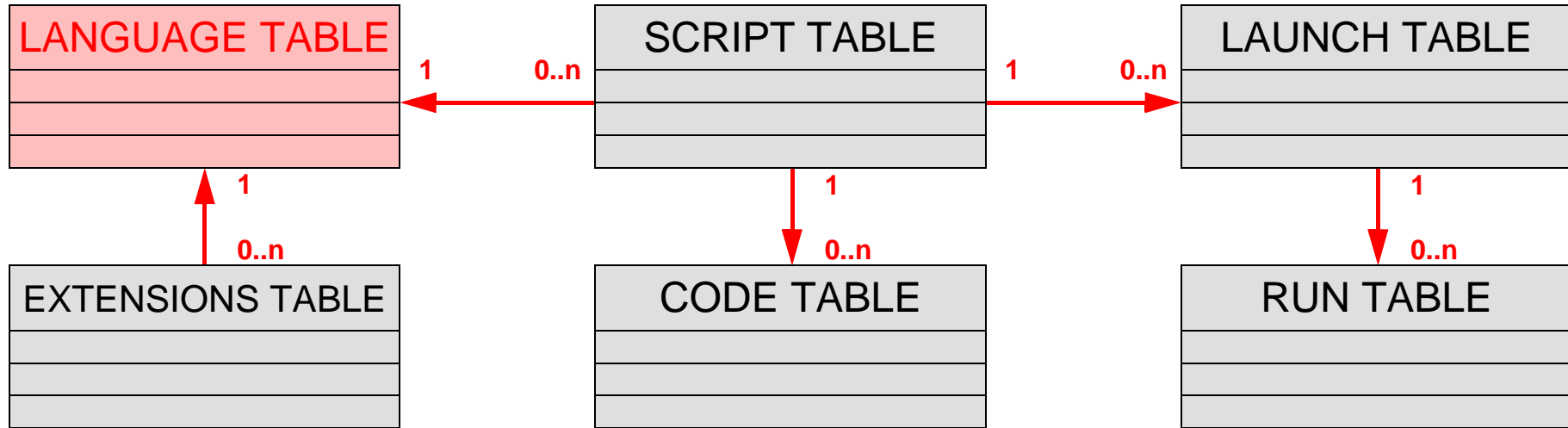
- FUNCTIONALITY CAN BE DEFINED AT RUN-TIME
 - POWERFUL AUTONOMOUS ACTIONS
- MAY BE EASIER TO OPERATE FOR THE TOP-LEVEL MANAGER
 - PROTECTION MECHANISMS NECESSARY
 - DIFFERENT SCRIPT LANGUAGES

SCRIPT MIB: STRUCTURE



CONSISTS OF 6 TABLES

SCRIPT MIB: LANGUAGE TABLE

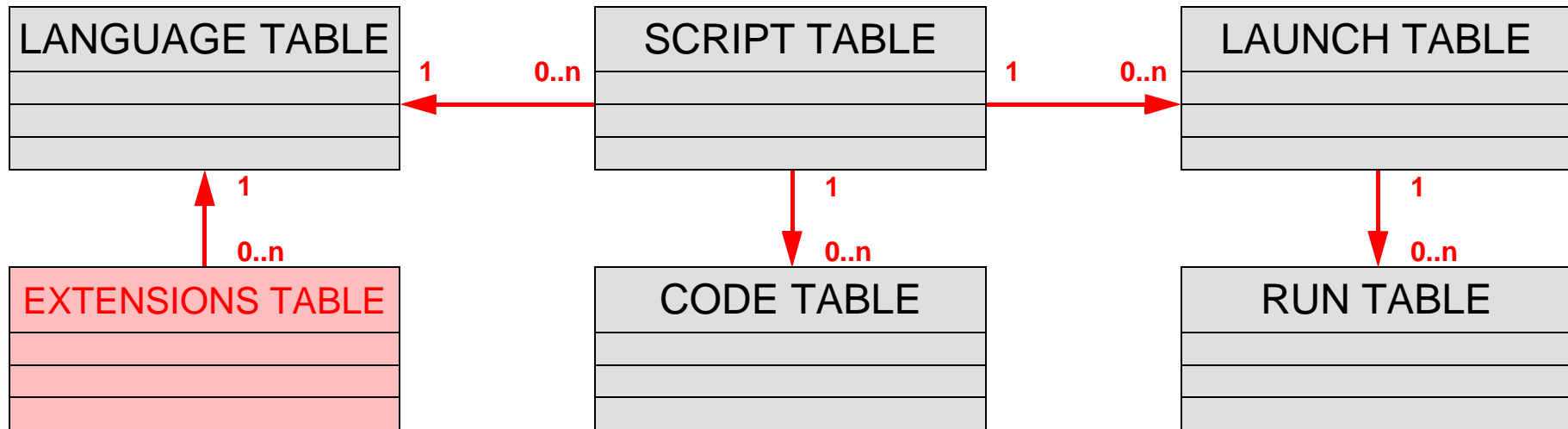


DEFINES THE LANGUAGES THIS SYSTEM SUPPORTS

- AN OID TO INDICATE THE LANGUAGE
 - THE VERSION
- AN OID TO INDICATE THE VENDOR
 - THE REVISION
 - A DESCRIPTION

TABLE IS READ ONLY

SCRIPT MIB: EXTENSIONS TABLE

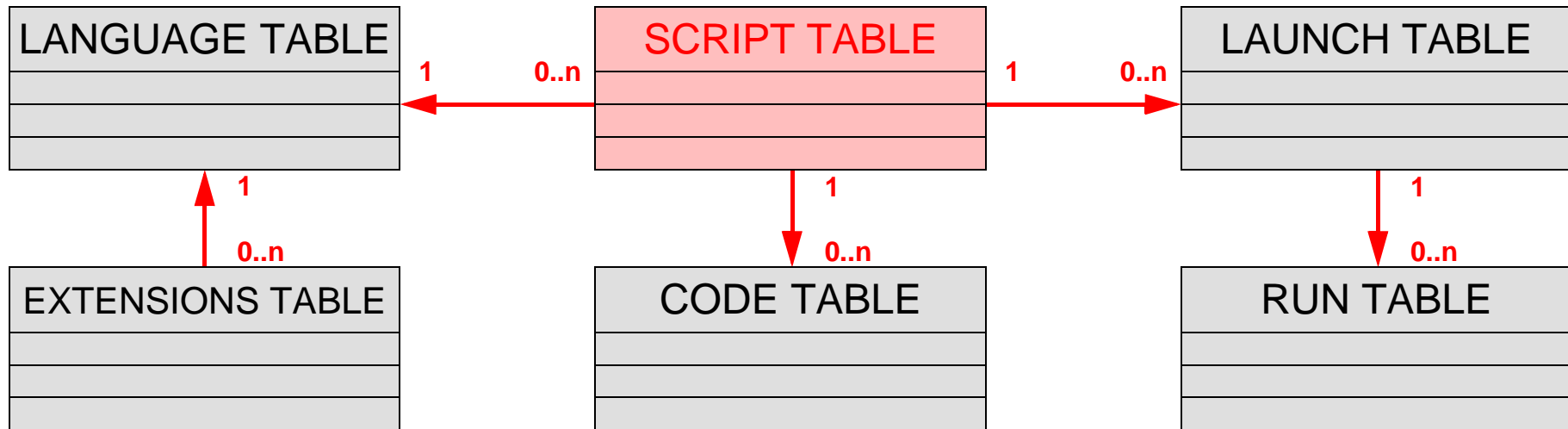


DEFINES THE EXTENSIONS FOR EACH LANGUAGE

- AN OID TO INDICATE THE EXTENSION
 - THE VERSION
- AN OID TO INDICATE THE VENDOR
 - THE REVISION
 - A DESCRIPTION

TABLE IS READ ONLY

SCRIPT MIB: SCRIPT TABLE

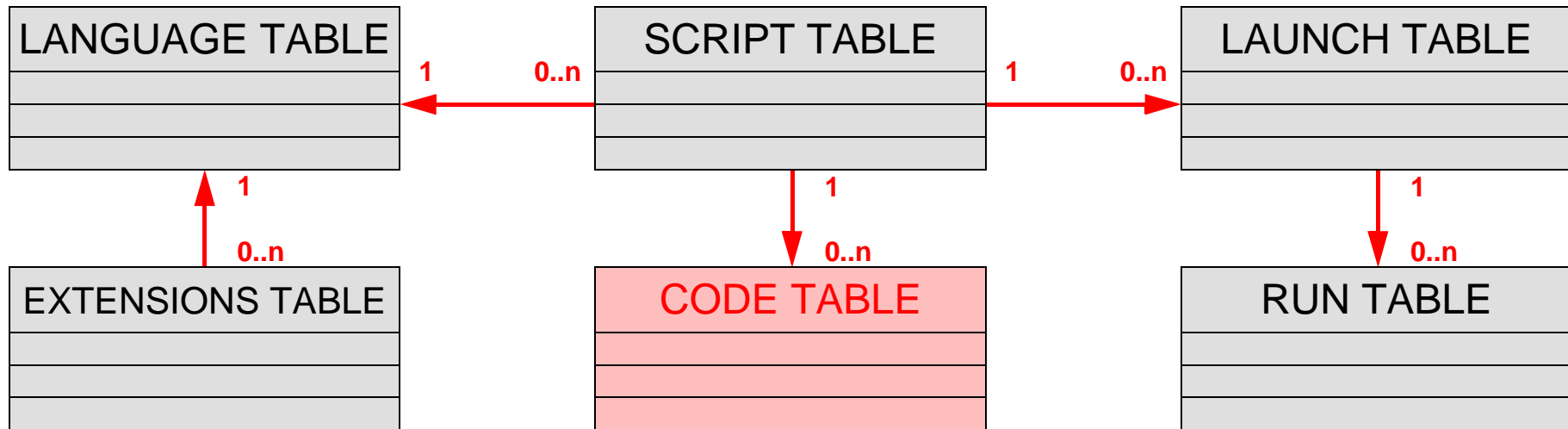


LISTS ALL SCRIPTS KNOWN TO THE SYSTEM

ALLOWS TO:

- DOWNLOAD SCRIPTS FROM A URL (PULL MODEL)
- READ SCRIPTS FROM LOCAL NON-VOLATILE STORAGE
 - STORE SCRIPTS IN LOCAL NON-VOLATILE STORAGE
- DELETE SCRIPTS FROM LOCAL NON-VOLATILE STORAGE
- LIST PERMANENT SCRIPTS (THAT CAN NOT BE CHANGED OR REMOVED)
- READ AND MODIFY THE SCRIPT STATUS (ENABLED, DISABLED, EDITING)

SCRIPT MIB: CODE TABLE



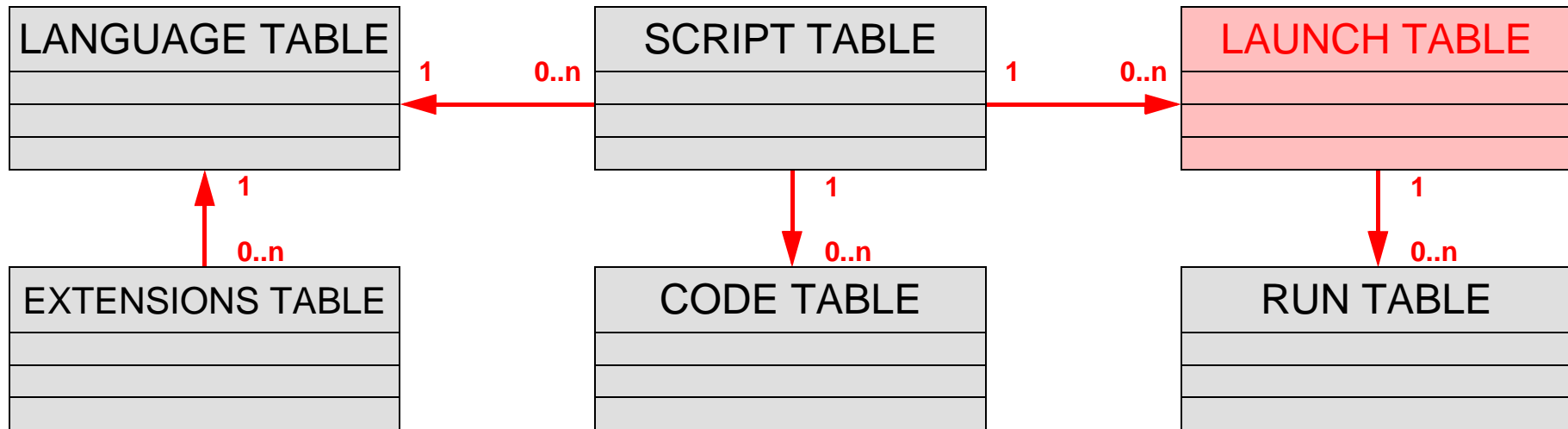
LISTS THE CODE OF A SCRIPT

ALLOWS TO:

- DOWNLOAD SCRIPTS VIA SNMP (PUSH MODEL)
 - MODIFY SCRIPTS VIA SNMP (EDITING)

IMPLEMENTATION IS OPTIONAL

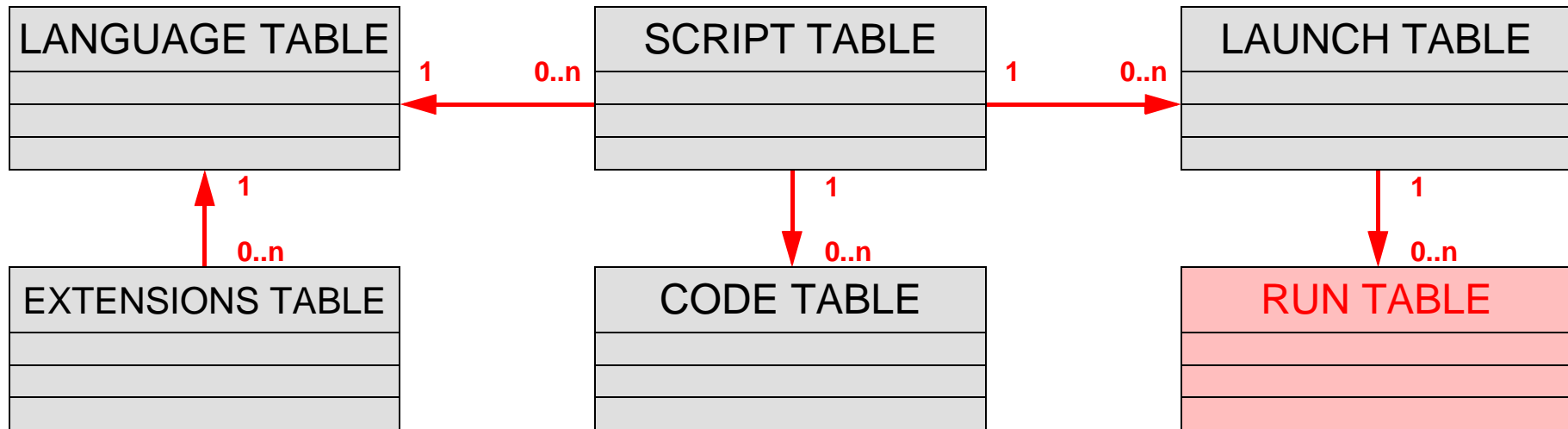
SCRIPT MIB: LAUNCH TABLE



ALLOWS TO:

- ASSOCIATE A SCRIPT WITH A 'PERSON' WHO INVOKES EXECUTION
- PROVIDE ARGUMENTS AND PARAMETERS FOR SCRIPT INVOCATION
 - INVOKE SCRIPTS WITH A SINGLE SET OPERATION
 - CONTROL THE NUMBER OF ACTIVE INVOCATIONS
 - CONTROL THE TOTAL NUMBER OF INVOCATIONS

SCRIPT MIB: RUN TABLE



ALLOWS TO:

- RETRIEVE STATUS INFORMATION FROM RUNNING SCRIPTS
- CONTROL RUNNING SCRIPTS (SUSPEND, RESUME, ABORT)
- RETRIEVE RESULTS FROM RECENTLY TERMINATED SCRIPTS
- CONTROL THE REMAINING MAXIMUM LIFETIME OF A RUNNING SCRIPT
 - CONTROL HOW LONG SCRIPT RESULTS ARE ACCESSIBLE

SCHEDULE MIB

PERFORMS SET OPERATIONS

FOR EXAMPLE ON THE SCRIPT MIB

- TARGET MUST BE `Integer32`

ON A PERIODIC OR CALENDER DRIVEN BASE

REMOTE OPERATIONS MIB

PING MIB

- TO PERFORM PING FROM A REMOTE HOST

TRACEROUTE MIB

- TO PERFORM TRACEROUTE FROM A REMOTE HOST

NAME LOOKUP MIB

- TO PERFORM NAME LOOKUP FROM A REMOTE HOST

