JAM 7

Master Index

also includes:

Glossary

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This software manual is documentation for JAM® 7. It is as accurate as possible at this time; however, both this manual and JAM itself are subject to revision.

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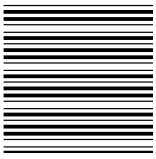


Glossary

active screen
The *screen* at the top of the window stack. This is the screen that the user can interact with. If there is a *cursor*, it appears on this screen.

aggregate function
One of a group of *database* functions that calculates summary information on a group of *rows*.

alias
A mechanism whereby a JAM variable is designated to receive information from a database *column*. You should create aliases when the JAM variable and the database column do not have the same name.

alternative scrolling
An alternative method to JAM's memory-resident mechanism for storing offscreen array occurrences. Also called alternative scroll function. The function can be specified in the Alt Scroll Func property under Geometry for any *widget* that has the Scrolling property set to Yes.

application mode
The start-up mode when using the JAM authoring executable. In this mode, you can test a complete application, or portions of an application. You can access the

screen editor, menu bar editor, and styles editor from this mode as well as connect to *databases*.

array

A *field* comprised of one or more *occurrences*. The number of onscreen occurrences is specified in the Array Size property under Geometry. Each occurrence can contain data. The onscreen portion of an array contains one or more *elements*, where each element is identified by a field number that is unique on the *screen*. An array can contain more occurrences than it has onscreen elements; then it is called a *scrolling array* and the number of offscreen occurrences is specified in the # of Occurrences property.

authoring

The act of using the `jamdev` utility (authoring executable) to create a JAM application.

authoring environment

The tools used to create and test application *screen*s and *link*s; the authoring environment includes *application mod*e, the *screen editor*, *menu bar editor*, *styles editor*, and *visual object repositories*.

automatic function

A *hook function* that executes on all occurrences of an event type—for example, screen exit on every *screen* in an application. These functions are never explicitly called in the application code or screens; instead, JAM calls them automatically at the appropriate stage of program execution. Contrast with *demand function*.

bundle

A buffer that stores screen data sent by JPL's `send` command or `sm_append_bundle_data`. JAM can maintain up to ten bundles. Bundle data can be read by the `receive` command or `sm_get_bundle_data`.

check box

A *selection widget* used to enable or disable one or more features or options, usually occurring in a *group* of check boxes. When an option is selected, an X or check mark appears in the box to the left of the widget. Contrast with *radio button*.

child

General term in defining a Detail section or Subdetail section of a screen wizard-generated screen.

child object

Refers to an object that has its Inherit From property set to inherit from a repository object (parent). The child object can be a screen or widget.

class

A widget property that is applied when you run the *transaction manager*. The class setting specifies a *style* for the *widget* in each *transaction mode*.

client

A machine on a network that uses the programs found on the database *server.*

column

The various subsections of a database *table*, each containing a piece of information. `actor_id`, `first_name` and `last_name` are the columns in the `actors` table. In some database systems, a column is called a field.

commit

The act of saving the database changes back to the *server* when a *transaction* is complete. Contrast with *roll back.*

configuration variable

Variables defined either in the `smvars` file or in the environment, which serve as pointers to required configuration files (key translation, video, and message), to alternate setup files, and to application-specific files and information. See also *setup variable*.

connection

A session on a database *server* that must be declared before you can perform SQL statements using JAM's database interface.

control string

Control strings can be thought of as the connectors that hold a JAM application together. A Control String property setting defines the action to take place when a pushbutton, function key, or menu selection *event* occurs. Possible actions include: displaying a *screen* or *window,* calling a developer-written function, or executing a system command.

correlation name

A temporary alternate name for a database *table* which is specified in the SQL statement.

cursor
1) The positional indicator on the monitor. 2) A SQL object associated with a specific query or operation.

database
A collection of information, organized into database *tables*.

database engine
A *DBMS* product which is identified by the vendor name and version number. For example, SYBASE 4.8, ORACLE 6.0 and ORACLE 7.0 are three distinct database engines.

data model
See *schema*.

DBMS
Database Management System. The components used to create and maintain a *database*.

demand function
A *hook function* that is explicitly called from a JAM object, such as a function called from a control string on a *widget* or *screen*, a screen entry function on a specific screen, or a function called from a JPL module. Contrast with *automatic function*.

display text
A *widget* that is not altered by the user or program at *runtime*. Static labels and graphical widgets (boxes and lines) are considered to be display text. These widgets do not get a *field number*.

element
An onscreen *field* in an array. Contrast with *occurrence*.

embedded character
Refers to any character in a data entry *field* that is automatically inserted into the field and cannot be modified by the user. They are created through the Keyboard Filter property. Depending upon the filter used, the library routine `sm_getfield` may or may not see the embedded characters as data.

engine
See *database engine*.

event
An action recognized by a *screen* or *widget* that causes something to happen. Some events are associated with a user interacting with an input device by pressing a function key or push button, or making a menu selection. Others are associated with something happening in the application, such as screen exit. Events often determine the flow of an application.

external menu
A menu that is invoked by a submenu-type item and is not defined in the same menu file as the item. At runtime, JAM searches for the menu among all menu files that are loaded into memory.

field
A *widget* that is typically populated at *runtime*. This includes widgets in which the user enters data, or the program displays variable output. Data entry widgets, option menus and dynamic labels are examples of fields. Each field on a *screen* is uniquely identified by a *field number*, and optionally, a name (specified in the Name property under Identity). It is recommended that you name all the fields on your screens. Contrast with *display text*.

field number
A unique number automatically assigned to a *widget* on a JAM *screen* based on its position on the screen. Only widgets that are considered to be *fields* get a field number. Widgets are numbered from left to right, beginning at the top line of the screen and ending at the bottom line. Thus, the leftmost widget on the top line of the screen is identified as Field #1, and the rightmost widget in the bottom line would have the highest field number on the screen.

Note: *Static labels and graphical widgets (lines and boxes) are not considered fields, and therefore do not get a field number.*

foreign key
A column in a database *table* which is a *primary key* in another table within the same *database*.

form
One of two ways that JAM displays a *screen* in an application. When a form opens, all other screens in the application are closed. Contrast with *window.*

function key
A key with a function other than data entry. Function keys are normally associated with control strings that specify such actions as *form* and *window* display. JAM

function keys are defined as logical keys, and you decide which physical key to map each function to. This feature enables JAM applications to be terminal independent.

group

One or more *selection widget*s (*radio button*, *check box*, *list box*, and *toggle button*) that are functionally connected—therefore, the widgets function as a group. The group has properties that define its entry/exit/validation behavior and tabbing order. Also, the set of widgets that make up a *table view.*

handles

Places on a *widget* or *screen* where the object can be“grabbed” for repositioning or resizing.

help screen

An informational screen that can be attached to a *screen* or *widget* by specifying its name in the JAM Help Screen property. The specified help screen will display at *runtime* when the Help key is pressed or automatically when the screen or widget is entered. JAM also supports an External Help property for displaying help using a third-party help engine.

hook function

A function that is called at specific events during program execution. JAM identifies each stage of program execution as one type of event or another. For example, JAM identifies all screen entries as one event type, and all field exits as another. For more information about hook functions, refer to Chapter 8 in the *Application Development Guide*.

join

A SQL method of combining database *tables* in order to obtain the desired information.

key translation file

A configuration file that contains the mapping between JAM *logical keys* and the physical keys on a terminal. You can create or edit a key translation file with a text editor. You can use the `showkey` utility to aid in determining the sequences that the keys on your terminal generate, for inclusion in the file.

LDB

See *local data block*.

LDB entry
A field in a LDB screen.

link
A *widget* which defines the relationship between two *table views* by designating one table view to be the parent and one table view to be the child. There are two types of links: sequential links and server links. In a sequential link, the processing for the parent table view occurs first, followed by the processing for the child table view. In a server link, the processing for both table views is done at the same time by the database *server.*

list box
A *selection widget* that contains a scrolling list of choices. You may define the number of selections that a user can make.

local data block (LDB)
A JAM *screen* that is used to initialize and save values on other screens. When a screen serves as an LDB, JAM uses its fields, or *LDB entries*, to transfer data to and from corresponding fields on the current screen. By using LDBs, applications can transfer data between screens automatically.

An LDB screen is not displayed. JAM matches LDB entries and screen fields by name. Only named fields and LDB entries take part in LDB processing, or *write-through.*

logical key
A device-independent mnemonic for a predefined JAM function. These logical functions have names such as TRANSMIT and EXIT. Logical keys are mapped to physical keys via the *key translation file.*

lookup screen
A *screen* that serves to validate entries made to certain data entry *widgets*. This screen does not display at runtime. The lookup screen is defined in the Table Lookup property under Input.

message file
A configuration file that maps message text to message identifiers. JAM messages are stored in the message file to enable customization (e.g., for international use). User messages may be included as well. The message file also contains date, time, and numeric format specifications that can be customized.

occurrence
An entry in an *array.* If the number of occurrences is larger than the number of onscreen *elements*, then the array is a *scrolling array.*

parent
General term used in defining a Master section or Detail section of a screen wizard-generated screen.

parent object
Refers to a repository object that sets properties on widgets that inherit from it. The parent object can be a screen or widget.

pop-up menu
A menu that can be accessed by pressing the right (menu) mouse button. The menu that is displayed is context-sensitive—its content depends on the location of the mouse pointer and the menu specification. You can specify the menu in the Pop-up Menu property under Help.

primary key
The information in a database *column* or columns that constitutes a unique entry for each *row* in the database *table*.

prototyped function
A hook function that gets only the number and type of arguments that you specify. Prototyped functions are *demand functions*—that is, they must be invoked by name from a JAM component, such as a *widget* or *screen*. Prototyped functions can be JAM library functions or developer-written. For more information on hook functions, refer to Chapter 8 in the *Application Development Guide*.

push button
Describes a *widget* used to carry out a command or action when selected. A push button is known as a command button in MS Windows parlance.

qbe
Query by example. In this type of database query, the `WHERE` clause includes specific values so that a certain subset of information can be returned.

radio button
A *selection widget* that, when *grouped* with other radio buttons, allows the user to select a single option from a set of choices. A radio button is known as an option button in MS Windows parlance. Contrast with *check box*.

repository
See *visual object repository.*

result set
The set of *rows* that gets returned after executing a database query with SQL `SELECT`.

roll back
The act of undoing the changes made to a database in a database *transaction.* Contrast with *commit.*

root table view
The *table view* that forms the basis of the database processing on a *transaction manager* screen.

row
An entry in a database *table* containing a value for each *column*. In some database systems, a row is called a record.

runtime
The environment in which a user runs a JAM application. The runtime environment is different than the *authoring environment* in that the editors and repositories cannot be accessed.

schema
An outline of your *database* showing the different areas of information (database *tables*) and the different pieces of information in each of those areas (database *columns*) and illustrating how pieces relate to each other. Also called a data model.

screen
Generic term that refers to the objects created using the screen editor. Screens usually contain collections of *widgets.* At runtime, a screen may be opened as a *form* or as a *window.*

scrolling array
An array in which the maximum number of *occurrences* exceeds the number of array *elements*. When the array contains more occurrences than elements, JAM lets you scroll the array to bring hidden occurrences into view. If circular scrolling is enabled, JAM lets you continue scrolling beyond the first and last occurrences to the last and first occurrences, respectively.

select list
In database applications, the list of columns or expressions that are to be processed by the SQL `SELECT` statement.

selection widget
A *widget* that allows a user to select from several of choices. JAM supports four kinds of selection widgets: *check box*, *radio button*, *toggle button*, and *list box*. A set of similar selection widgets are usually *grouped*, so they behave in a certain fashion with respect to the number of choices that can be made.

sequential link
A link where the *transaction manager* processing for the parent *table view* occurs first, followed by the processing for the child table view. See also *link*.

server
A computer on a network that controls access to the database.

server link
A link where *transaction manager* processing for the parent and child *table views* is done at the same time by the database *server.* See also *link*.

server view
A table view and all the table views connected to it by *server links*.

setup file
At runtime, JAM uses setup files to find and translate an application's configuration. The environment variables in setup files tell JAM how the application should look, how the hardware is configured, and where system-specific information is located. Setup files can be used to establish installation-wide and application-specific configuration information.

setup variable
Variables, usually defined in the `smvars` or `smsetup` file, that control the overall behavior of JAM and JAM applications. See also *configuration variable*.

shifting field
A *field* in which the maximum number of characters (Max Data Length property) allowed for input exceeds the number of characters (Length property) that the field can display at any given time. When the field data contains more characters than the field can display, the user can scroll the data horizontally—left and right—to bring hidden data into view.

sibling window
A *window* that is at the same level as another window. Sibling windows can be opened and activated without closing the calling window, and are therefore

non-modal. The VIEWPORT key allows the user to select among (activate) any open sibling windows. Contrast with *stacked window.*

SQL
Structured Query Language. A language used to access *databases* employed by many relational database products. SQL was originally developed by IBM in the 1970's. ANSI standards have been issued for SQL in 1986 and 1992.

stacked window
A *window* that is layered on top of other open *screens*. Once a stacked window is opened, it must be closed before the user can access any underlying screens. This is also called a modal window, and is often used for a dialog box.

style
A group of settings affecting the appearance and focus protection properties of a *widget*. A style is applied to a widget by the *transaction manager* for a particular *transaction mode* based on the widget's *class* property.

submenu
A lower level menu that displays additional choices under a menu item on an upper level menu.

support routine
A module supplied with JAM's database drivers which supplies all the engine-specific instructions needed to process database statements.

synchronized array
Two or more *scrolling arrays* whose data scroll together. Synchronized arrays are defined via the Edit menu in the screen editor. The arrays need not be adjacent to each other on the *screen*, but must contain the same number of *occurrences* and onscreen *elements*.

system catalog
A series of database *tables* containing information about the *database* itself, such as the table names, *column* names and key information.

table
A main subset of information in a database containing a series of *columns* and *rows*. In some database systems, a table is called a file.

table view
A *group* of *widgets*, generally from the same database *table*, which work together in *transaction manager* processing.

test mode
A special state in the various editors that allows you to test the object you are editing. You can toggle into and out of test mode without disrupting your editing session.

toggle button
A *selection widget* that allows users to toggle between two settings—turning some option off or on.

transaction
A database transaction is a series of SQL statements that must either be completed as a unit, or not completed at all. At the end of the series, you *commit* the transaction in order to save the changes to the *database*. If there is an error, you can *roll back* the statements in order to return the database to its original state.

A *transaction manager* transaction is a series of transaction manager commands that are completed together. A transaction manager transaction may contain several database transactions.

transaction manager
A runtime program which performs the processing needed to view and update *database* information. Database statements are generated from settings stored in screen and widget properties.

transaction mode
One of a series of states which indicate the data entry status of a *screen* when using the *transaction manager*. Transaction modes include: initial, new, update and view.

validation
The process of checking user data entry against the keystroke filters you specify in the screen editor. Validation generally occurs when a user tabs out of a *field*. Validation also occurs for all fields on a *screen* at screen exit, or when the XMIT key is pressed.

video file
A configuration file that provides JAM with the information required to use the capabilities of a specific terminal. JAM includes a set of video files for many different terminals. Optionally, you can define a custom video file using the instructions in the *Configuration Guide*.

viewport
The mechanism through which the user views all or part of a *screen*. The VIEWPORT key allows the user to move, resize, and scroll the viewport.

visual object repository

A special JAM library that can consist of one or more *screen*s. Objects in repository entries can export their properties to other objects on your application screens. By copying repository objects to application screens, you create an inheritance relationship between the parent and child object, which can be maintained to ensure consistency throughout your application.

widget

An object on a JAM *screen*. Some widgets are used to interact with an application, while others are for display only.

window

One of two ways that JAM displays a *screen* in an application. Unlike a screen displayed as a *form*, a screen displayed as a window overlays, but preserves, any screens beneath it. The open window is the *active screen* and the image hidden by the open window is saved, to be restored and made active again when the open window is closed. Windows can be *stacked* or *sibling*.

window stack

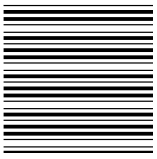
A list that is kept internally by JAM that allows it to remember the order in which *windows* were opened, or were rearranged with the VIEWPORT key. When a window closes, it is popped off the window stack, and the previous window comes to the fore.

word wrap

A property that can be applied to multitext widgets. When characters are inserted, JAM wraps any text which is too lengthy for the current line onto to the next line. When characters are deleted from the *field*, JAM automatically fills the line with words from the next line in the field.

write-through

Intrascreen data transfer that uses *local data block* screens (LDBs).



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