

Nut files are read with `sql_readclosure`.

<https://github.com/albertodemichelis/squirrel/blob/8471ad1aeab4373d743f8139fc5baf63b429bb85/squirrel/sqapi.cpp#L1258>

This function reads the `SQ_BYTECODE_STREAM_TAG` (0xFAFA), then calls `SQClosure::Load`.

<https://github.com/albertodemichelis/squirrel/blob/fae1cabb519dfd1ce99059585853ab1928d72e8f/squirrel/sqobject.cpp#L382>

This function will read the closure header described below, then call `SQFunctionProto::Load`, then read the closure footer.

<https://github.com/albertodemichelis/squirrel/blob/fae1cabb519dfd1ce99059585853ab1928d72e8f/squirrel/sqobject.cpp#L471>

This function will read the function header and create a `SQFunctionProto`, then it will read all the fields after the function header, and it will call itself for the Functions field.

Stream magic (2 bytes) 0xFAFA
Closure header
Closure magic (SQInteger) The ASCII string RIQS (4 bytes)
Size of SQChar (4 bytes) Must be 1
Size of SQInteger (4 bytes) Must be 4
Size of SQFloat (4 bytes) Must be 4
Function header
TRAP (PART little endian) (4 bytes)
sourcename (SQObjectPtr)
name (SQObjectPtr)
TRAP (PART little endian) (4 bytes)
nliterals (SQInteger)
nparameters (SQInteger)
noutervalues (SQInteger)

nlocalvarinfos (SQInteger)
nlineinfos (SQInteger)
ndefaultparams (SQInteger)
ninstructions (SQInteger)
nfunctions (SQInteger)

Literals

TRAP (PART little endian) (4 bytes)
SQObjectPtr[nliterals]

Parameters

TRAP (PART little endian) (4 bytes)
SQObjectPtr[nparameters]

Outer values

TRAP (PART little endian) (4 bytes)			
Array of size noutervalues: <table><tr><td>Type (SQOuterType, 4 bytes). Either otLOCAL (0) or otOUTER (1).</td></tr><tr><td>Object (SQObjectPtr)</td></tr><tr><td>Name (SQObjectPtr)</td></tr></table>	Type (SQOuterType, 4 bytes). Either otLOCAL (0) or otOUTER (1).	Object (SQObjectPtr)	Name (SQObjectPtr)
Type (SQOuterType, 4 bytes). Either otLOCAL (0) or otOUTER (1).			
Object (SQObjectPtr)			
Name (SQObjectPtr)			

Local var infos

TRAP (PART little endian) (4 bytes)				
Array of size nlocalvarinfos: <table><tr><td>name (SQObjectPtr)</td></tr><tr><td>pos (SQUnsignedInteger)</td></tr><tr><td>start_op (SQUnsignedInteger)</td></tr><tr><td>end_op (SQUnsignedInteger)</td></tr></table>	name (SQObjectPtr)	pos (SQUnsignedInteger)	start_op (SQUnsignedInteger)	end_op (SQUnsignedInteger)
name (SQObjectPtr)				
pos (SQUnsignedInteger)				
start_op (SQUnsignedInteger)				
end_op (SQUnsignedInteger)				

Line infos

TRAP (PART little endian) (4 bytes)

Array of size nlineinfos:

line (SQInteger)

op (SQInteger)

Default parameters

TRAP (PART little endian) (4 bytes)

SQInteger[ndefaultparams]

Instructions

TRAP (PART little endian) (4 bytes)

Array of size ninstructions:

arg1 (SQInteger)

op (unsigned char)

arg0 (unsigned char)

arg2 (unsigned char)

arg3 (unsigned char)

Functions

TRAP (PART little endian) (4 bytes)

Array of size nfunctions:

Everything between (but not including) Closure header and Closure footer.

Stack size (SQInteger)

bgenerator (bool, 1 byte)

varparams (SQInteger)

Closure footer (4 bytes) The ASCII string LIAT (TAIL little endian)
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Colors are only for a graphical purpose.

SQInteger: a 4-bytes integer.

SQUnsignedInteger: a 4-bytes unsigned integer.

SQFloat: a 4-bytes float.

SQObjectPtr:

type (4 bytes) Can be OT_STRING (0x08000010), OT_INTEGER (0x05000002), OT_BOOL (0x01000008), OT_FLOAT (0x05000004) or OT_NULL (0x01000001).
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Content. Size and memory layout depends on the type.

OT_NULL:

Nothing (0 bytes).

OT_INTEGER, OT_BOOL or OT_FLOAT:

The corresponding value (4 bytes, even for OT_BOOL).

OT_STRING:

Length (4 bytes)

String (Length bytes, isn't NUL-terminated)
