XtDisplayInitialize, XtOpenDisplay, XtDatabase, XtScreenDatabase, XtCloseDisplay – initialize, open, or close a display

```c
void XtDisplayInitialize(app_context, display, application_name, application_class, options, num_options, argc, argv)
    XtAppContext app_context;
    Display *display;
    String application_name;
    String application_class;
    XrmOptionDescRec *options;
    Cardinal num_options;
    int *argc;
    String *argv;
Display *XtOpenDisplay(app_context, display_string, application_name, application_class, options, num_options, argc, argv)
    XtAppContext app_context;
    String display_string;
    String application_name;
    String application_class;
    XrmOptionDescRec *options;
    Cardinal num_options;
    int *argc;
    String *argv;
void XtCloseDisplay(display)
    Display *display;
XrmDatabase XtDatabase(display)
    Display *display;
XrmDatabase XtScreenDatabase(screen)
    Screen* screen;
```

- **argc** Specifies a pointer to the number of command line parameters.
- **argv** Specifies the command line parameters.
- **app_context** Specifies the application context.
- **application_class** Specifies the class name of this application, which usually is the generic name for all instances of this application.
- **application_name** Specifies the name of the application instance.
- **display** Specifies the display. Note that a display can be in at most one application context.
- **num_options** Specifies the number of entries in the options list.
- **options** Specifies how to parse the command line for any application-specific resources. The options argument is passed as a parameter to `XrmParseCommand`. For further information, see *Xlib – C Language X Interface*.
- **screen** Specifies the screen whose resource database is to be returned.

The `XtDisplayInitialize` function builds the resource database, calls the Xlib `XrmParseCommand` function to parse the command line, and performs other per display initialization. After `XrmParseCommand` has been called, `argc` and `argv` contain only those parameters that were not in the standard option table or in the table specified by the options argument. If the modified `argc` is not zero, most applications simply print out the modified `argv` along with a message listing the allowable options. On UNIX-based systems, the application name is usually the final component of `argv[0]`. If the synchronize resource is `True` for the specified application, `XtDisplayInitialize` calls the Xlib `XSynchronize` function to put Xlib into synchronous mode for this display connection. If the reverseVideo resource is `True`, the Intrinsics exchange
XtDefaultForeground and XtDefaultBackground for widgets created on this display. (See Section
9.6.1).

The XtOpenDisplay function calls XOpenDisplay the specified display name. If display_string is NULL,
XtOpenDisplay uses the current value of the −display option specified in argv and if no display is specified
in argv, uses the user’s default display (on UNIX-based systems, this is the value of the DISPLAY environ-
ment variable).

If this succeeds, it then calls XtDisplayInitialize and pass it the opened display and the value of the −name
option specified in argv as the application name. If no name option is specified, it uses the application name
passed to XtOpenDisplay. If the application name is NULL, it uses the last component of argv[0].
XtOpenDisplay returns the newly opened display or NULL if it failed.

XtOpenDisplay is provided as a convenience to the application programmer.

The XtCloseDisplay function closes the specified display as soon as it is safe to do so. If called from
within an event dispatch (for example, a callback procedure), XtCloseDisplay does not close the display
until the dispatch is complete. Note that applications need only call XtCloseDisplay if they are to continue
executing after closing the display; otherwise, they should call XtDestroyApplicationContext or just exit.

The XtDatabase function returns the fully merged resource database that was built by XtDisplayInitialize
associated with the display that was passed in. If this display has not been initialized by XtDisplay-
Initialize, the results are not defined.

The XtScreenDatabase function returns the fully merged resource database associated with the specified
screen. If the screen does not belong to a Display initilized by XtDisplayInitialize, the results are
undefined.

XtAppCreateShell(3Xt), XtCreateApplicationContext(3Xt)

X Toolkit Intrinsics – C Language Interface
Xlib – C Language X Interface