XLookupKeysym, XRefreshKeyboardMapping, XLookupString, XRebindKeySym – handle keyboard input events in Latin-1

KeySym XLookupKeysym(key_event, index)
  XKeyEvent *key_event;
  int index;
XRefreshKeyboardMapping(event_map)
  XMappingEvent *event_map;
int XLookupString(event_struct, buffer_return, bytes_buffer, keysym_return, status_in_out)
  XKeyEvent *event_struct;
  char *buffer_return;
  int bytes_buffer;
  KeySym *keysym_return;
  XComposeStatus *status_in_out;
XRebindKeysym(display, keysym, list, mod_count, string, num_bytes)
  Display *display;
  KeySym keysym;
  KeySym list[];
  int mod_count;
  unsigned char *string;
  int num_bytes;

buffer_return Returns the translated characters.
bytes_buffer Specifies the length of the buffer. No more than bytes_buffer of translation are returned.
num_bytes Specifies the number of bytes in the string argument.
display Specifies the connection to the X server.
event_map Specifies the mapping event that is to be used.
event_struct Specifies the key event structure to be used. You can pass XKeyPressEvent or XKeyReleaseEvent.
index Specifies the index into the KeySyms list for the event’s KeyCode.
key_event Specifies the KeyPress or KeyRelease event.
keysym Specifies the KeySym that is to be.
keysym_return Returns the KeySym computed from the event if this argument is not NULL.
list Specifies the KeySyms to be used as modifiers.
mod_count Specifies the number of modifiers in the modifier list.
status_in_out Specifies or returns the XComposeStatus structure or NULL.
string Specifies the string that is copied and will be returned by XLookupString.

The XLookupKeysym function uses a given keyboard event and the index you specified to return the KeySym from the list that corresponds to the KeyCode member in the XKeyPressedEvent or XKeyReleasedEvent structure. If no KeySym is defined for the KeyCode of the event, XLookupKeysym returns NoSymbol.

The XRefreshKeyboardMapping function refreshes the stored modifier and keymap information. You usually call this function when a MappingNotify event with a request member of MappingKeyboard or MappingModifier occurs. The result is to update Xlib’s knowledge of the keyboard.

The XLookupString function translates a key event to a KeySym and a string. The KeySym is obtained by using the standard interpretation of the Shift, Lock, group, and numlock modifiers as defined in the X Protocol specification. If the KeySym has been rebound (see XRebindKeysym), the bound string will be stored in the buffer. Otherwise, the KeySym is mapped, if possible, to an ISO Latin-1 character or (if the
Control modifier is on) to an ASCII control character, and that character is stored in the buffer. XLookupString returns the number of characters that are stored in the buffer.

If present (non-NULL), the XComposeStatus structure records the state, which is private to Xlib, that needs preservation across calls to XLookupString to implement compose processing. The creation of XComposeStatus structures is implementation-dependent; a portable program must pass NULL for this argument.

The XRebindKeysym function can be used to rebind the meaning of a KeySym for the client. It does not redefine any key in the X server but merely provides an easy way for long strings to be attached to keys. XLookupString returns this string when the appropriate set of modifier keys are pressed and when the KeySym would have been used for the translation. No text conversions are performed; the client is responsible for supplying appropriately encoded strings. Note that you can rebind a KeySym that may not exist.

XButtonEvent(3X11), XMapEvent(3X11), XStringToKeysym(3X11)

Xlib − C Language X Interface