

# Analizador Sintáctico

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# Análisis Sintáctico

Se hizo un analizador sintáctico con la ayuda de la herramienta de Bison, para el lenguaje C y que corre en C, este analizador trabaja en conjunto con Flex, para tomar los tokens que este le otorga y revisar con las gramáticas que les sean ingresadas.

# Bison

Bison convierte de una gramática libre de contexto a un analizador sintáctico que emplea las tablas de Parsing LALR(1), siendo:

- L: Left algo
- A: ...
- L: ...
- R: rightmost
- (1): donde este uno significa que tiene como lookahead solo un símbolo.

Cabe destacar que Bison es compatible con Yacc. Sirve con C, C++ y Java.

# Código

```
double L , o , P
, _ = dt , T , Z , D = 1 , d ,
s [ 999 ] , E , h = 8 , I ,
J , K , w [ 999 ] , M , m , O
, n [ 999 ] , j = 33e-3 , i =
1E3 , r , t , u , v , W , S =
74.5 , l = 221 , X = 7.26 ,
a , B , A = 32.2 , c , F , H ;
int N , q , C , y , p , U ;
Window z ; char f [ 52 ]
; GC k ; main ( ) { Display * e =
XOpenDisplay ( 0 ) ; z = RootWindow ( e , 0 ) ; for ( XSetForeground ( e , k = XCreateGC ( e , z , 0 , 0 )
```

# Código

```
; scanf ( "%lf%lf%lf" , y + n , w + y , y + s ) + 1 ; y ++ ) ; XSelectInput ( e , z = XCreateSimpleWindow
0 , 0 , WhitePixel ( e , 0 ) ) , KeyPressMask ) ; for ( XMapWindow ( e , z ) ; ; T = sin ( 0 ) ) { struct
; K = cos ( j ) ; N = 1e4 ; M += H * _ ; Z = D * K ; F += _ * P ; r = E * K ; W = cos ( 0 ) ; m = K * W ;
sin ( j ) ; a = B * T * D - E * W ; XClearWindow ( e , z ) ; t = T * E + D * B * W ; j += d * _ * D - _ *
* T * B , E * d / K * B + v + B / K * F * D ) * _ ; p < y ; ) { T = p [ s ] + i ; E = c - p [ w ] ; D = n
] == 0 | K < fabs ( W = T * r - I * E + D * P ) | fabs ( D = t * D + Z * T - a * E ) > K ) N = 1e4 ; else
* D ; N - 1E4 && XDrawLine ( e , z , k , N , U , q , C ) ; N = q ; U = C ; } ++ p ; } L += _ * ( X * t + L
XDrawString ( e , z , k , 20 , 380 , f , 17 ) ; D = v / l * 15 ; i += ( B * l - M * r - X * Z ) * _ ; for
XEvent z ; XNextEvent ( e , & z ) ;
++ * ( ( N = XLookupKeysym
( & z . xkey , 0 ) ) - IT ?
N - LT ? UP - N ? & E : &
J : & u : & h ) ; -- * (
```

# Código

```
DN - N ? N - DT ? N ==  
RT ? & u : & W : & h : & J  
) ; } m = 15 * F / l ;  
c += ( I = M / l , l * H  
+ I * M + a * X ) * _ ; H  
= A * r + v * X - F * l + (  
E = .1 + X * 4.9 / l , t  
= T * m / 32 - I * T / 24  
) / S ; K = F * M + (  
h * 1e4 / l - ( T +  
E * 5 * T * E ) / 3e2  
) / S - X * d - B * A ;  
a = 2.63 / l * d ;
```

# Código

```
X += ( d * l - T / S
* ( .19 * E + a
* .64 + J / 1e3
) - M * v + A *
Z ) * _ ; l +=
K * _ ; W = d ;
sprintf ( f ,
"%5d %3d"
"%7d" , p = l
/ 1.7 , ( C = 9E3 +
0 * 57.3 ) % 0550 , ( int ) i ) ; d += T * ( .45 - 14 / l *
X - a * 130 - J * .14 ) * _ / 125e2 + F * _ * v ; P = ( T * ( 47
* I - m * 52 + E * 94 * D - t * .38 + u * .21 * E ) / 1e2 + W *
```

# Código

```
179 * v ) / 2312 ; select ( p = 0 , 0 , 0 , 0 , & G ) ; v -= (
W * F - T * ( .63 * m - I * .086 + m * E * 19 - D * 25 - .11 * u
) / 107e2 ) * _ ; D = cos ( o ) ; E = sin ( o ) ; } }
typedef unsigned char __u_char ;
typedef unsigned short int __u_short ;
typedef unsigned int __u_int ;
typedef unsigned long int __u_long ;
typedef signed char __int8_t ;
typedef unsigned char __uint8_t ;
typedef signed short int __int16_t ;
typedef unsigned short int __uint16_t ;
typedef signed int __int32_t ;
typedef unsigned int __uint32_t ;
```



# Código

```
typedef signed long int __int64_t ;  
typedef unsigned long int __uint64_t ;  
typedef long int __quad_t ;  
typedef unsigned long int __u_quad_t ;  
typedef unsigned long int __dev_t ;  
typedef unsigned int __uid_t ;  
typedef unsigned int __gid_t ;  
typedef unsigned long int __ino_t ;  
typedef unsigned long int __ino64_t ;  
typedef unsigned int __mode_t ;  
typedef unsigned long int __nlink_t ;  
typedef long int __off_t ;  
typedef long int __off64_t ;
```

# Código

```
typedef int __pid_t ;
typedef struct { int __val [ 2 ] ; } __fsid_t ;
typedef long int __clock_t ;
typedef unsigned long int __rlim_t ;
typedef unsigned long int __rlim64_t ;
typedef unsigned int __id_t ;
typedef long int __time_t ;
typedef unsigned int __useconds_t ;
typedef long int __suseconds_t ;
typedef int __daddr_t ;
typedef int __key_t ;
typedef int __clockid_t ;
typedef void * __timer_t ;
```

# Código

```
typedef long int __blksize_t ;
typedef long int __blkcnt_t ;
typedef long int __blkcnt64_t ;
typedef unsigned long int __fsblkcnt_t ;
typedef unsigned long int __fsblkcnt64_t ;
typedef unsigned long int __fsfilcnt_t ;
typedef unsigned long int __fsfilcnt64_t ;
typedef long int __fsword_t ;
typedef long int __ssize_t ;
typedef long int __syscall_slong_t ;
typedef unsigned long int __syscall_ulong_t ;
typedef __off64_t __loff_t ;
typedef __quad_t * __qaddr_t ;
```

# Código

```
typedef char * __caddr_t ;  
typedef long int __intptr_t ;  
typedef unsigned int __socklen_t ;  
typedef __u_char u_char ;  
typedef __u_short u_short ;  
typedef __u_int u_int ;  
typedef __u_long u_long ;  
typedef __quad_t quad_t ;  
typedef __u_quad_t u_quad_t ;  
typedef __fsid_t fsid_t ;  
typedef __loff_t loff_t ;  
typedef __ino_t ino_t ;  
typedef __dev_t dev_t ;
```

# Código

```
typedef __gid_t gid_t ;  
typedef __mode_t mode_t ;  
typedef __nlink_t nlink_t ;  
typedef __uid_t uid_t ;  
typedef __off_t off_t ;  
typedef __pid_t pid_t ;  
typedef __id_t id_t ;  
typedef __ssize_t ssize_t ;  
typedef __daddr_t daddr_t ;  
typedef __caddr_t caddr_t ;  
typedef __key_t key_t ;  
typedef __clock_t clock_t ;  
typedef __time_t time_t ;
```

# Código

```
typedef __clockid_t clockid_t ;
typedef __timer_t timer_t ;
typedef long unsigned int size_t ;
typedef unsigned long int ulong ;
typedef unsigned short int ushort ;
typedef unsigned int uint ;
typedef int int8_t __attribute__ ( ( __mode__ ( __QI__ ) ) ) ;
typedef int int16_t __attribute__ ( ( __mode__ ( __HI__ ) ) ) ;
typedef int int32_t __attribute__ ( ( __mode__ ( __SI__ ) ) ) ;
typedef int int64_t __attribute__ ( ( __mode__ ( __DI__ ) ) ) ;
typedef unsigned int u_int8_t __attribute__ ( ( __mode__ ( __QI__ ) ) ) ;
typedef unsigned int u_int16_t __attribute__ ( ( __mode__ ( __HI__ ) ) ) ;
typedef unsigned int u_int32_t __attribute__ ( ( __mode__ ( __SI__ ) ) ) ;
```

# Código

```
typedef unsigned int u_int64_t __attribute__ ( ( __mode__ ( __DI__ ) ) );  
typedef int register_t __attribute__ ( ( __mode__ ( __word__ ) ) );  
static __inline unsigned int  
__bswap_32 ( unsigned int __bsx )  
{  
    return __builtin_bswap32 ( __bsx );  
}  
static __inline __uint64_t  
__bswap_64 ( __uint64_t __bsx )  
{  
    return __builtin_bswap64 ( __bsx );  
}  
typedef int __sig_atomic_t ;
```

# Código

```
typedef struct
{
    unsigned long int __val [ ( 1024 / ( 8 * sizeof ( unsigned long int ) ) ) ] ;
} __sigset_t ;
typedef __sigset_t sigset_t ;
struct timespec
{
    __time_t tv_sec ;
    __syscall_slong_t tv_nsec ;
} ;
struct timeval
{
    __time_t tv_sec ;
```



# Código

```
__suseconds_t tv_usec ;
} ;
typedef __suseconds_t suseconds_t ;
typedef long int __fd_mask ;
typedef struct
{
    __fd_mask __fds_bits [ 1024 / ( 8 * ( int ) sizeof ( __fd_mask ) ) ] ;
} fd_set ;
typedef __fd_mask fd_mask ;
extern int select ( int __nfds , fd_set * __restrict __readfds ,
    fd_set * __restrict __writefds ,
    fd_set * __restrict __exceptfds ,
    struct timeval * __restrict __timeout ) ;
```

# Código

```
extern int pselect ( int __nfds , fd_set * __restrict __readfds ,
fd_set * __restrict __writefds ,
fd_set * __restrict __exceptfds ,
const struct timespec * __restrict __timeout ,
const __sigset_t * __restrict __sigmask );
__extension__
extern unsigned int gnu_dev_major ( unsigned long long int __dev )
__attribute__ ( ( __nothrow__ , __leaf__ ) ) __attribute__ ( ( __const__ ) );
__extension__
extern unsigned int gnu_dev_minor ( unsigned long long int __dev )
__attribute__ ( ( __nothrow__ , __leaf__ ) ) __attribute__ ( ( __const__ ) );
__extension__
extern unsigned long long int gnu_dev_makedev ( unsigned int __major ,
```

# Código

```
unsigned int __minor )
__attribute__ ( ( __nothrow__ , __leaf__ ) ) __attribute__ ( ( __const__ ) ) ;
typedef __blksize_t blksize_t ;
typedef __blkcnt_t blkcnt_t ;
typedef __fsblkcnt_t fsblkcnt_t ;
typedef __fsfilcnt_t fsfilcnt_t ;
typedef unsigned long int pthread_t ;
union pthread_attr_t
{
char __size [ 56 ] ;
long int __align ;
} ;
typedef union pthread_attr_t pthread_attr_t ;
```

# Código

```
typedef struct __pthread_internal_list
{
    struct __pthread_internal_list * __prev ;
    struct __pthread_internal_list * __next ;
} __pthread_list_t ;
typedef union
{
    struct __pthread_mutex_s
    {
        int __lock ;
        unsigned int __count ;
        int __owner ;
        unsigned int __nusers ;
```

# Código

```
int __kind ;
short __spins ;
short __elision ;
__pthread_list_t __list ;
} __data ;
char __size [ 40 ] ;
long int __align ;
} pthread_mutex_t ;
typedef union
{
char __size [ 4 ] ;
int __align ;
} pthread_mutexattr_t ;
```

# Código

```
typedef union
{
    struct
    {
        int __lock ;
        unsigned int __futex ;
        __extension__ unsigned long long int __total_seq ;
        __extension__ unsigned long long int __wakeup_seq ;
        __extension__ unsigned long long int __woken_seq ;
        void * __mutex ;
        unsigned int __nwaiters ;
        unsigned int __broadcast_seq ;
    } __data ;
}
```

# Código

```
char __size [ 48 ] ;
__extension__ long long int __align ;
} pthread_cond_t ;
typedef union
{
char __size [ 4 ] ;
int __align ;
} pthread_condattr_t ;
typedef unsigned int pthread_key_t ;
typedef int pthread_once_t ;
typedef union
{
struct
```

# Código

```
{  
int __lock ;  
unsigned int __nr_readers ;  
unsigned int __readers_wakeup ;  
unsigned int __writer_wakeup ;  
unsigned int __nr_readers_queued ;  
unsigned int __nr_writers_queued ;  
int __writer ;  
int __shared ;  
signed char __rwelision ;  
unsigned char __pad1 [ 7 ] ;  
unsigned long int __pad2 ;  
unsigned int __flags ;
```



# Código

```
} __data ;  
char __size [ 56 ] ;  
long int __align ;  
} pthread_rwlock_t ;  
typedef union  
{  
char __size [ 8 ] ;  
long int __align ;  
} pthread_rwlockattr_t ;  
typedef volatile int pthread_spinlock_t ;  
typedef union  
{  
char __size [ 32 ] ;
```

# Código

```
long int __align ;
} pthread_barrier_t ;
typedef union
{
char __size [ 4 ] ;
int __align ;
} pthread_barrierattr_t ;
typedef unsigned long XID ;
typedef unsigned long Mask ;
typedef unsigned long Atom ;
typedef unsigned long VisualID ;
typedef unsigned long Time ;
typedef XID Window ;
```

# Código

```
typedef XID Drawable ;
typedef XID Font ;
typedef XID Pixmap ;
typedef XID Cursor ;
typedef XID Colormap ;
typedef XID GContext ;
typedef XID KeySym ;
typedef unsigned char KeyCode ;
typedef long int ptrdiff_t ;
typedef int wchar_t ;
typedef struct {
long long __max_align_ll __attribute__ ( ( __aligned__ ( __alignof__ ( long long ) ) ) ) ;
long double __max_align_ld __attribute__ ( ( __aligned__ ( __alignof__ ( long double ) ) ) ) ;
```

# Código

```
} max_align_t ;  
extern int  
_Xmblen (  
char * str ,  
int len  
) ;  
typedef char * XPointer ;  
typedef struct _XExtData {  
int number ;  
struct _XExtData * next ;  
int ( * free_private ) (  
struct _XExtData * extension  
) ;
```

# Código

```
XPointer private_data ;  
} XExtData ;  
typedef struct {  
int extension ;  
int major_opcode ;  
int first_event ;  
int first_error ;  
} XExtCodes ;  
typedef struct {  
int depth ;  
int bits_per_pixel ;  
int scanline_pad ;  
} XPixmapFormatValues ;
```

# Código

```
typedef struct {  
    int function ;  
    unsigned long plane_mask ;  
    unsigned long foreground ;  
    unsigned long background ;  
    int line_width ;  
    int line_style ;  
    int cap_style ;  
    int join_style ;  
    int fill_style ;  
    int fill_rule ;  
    int arc_mode ;  
    Pixmap tile ;  
}
```

# Código

```
Pixmap stipple ;  
int ts_x_origin ;  
int ts_y_origin ;  
Font font ;  
int subwindow_mode ;  
int graphics_exposures ;  
int clip_x_origin ;  
int clip_y_origin ;  
Pixmap clip_mask ;  
int dash_offset ;  
char dashes ;  
} XGCValues ;  
typedef struct _XGC
```

# Código

```
* GC ;
typedef struct {
XExtData * ext_data ;
VisualID visualid ;
int class ;
unsigned long red_mask , green_mask , blue_mask ;
int bits_per_rgb ;
int map_entries ;
} Visual ;
typedef struct {
int depth ;
int nvisuals ;
Visual * visuals ;
```



# Código

```
} Depth ;  
struct _XDisplay ;  
typedef struct {  
XExtData * ext_data ;  
struct _XDisplay * display ;  
Window root ;  
int width , height ;  
int mwidth , mheight ;  
int ndepths ;  
Depth * depths ;  
int root_depth ;  
Visual * root_visual ;  
GC default_gc ;
```

# Código

```
Colormap cmap ;
unsigned long white_pixel ;
unsigned long black_pixel ;
int max_maps , min_maps ;
int backing_store ;
int save_unders ;
long root_input_mask ;
} Screen ;
typedef struct {
XExtData * ext_data ;
int depth ;
int bits_per_pixel ;
int scanline_pad ;
```

# Código

```
} ScreenFormat ;  
typedef struct {  
    Pixmap background_pixmap ;  
    unsigned long background_pixel ;  
    Pixmap border_pixmap ;  
    unsigned long border_pixel ;  
    int bit_gravity ;  
    int win_gravity ;  
    int backing_store ;  
    unsigned long backing_planes ;  
    unsigned long backing_pixel ;  
    int save_under ;  
    long event_mask ;
```

# Código

```
long do_not_propagate_mask ;
int override_redirect ;
Colormap colormap ;
Cursor cursor ;
} XSetWindowAttributes ;
typedef struct {
int x , y ;
int width , height ;
int border_width ;
int depth ;
Visual * visual ;
Window root ;
int class ;
```

# Código

```
int bit_gravity ;  
int win_gravity ;  
int backing_store ;  
unsigned long backing_planes ;  
unsigned long backing_pixel ;  
int save_under ;  
Colormap colormap ;  
int map_installed ;  
int map_state ;  
long all_event_masks ;  
long your_event_mask ;  
long do_not_propagate_mask ;  
int override_redirect ;
```

# Código

```
Screen * screen ;  
} XWindowAttributes ;  
typedef struct {  
int family ;  
int length ;  
char * address ;  
} XHostAddress ;  
typedef struct {  
int typelength ;  
int valuelength ;  
char * type ;  
char * value ;  
} XServerInterpretedAddress ;
```

# Código

```
typedef struct _XImage {  
    int width , height ;  
    int xoffset ;  
    int format ;  
    char * data ;  
    int byte_order ;  
    int bitmap_unit ;  
    int bitmap_bit_order ;  
    int bitmap_pad ;  
    int depth ;  
    int bytes_per_line ;  
    int bits_per_pixel ;  
    unsigned long red_mask ;
```

# Código

```
unsigned long green_mask ;
unsigned long blue_mask ;
XPointer obdata ;
struct funcs {
struct _XImage * ( * create_image ) (
struct _XDisplay * ,
Visual * ,
unsigned int ,
int ,
int ,
char * ,
unsigned int ,
unsigned int ,
```



# Código

```
int ,  
int ) ;  
int ( * destroy_image ) ( struct _XImage * ) ;  
unsigned long ( * get_pixel ) ( struct _XImage * , int , int ) ;  
int ( * put_pixel ) ( struct _XImage * , int , int , unsigned long ) ;  
struct _XImage * ( * sub_image ) ( struct _XImage * , int , int , unsigned int , unsigned int ) ;  
int ( * add_pixel ) ( struct _XImage * , long ) ;  
} f ;  
} XImage ;  
typedef struct {  
int x , y ;  
int width , height ;  
int border_width ;
```

# Código

```
Window sibling ;
int stack_mode ;
} XWindowChanges ;
typedef struct {
unsigned long pixel ;
unsigned short red , green , blue ;
char flags ;
char pad ;
} XColor ;
typedef struct {
short x1 , y1 , x2 , y2 ;
} XSegment ;
typedef struct {
```

# Código

```
short x , y ;  
} XPoint ;  
typedef struct {  
short x , y ;  
unsigned short width , height ;  
} XRectangle ;  
typedef struct {  
short x , y ;  
unsigned short width , height ;  
short angle1 , angle2 ;  
} XArc ;  
typedef struct {  
int key_click_percent ;
```

# Código

```
int bell_percent ;
int bell_pitch ;
int bell_duration ;
int led ;
int led_mode ;
int key ;
int auto_repeat_mode ;
} XKeyboardControl ;
typedef struct {
int key_click_percent ;
int bell_percent ;
unsigned int bell_pitch , bell_duration ;
unsigned long led_mask ;
```

# Código

```
int global_auto_repeat ;
char auto_repeats [ 32 ] ;
} XKeyboardState ;
typedef struct {
Time time ;
short x , y ;
} XTimeCoord ;
typedef struct {
int max_keypermod ;
KeyCode * modifiermap ;
} XModifierKeymap ;
typedef struct _XDisplay Display ;
struct _XPrivate ;
```

# Código

```
struct _XrmHashBucketRec ;  
typedef struct  
{  
  XExtData * ext_data ;  
  struct _XPrivate * private1 ;  
  int fd ;  
  int private2 ;  
  int proto_major_version ;  
  int proto_minor_version ;  
  char * vendor ;  
  XID private3 ;  
  XID private4 ;  
  XID private5 ;
```

# Código

```
int private6 ;
XID ( * resource_alloc ) (
struct _XDisplay *
) ;
int byte_order ;
int bitmap_unit ;
int bitmap_pad ;
int bitmap_bit_order ;
int nformats ;
ScreenFormat * pixmap_format ;
int private8 ;
int release ;
struct _XPrivate * private9 , * private10 ;
```

# Código

```
int qlen ;
unsigned long last_request_read ;
unsigned long request ;
XPointer private11 ;
XPointer private12 ;
XPointer private13 ;
XPointer private14 ;
unsigned max_request_size ;
struct _XrmHashBucketRec * db ;
int ( * private15 ) (
struct _XDisplay *
) ;
char * display_name ;
```



# Código

```
int default_screen ;
int nscreens ;
Screen * screens ;
unsigned long motion_buffer ;
unsigned long private16 ;
int min_keycode ;
int max_keycode ;
XPointer private17 ;
XPointer private18 ;
int private19 ;
char * xdefaults ;
}
* _XPrivDisplay ;
```

# Código

```
typedef struct {  
    int type ;  
    unsigned long serial ;  
    int send_event ;  
    Display * display ;  
    Window window ;  
    Window root ;  
    Window subwindow ;  
    Time time ;  
    int x , y ;  
    int x_root , y_root ;  
    unsigned int state ;  
    unsigned int keycode ;  
}
```

# Código

```
int same_screen ;  
} XKeyEvent ;  
typedef XKeyEvent XKeyPressedEvent ;  
typedef XKeyEvent XKeyReleasedEvent ;  
typedef struct {  
    int type ;  
    unsigned long serial ;  
    int send_event ;  
    Display * display ;  
    Window window ;  
    Window root ;  
    Window subwindow ;  
    Time time ;
```

# Código

```
int x , y ;
int x_root , y_root ;
unsigned int state ;
unsigned int button ;
int same_screen ;
} XButtonEvent ;
typedef XButtonEvent XButtonPressedEvent ;
typedef XButtonEvent XButtonReleasedEvent ;
typedef struct {
int type ;
unsigned long serial ;
int send_event ;
Display * display ;
```

# Código

```
Window window ;
Window root ;
Window subwindow ;
Time time ;
int x , y ;
int x_root , y_root ;
unsigned int state ;
char is_hint ;
int same_screen ;
} XMotionEvent ;
typedef XMotionEvent XPointerMovedEvent ;
typedef struct {
int type ;
```

# Código

```
unsigned long serial ;  
int send_event ;  
Display * display ;  
Window window ;  
Window root ;  
Window subwindow ;  
Time time ;  
int x , y ;  
int x_root , y_root ;  
int mode ;  
int detail ;  
int same_screen ;  
int focus ;
```

# Código

```
unsigned int state ;  
} XCrossingEvent ;  
typedef XCrossingEvent XEnterWindowEvent ;  
typedef XCrossingEvent XLeaveWindowEvent ;  
typedef struct {  
    int type ;  
    unsigned long serial ;  
    int send_event ;  
    Display * display ;  
    Window window ;  
    int mode ;  
    int detail ;  
} XFocusChangeEvent ;
```

# Código

```
typedef XFocusChangeEvent XFocusInEvent ;
typedef XFocusChangeEvent XFocusOutEvent ;
typedef struct {
int type ;
unsigned long serial ;
int send_event ;
Display * display ;
Window window ;
char key_vector [ 32 ] ;
} XKeymapEvent ;
typedef struct {
int type ;
unsigned long serial ;
```



# Código

```
int send_event ;  
Display * display ;  
Window window ;  
int x , y ;  
int width , height ;  
int count ;  
} XExposeEvent ;  
typedef struct {  
int type ;  
unsigned long serial ;  
int send_event ;  
Display * display ;  
Drawable drawable ;
```

# Código

```
int x , y ;  
int width , height ;  
int count ;  
int major_code ;  
int minor_code ;  
} XGraphicsExposeEvent ;  
typedef struct {  
int type ;  
unsigned long serial ;  
int send_event ;  
Display * display ;  
Drawable drawable ;  
int major_code ;
```

# Código

```
int minor_code ;
} XNoExposeEvent ;
typedef struct {
int type ;
unsigned long serial ;
int send_event ;
Display * display ;
Window window ;
int state ;
} XVisibilityEvent ;
typedef struct {
int type ;
unsigned long serial ;
```

# Código

```
int send_event ;
Display * display ;
Window parent ;
Window window ;
int x , y ;
int width , height ;
int border_width ;
int override_redirect ;
} XCreateWindowEvent ;
typedef struct {
int type ;
unsigned long serial ;
int send_event ;
```

# Código

```
Display * display ;  
Window event ;  
Window window ;  
} XDestroyWindowEvent ;  
typedef struct {  
    int type ;  
    unsigned long serial ;  
    int send_event ;  
    Display * display ;  
    Window event ;  
    Window window ;  
    int from_configure ;  
} XUnmapEvent ;
```

# Código

```
typedef struct {  
    int type ;  
    unsigned long serial ;  
    int send_event ;  
    Display * display ;  
    Window event ;  
    Window window ;  
    int override_redirect ;  
} XMapEvent ;  
typedef struct {  
    int type ;  
    unsigned long serial ;  
    int send_event ;
```

# Código

```
Display * display ;
Window parent ;
Window window ;
} XMapRequestEvent ;
typedef struct {
    int type ;
    unsigned long serial ;
    int send_event ;
    Display * display ;
    Window event ;
    Window window ;
    Window parent ;
    int x , y ;
```

# Código

```
int override_redirect ;
} XReparentEvent ;
typedef struct {
int type ;
unsigned long serial ;
int send_event ;
Display * display ;
Window event ;
Window window ;
int x , y ;
int width , height ;
int border_width ;
Window above ;
```



# Código

```
int override_redirect ;  
} XConfigureEvent ;  
typedef struct {  
int type ;  
unsigned long serial ;  
int send_event ;  
Display * display ;  
Window event ;  
Window window ;  
int x , y ;  
} XGravityEvent ;  
typedef struct {  
int type ;
```

# Código

```
unsigned long serial ;  
int send_event ;  
Display * display ;  
Window window ;  
int width , height ;  
} XResizeRequestEvent ;  
typedef struct {  
int type ;  
unsigned long serial ;  
int send_event ;  
Display * display ;  
Window parent ;  
Window window ;
```

# Código

```
int x , y ;
int width , height ;
int border_width ;
Window above ;
int detail ;
unsigned long value_mask ;
} XConfigureRequestEvent ;
typedef struct {
int type ;
unsigned long serial ;
int send_event ;
Display * display ;
Window event ;
```

# Código

```
Window window ;
int place ;
} XCirculateEvent ;
typedef struct {
int type ;
unsigned long serial ;
int send_event ;
Display * display ;
Window parent ;
Window window ;
int place ;
} XCirculateRequestEvent ;
typedef struct {
```

# Código

```
int type ;
unsigned long serial ;
int send_event ;
Display * display ;
Window window ;
Atom atom ;
Time time ;
int state ;
} XPropertyEvent ;
typedef struct {
int type ;
unsigned long serial ;
int send_event ;
```

# Código

```
Display * display ;
Window window ;
Atom selection ;
Time time ;
} XSelectionClearEvent ;
typedef struct {
int type ;
unsigned long serial ;
int send_event ;
Display * display ;
Window owner ;
Window requestor ;
Atom selection ;
```

# Código

```
Atom target ;  
Atom property ;  
Time time ;  
} XSelectionRequestEvent ;  
typedef struct {  
    int type ;  
    unsigned long serial ;  
    int send_event ;  
    Display * display ;  
    Window requestor ;  
    Atom selection ;  
    Atom target ;  
    Atom property ;
```

# Código

```
Time time ;  
} XSelectionEvent ;  
typedef struct {  
    int type ;  
    unsigned long serial ;  
    int send_event ;  
    Display * display ;  
    Window window ;  
    Colormap colormap ;  
    int new ;  
    int state ;  
} XColormapEvent ;  
typedef struct {
```



# Código

```
int type ;
unsigned long serial ;
int send_event ;
Display * display ;
Window window ;
Atom message_type ;
int format ;
union {
char b [ 20 ] ;
short s [ 10 ] ;
long l [ 5 ] ;
} data ;
} XClientMessageEvent ;
```

# Código

```
typedef struct {  
    int type ;  
    unsigned long serial ;  
    int send_event ;  
    Display * display ;  
    Window window ;  
    int request ;  
    int first_keycode ;  
    int count ;  
} XMappingEvent ;  
typedef struct {  
    int type ;  
    Display * display ;
```

# Código

```
XID resourceid ;
unsigned long serial ;
unsigned char error_code ;
unsigned char request_code ;
unsigned char minor_code ;
} XErrorEvent ;
typedef struct {
int type ;
unsigned long serial ;
int send_event ;
Display * display ;
Window window ;
} XAnyEvent ;
```

# Código

```
typedef struct
{
    int type ;
    unsigned long serial ;
    int send_event ;
    Display * display ;
    int extension ;
    int evtype ;
} XGenericEvent ;
typedef struct {
    int type ;
    unsigned long serial ;
    int send_event ;
```

# Código

```
Display * display ;
int extension ;
int evtype ;
unsigned int cookie ;
void * data ;
} XGenericEventCookie ;
typedef union _XEvent {
int type ;
XAnyEvent xany ;
XKeyEvent xkey ;
XButtonEvent xbutton ;
XMotionEvent xmotion ;
XCrossingEvent xcrossing ;
```

# Código

```
XFocusChangeEvent xfocus ;  
XExposeEvent xexpose ;  
XGraphicsExposeEvent xgraphicsexpose ;  
XNoExposeEvent xnoexpose ;  
XVisibilityEvent xvisibility ;  
XCreateWindowEvent xcreatewindow ;  
XDestroyWindowEvent xdestroywindow ;  
XUnmapEvent xunmap ;  
XMapEvent xmap ;  
XMapRequestEvent xmaprequest ;  
XReparentEvent xreparent ;  
XConfigureEvent xconfigure ;  
XGravityEvent xgravity ;
```

# Código

```
XResizeRequestEvent xresizerequest ;  
XConfigureRequestEvent xconfigurerequest ;  
XCirculateEvent xcirculate ;  
XCirculateRequestEvent xcirculaterequest ;  
XPropertyEvent xproperty ;  
XSelectionClearEvent xselectionclear ;  
XSelectionRequestEvent xselectionrequest ;  
XSelectionEvent xselection ;  
XColormapEvent xcolormap ;  
XClientMessageEvent xclient ;  
XMappingEvent xmapping ;  
XErrorEvent xerror ;  
XKeymapEvent xkeymap ;
```

# Código

```
XGenericEvent xgeneric ;
XGenericEventCookie xcookie ;
long pad [ 24 ] ;
} XEvent ;
typedef struct {
short lbearing ;
short rbearing ;
short width ;
short ascent ;
short descent ;
unsigned short attributes ;
} XCharStruct ;
typedef struct {
```



# Código

```
Atom name ;  
unsigned long card32 ;  
} XFontProp ;  
typedef struct {  
XExtData * ext_data ;  
Font fid ;  
unsigned direction ;  
unsigned min_char_or_byte2 ;  
unsigned max_char_or_byte2 ;  
unsigned min_byte1 ;  
unsigned max_byte1 ;  
int all_chars_exist ;  
unsigned default_char ;
```

# Código

```
int n_properties ;
XFontProp * properties ;
XCharStruct min_bounds ;
XCharStruct max_bounds ;
XCharStruct * per_char ;
int ascent ;
int descent ;
} XFontStruct ;
typedef struct {
char * chars ;
int nchars ;
int delta ;
Font font ;
```

# Código

```
} XTextItem ;  
typedef struct {  
    unsigned char byte1 ;  
    unsigned char byte2 ;  
} XChar2b ;  
typedef struct {  
    XChar2b * chars ;  
    int nchars ;  
    int delta ;  
    Font font ;  
} XTextItem16 ;  
typedef union { Display * display ;  
    GC gc ;
```

# Código

```
Visual * visual ;
Screen * screen ;
ScreenFormat * pixmap_format ;
XFontStruct * font ; } XEDataObject ;
typedef struct {
XRectangle max_ink_extent ;
XRectangle max_logical_extent ;
} XFontSetExtents ;
typedef struct _XOM * XOM ;
typedef struct _XOC * XOC , * XFontSet ;
typedef struct {
char * chars ;
int nchars ;
```

# Código

```
int delta ;
XFontSet font_set ;
} XmbTextItem ;
typedef struct {
wchar_t * chars ;
int nchars ;
int delta ;
XFontSet font_set ;
} XwcTextItem ;
typedef struct {
int charset_count ;
char * * charset_list ;
} XOMCharSetList ;
```

# Código

```
typedef enum {  
XOMOrientation_LTR_TTB ,  
XOMOrientation_RTL_TTB ,  
XOMOrientation_TTB_LTR ,  
XOMOrientation_TTB_RTL ,  
XOMOrientation_Context  
} XOrientation ;  
typedef struct {  
int num_orientation ;  
XOrientation * orientation ;  
} XOMOrientation ;  
typedef struct {  
int num_font ;
```

# Código

```
XFontStruct * * font_struct_list ;  
char * * font_name_list ;  
} XOMFontInfo ;  
typedef struct _XIM * XIM ;  
typedef struct _XIC * XIC ;  
typedef void ( * XIMProc ) (  
XIM ,  
XPointer ,  
XPointer  
) ;  
typedef int ( * XICProc ) (  
XIC ,  
XPointer ,
```

# Código

```
XPointer
);
typedef void ( * XIDProc ) (
Display * ,
XPointer ,
XPointer
);
typedef unsigned long XIMStyle ;
typedef struct {
unsigned short count_styles ;
XIMStyle * supported_styles ;
} XIMStyles ;
typedef void * XVaNestedList ;
```



# Código

```
typedef struct {  
  XPointer client_data ;  
  XIMProc callback ;  
} XIMCallback ;  
typedef struct {  
  XPointer client_data ;  
  XICProc callback ;  
} XICCallback ;  
typedef unsigned long XIMFeedback ;  
typedef struct _XIMText {  
  unsigned short length ;  
  XIMFeedback * feedback ;  
  int encoding_is_wchar ;  
}
```

# Código

```
union {  
    char * multi_byte ;  
    wchar_t * wide_char ;  
} string ;  
} XIMText ;  
  
typedef unsigned long XIMPreeditState ;  
typedef struct _XIMPreeditStateNotifyCallbackStruct {  
    XIMPreeditState state ;  
} XIMPreeditStateNotifyCallbackStruct ;  
typedef unsigned long XIMResetState ;  
typedef unsigned long XIMStringConversionFeedback ;  
typedef struct _XIMStringConversionText {  
    unsigned short length ;
```

# Código

```
XIMStringConversionFeedback * feedback ;  
int encoding_is_wchar ;  
union {  
char * mbs ;  
wchar_t * wcs ;  
} string ;  
} XIMStringConversionText ;  
typedef unsigned short XIMStringConversionPosition ;  
typedef unsigned short XIMStringConversionType ;  
typedef unsigned short XIMStringConversionOperation ;  
typedef enum {  
XIMForwardChar , XIMBackwardChar ,  
XIMForwardWord , XIMBackwardWord ,
```

# Código

```
XIMCaretUp , XIMCaretDown ,  
XIMNextLine , XIMPreviousLine ,  
XIMLineStart , XIMLineEnd ,  
XIMAbsolutePosition ,  
XIMDontChange  
} XIMCaretDirection ;  
typedef struct _XIMStringConversionCallbackStruct {  
XIMStringConversionPosition position ;  
XIMCaretDirection direction ;  
XIMStringConversionOperation operation ;  
unsigned short factor ;  
XIMStringConversionText * text ;  
} XIMStringConversionCallbackStruct ;
```

# Código

```
typedef struct _XIMPreeditDrawCallbackStruct {  
    int caret ;  
    int chg_first ;  
    int chg_length ;  
    XIMText * text ;  
} XIMPreeditDrawCallbackStruct ;  
typedef enum {  
    XIMIsInvisible ,  
    XIMIsPrimary ,  
    XIMIsSecondary  
} XIMCaretStyle ;  
typedef struct _XIMPreeditCaretCallbackStruct {  
    int position ;
```

# Código

```
XIMCaretDirection direction ;
XIMCaretStyle style ;
} XIMPreeditCaretCallbackStruct ;
typedef enum {
XIMTextType ,
XIMBitmapType
} XIMStatusDataType ;
typedef struct _XIMStatusDrawCallbackStruct {
XIMStatusDataType type ;
union {
XIMText * text ;
Pixmap bitmap ;
} data ;
```

# Código

```
} XIMStatusDrawCallbackStruct ;  
typedef struct _XIMHotKeyTrigger {  
    KeySym keysym ;  
    int modifier ;  
    int modifier_mask ;  
} XIMHotKeyTrigger ;  
typedef struct _XIMHotKeyTriggers {  
    int num_hot_key ;  
    XIMHotKeyTrigger * key ;  
} XIMHotKeyTriggers ;  
typedef unsigned long XIMHotKeyState ;  
typedef struct {  
    unsigned short count_values ;
```

# Código

```
char * * supported_values ;  
} XIMValuesList ;  
extern int _Xdebug ;  
extern XFontStruct * XLoadQueryFont (   
Display * ,  
const char *  
) ;  
extern XFontStruct * XQueryFont (   
Display * ,  
XID  
) ;  
extern XTimeCoord * XGetMotionEvents (   
Display * ,
```



# Código

```
Window ,  
Time ,  
Time ,  
int *  
);  
extern XModifierKeymap * XDeleteModifiermapEntry (  
XModifierKeymap * ,  
KeyCode ,  
int  
);  
extern XModifierKeymap * XGetModifierMapping (  
Display *  
);
```

# Código

```
extern XModifierKeymap * XInsertModifiermapEntry (  
XModifierKeymap * ,  
KeyCode ,  
int  
) ;  
extern XModifierKeymap * XNewModifiermap (  
int  
) ;  
extern XImage * XCreateImage (  
Display * ,  
Visual * ,  
unsigned int ,  
int ,
```

# Código

```
int ,  
char * ,  
unsigned int ,  
unsigned int ,  
int ,  
int  
) ;  
extern int XInitImage (  
XImage *  
) ;  
extern XImage * XGetImage (  
Display * ,  
Drawable ,
```

# Código

```
int ,  
int ,  
unsigned int ,  
unsigned int ,  
unsigned long ,  
int  
) ;  
extern XImage * XGetSubImage (  
Display * ,  
Drawable ,  
int ,  
int ,  
unsigned int ,
```

# Código

```
unsigned int ,  
unsigned long ,  
int ,  
XImage * ,  
int ,  
int  
) ;  
extern Display * XOpenDisplay (  
const char *  
) ;  
extern void XrmInitialize (  
void  
) ;
```

# Código

```
extern char * XFetchBytes (  
Display * ,  
int *  
) ;  
extern char * XFetchBuffer (  
Display * ,  
int * ,  
int  
) ;  
extern char * XGetAtomName (  
Display * ,  
Atom  
) ;
```

# Código

```
extern int XGetAtomNames (  
Display * ,  
Atom * ,  
int ,  
char * *  
) ;  
extern char * XGetDefault (  
Display * ,  
const char * ,  
const char *  
) ;  
extern char * XDisplayName (  
const char *
```

# Código

```
);  
extern char * XKeysymToString (  
KeySym  
);  
extern int ( * XSynchronize (  
Display * ,  
int  
) ) (  
Display *  
);  
extern int ( * XSetAfterFunction (  
Display * ,  
int ( * ) ) (  

```



# Código

```
Display *  
)  
) ) (  
Display *  
) ;  
extern Atom XInternAtom (  
Display * ,  
const char * ,  
int  
) ;  
extern int XInternAtoms (  
Display * ,  
char * * ,
```

# Código

```
int ,  
int ,  
Atom *  
);  
extern Colormap XCopyColormapAndFree (  
Display * ,  
Colormap  
);  
extern Colormap XCreateColormap (  
Display * ,  
Window ,  
Visual * ,  
int
```

# Código

```
);  
extern Cursor XCreatePixmapCursor (  
Display * ,  
Pixmap ,  
Pixmap ,  
XColor * ,  
XColor * ,  
unsigned int ,  
unsigned int  
);  
extern Cursor XCreateGlyphCursor (  
Display * ,  
Font ,
```

# Código

```
Font ,  
unsigned int ,  
unsigned int ,  
XColor const * ,  
XColor const *  
) ;  
extern Cursor XCreateFontCursor (  
Display * ,  
unsigned int  
) ;  
extern Font XLoadFont (  
Display * ,  
const char *
```

# Código

```
);  
extern GC XCreateGC (  
Display *,  
Drawable ,  
unsigned long ,  
XGCValues *  
);  
extern GContext XGContextFromGC (  
GC  
);  
extern void XFlushGC (  
Display * ,  
GC
```

# Código

```
);  
extern Pixmap XCreatePixmap (  
Display *,  
Drawable ,  
unsigned int ,  
unsigned int ,  
unsigned int  
);  
extern Pixmap XCreateBitmapFromData (  
Display * ,  
Drawable ,  
const char * ,  
unsigned int ,
```

# Código

```
unsigned int
);
extern Pixmap XCreatePixmapFromBitmapData (
Display *,
Drawable ,
char * ,
unsigned int ,
unsigned int ,
unsigned long ,
unsigned long ,
unsigned int
);
extern Window XCreateSimpleWindow (
```

# Código

```
Display * ,  
Window ,  
int ,  
int ,  
unsigned int ,  
unsigned int ,  
unsigned int ,  
unsigned long ,  
unsigned long  
);  
extern Window XGetSelectionOwner (  
Display * ,  
Atom
```



# Código

```
) ;  
extern Window XCreateWindow (  
Display * ,  
Window ,  
int ,  
int ,  
unsigned int ,  
unsigned int ,  
unsigned int ,  
int ,  
unsigned int ,  
Visual * ,  
unsigned long ,
```

# Código

```
XSetWindowAttributes *  
) ;  
extern Colormap * XListInstalledColormaps (  
Display * ,  
Window ,  
int *  
) ;  
extern char * * XListFonts (  
Display * ,  
const char * ,  
int ,  
int *  
) ;
```

# Código

```
extern char * * XListFontsWithInfo (
Display * ,
const char * ,
int ,
int * ,
XFontStruct * *
) ;
extern char * * XGetFontPath (
Display * ,
int *
) ;
extern char * * XListExtensions (
Display * ,
```

# Código

```
int *  
) ;  
extern Atom * XListProperties (  
Display * ,  
Window ,  
int *  
) ;  
extern XHostAddress * XListHosts (  
Display * ,  
int * ,  
int *  
) ;  
__attribute__ ( ( deprecated ) )
```

# Código

```
extern KeySym XKeycodeToKeysym (  
Display * ,  
KeyCode ,  
int  
) ;  
extern KeySym XLookupKeysym (  
XKeyEvent * ,  
int  
) ;  
extern KeySym * XGetKeyboardMapping (  
Display * ,  
KeyCode ,  
int ,
```

# Código

```
int *  
) ;  
extern KeySym XStringToKeysym (  
const char *  
) ;  
extern long XMaxRequestSize (  
Display *  
) ;  
extern long XExtendedMaxRequestSize (  
Display *  
) ;  
extern char * XResourceManagerString (  
Display *
```

# Código

```
) ;  
extern char * XScreenResourceString (  
Screen *  
) ;  
extern unsigned long XDisplayMotionBufferSize (  
Display *  
) ;  
extern VisualID XVisualIDFromVisual (  
Visual *  
) ;  
extern int XInitThreads (  
void  
) ;
```

# Código

```
extern void XLockDisplay (  
Display *  
) ;  
extern void XUnlockDisplay (  
Display *  
) ;  
extern XExtCodes * XInitExtension (  
Display * ,  
const char *  
) ;  
extern XExtCodes * XAddExtension (  
Display *  
) ;
```



# Código

```
extern XExtData * XFindOnExtensionList (  
XExtData * * ,  
int  
) ;  
extern XExtData * * XEHeadOfExtensionList (  
XDataObject  
) ;  
extern Window XRootWindow (  
Display * ,  
int  
) ;  
extern Window XDefaultRootWindow (  
Display *
```

# Código

```
) ;  
extern Window XRootWindowOfScreen (  
Screen *  
) ;  
extern Visual * XDefaultVisual (  
Display * ,  
int  
) ;  
extern Visual * XDefaultVisualOfScreen (  
Screen *  
) ;  
extern GC XDefaultGC (  
Display * ,
```

# Código

```
int
) ;
extern GC XDefaultGCOfScreen (
Screen *
) ;
extern unsigned long XBlackPixel (
Display * ,
int
) ;
extern unsigned long XWhitePixel (
Display * ,
int
) ;
```

# Código

```
extern unsigned long XAllPlanes (
void
) ;
extern unsigned long XBlackPixelOfScreen (
Screen *
) ;
extern unsigned long XWhitePixelOfScreen (
Screen *
) ;
extern unsigned long XNextRequest (
Display *
) ;
extern unsigned long XLastKnownRequestProcessed (
```

# Código

```
Display *  
) ;  
extern char * XServerVendor (  
Display *  
) ;  
extern char * XDisplayString (  
Display *  
) ;  
extern Colormap XDefaultColormap (  
Display * ,  
int  
) ;  
extern Colormap XDefaultColormapOfScreen (  

```

# Código

```
Screen *  
) ;  
extern Display * XDisplayOfScreen (  
Screen *  
) ;  
extern Screen * XScreenOfDisplay (  
Display * ,  
int  
) ;  
extern Screen * XDefaultScreenOfDisplay (  
Display *  
) ;  
extern long XEventMaskOfScreen (
```

# Código

```
Screen *  
) ;  
extern int XScreenNumberOfScreen (   
Screen *  
) ;  
typedef int ( * XErrorHandler ) (   
Display * ,  
XErrorEvent *  
) ;  
extern XErrorHandler XSetErrorHandler (   
XErrorHandler  
) ;  
typedef int ( * XIOErrorHandler ) (
```

# Código

```
Display *  
) ;  
extern XIOErrorHandler XSetIOErrorHandler (  
XIOErrorHandler  
) ;  
extern XPixmapFormatValues * XListPixmapFormats (  
Display * ,  
int *  
) ;  
extern int * XListDepths (  
Display * ,  
int ,  
int *
```



# Código

```
);  
extern int XReconfigureWMWindow (  
Display * ,  
Window ,  
int ,  
unsigned int ,  
XWindowChanges *  
);  
extern int XGetWMProtocols (  
Display * ,  
Window ,  
Atom * * ,  
int *
```

# Código

```
);  
extern int XSetWMProtocols (  
Display *,  
Window ,  
Atom * ,  
int  
) ;  
extern int XIconifyWindow (  
Display * ,  
Window ,  
int  
) ;  
extern int XWithdrawWindow (  

```

# Código

```
Display * ,  
Window ,  
int  
) ;  
extern int XGetCommand (  
Display * ,  
Window ,  
char * * * ,  
int *  
) ;  
extern int XGetWMColormapWindows (  
Display * ,  
Window ,
```

# Código

```
Window * * ,  
int *  
) ;  
extern int XSetWMColormapWindows (  
Display * ,  
Window ,  
Window * ,  
int  
) ;  
extern void XFreeStringList (  
char * *  
) ;  
extern int XSetTransientForHint (
```

# Código

```
Display * ,  
Window ,  
Window  
) ;  
extern int XActivateScreenSaver (  
Display *  
) ;  
extern int XAddHost (  
Display * ,  
XHostAddress *  
) ;  
extern int XAddHosts (  
Display * ,
```

# Código

```
XHostAddress * ,  
int  
) ;  
extern int XAddToExtensionList (  
struct _XExtData * * ,  
XExtData *  
) ;  
extern int XAddToSaveSet (  
Display * ,  
Window  
) ;  
extern int XAllocColor (  
Display * ,
```

# Código

```
Colormap ,  
XColor *  
) ;  
extern int XAllocColorCells (  
Display * ,  
Colormap ,  
int ,  
unsigned long * ,  
unsigned int ,  
unsigned long * ,  
unsigned int  
) ;  
extern int XAllocColorPlanes (
```

# Código

```
Display * ,  
Colormap ,  
int ,  
unsigned long * ,  
int ,  
int ,  
int ,  
int ,  
unsigned long * ,  
unsigned long * ,  
unsigned long *  
) ;  
extern int XAllocNamedColor (
```



# Código

```
Display * ,  
Colormap ,  
const char * ,  
XColor * ,  
XColor *  
);  
extern int XAllowEvents (  
Display * ,  
int ,  
Time  
);  
extern int XAutoRepeatOff (  
Display *
```

# Código

```
) ;  
extern int XAutoRepeatOn (  
Display *  
) ;  
extern int XBell (  
Display * ,  
int  
) ;  
extern int XBitmapBitOrder (  
Display *  
) ;  
extern int XBitmapPad (  
Display *
```

# Código

```
);  
extern int XBitmapUnit (  
Display *  
);  
extern int XCellsOfScreen (  
Screen *  
);  
extern int XChangeActivePointerGrab (  
Display * ,  
unsigned int ,  
Cursor ,  
Time  
);
```

# Código

```
extern int XChangeGC (  
Display * ,  
GC ,  
unsigned long ,  
XGCValues *  
) ;  
extern int XChangeKeyboardControl (  
Display * ,  
unsigned long ,  
XKeyboardControl *  
) ;  
extern int XChangeKeyboardMapping (  
Display * ,
```

# Código

```
int ,  
int ,  
KeySym * ,  
int  
) ;  
extern int XChangePointerControl (  
Display * ,  
int ,  
int ,  
int ,  
int ,  
int  
) ;
```

# Código

```
extern int XChangeProperty (  
Display * ,  
Window ,  
Atom ,  
Atom ,  
int ,  
int ,  
const unsigned char * ,  
int  
) ;  
extern int XChangeSaveSet (  
Display * ,  
Window ,
```

# Código

```
int
);
extern int XChangeWindowAttributes (
Display * ,
Window ,
unsigned long ,
XSetWindowAttributes *
);
extern int XCheckIfEvent (
Display * ,
XEvent * ,
int ( * ) (
Display * ,
```

# Código

```
XEvent * ,  
XPointer  
) ,  
XPointer  
) ;  
extern int XCheckMaskEvent (  
Display * ,  
long ,  
XEvent *  
) ;  
extern int XCheckTypedEvent (  
Display * ,  
int ,
```



# Código

```
XEvent *  
) ;  
extern int XCheckTypedWindowEvent (  
Display * ,  
Window ,  
int ,  
XEvent *  
) ;  
extern int XCheckWindowEvent (  
Display * ,  
Window ,  
long ,  
XEvent *
```

# Código

```
);  
extern int XCirculateSubwindows (  
Display * ,  
Window ,  
int  
);  
extern int XCirculateSubwindowsDown (  
Display * ,  
Window  
);  
extern int XCirculateSubwindowsUp (  
Display * ,  
Window
```

# Código

```
);  
extern int XClearArea (  
Display * ,  
Window ,  
int ,  
int ,  
unsigned int ,  
unsigned int ,  
int  
) ;  
extern int XClearWindow (  
Display * ,  
Window
```

# Código

```
) ;  
extern int XCloseDisplay (  
Display *  
) ;  
extern int XConfigureWindow (  
Display * ,  
Window ,  
unsigned int ,  
XWindowChanges *  
) ;  
extern int XConnectionNumber (  
Display *  
) ;
```

# Código

```
extern int XConvertSelection (  
Display * ,  
Atom ,  
Atom ,  
Atom ,  
Window ,  
Time  
) ;  
extern int XCopyArea (  
Display * ,  
Drawable ,  
Drawable ,  
GC ,
```

# Código

```
int ,  
int ,  
unsigned int ,  
unsigned int ,  
int ,  
int  
) ;  
extern int XCopyGC (  
Display * ,  
GC ,  
unsigned long ,  
GC  
) ;
```

# Código

```
extern int XCopyPlane (  
Display * ,  
Drawable ,  
Drawable ,  
GC ,  
int ,  
int ,  
unsigned int ,  
unsigned int ,  
int ,  
int ,  
unsigned long  
) ;
```

# Código

```
extern int XDefaultDepth (
Display * ,
int
) ;
extern int XDefaultDepthOfScreen (
Screen *
) ;
extern int XDefaultScreen (
Display *
) ;
extern int XDefineCursor (
Display * ,
Window ,
```



# Código

```
Cursor
);
extern int XDeleteProperty (
Display * ,
Window ,
Atom
);
extern int XDestroyWindow (
Display * ,
Window
);
extern int XDestroySubwindows (
Display * ,
```

# Código

```
Window
);
extern int XDoesBackingStore (
Screen *
);
extern int XDoesSaveUnders (
Screen *
);
extern int XDisableAccessControl (
Display *
);
extern int XDisplayCells (
Display * ,
```

# Código

```
int
) ;
extern int XDisplayHeight (
Display * ,
int
) ;
extern int XDisplayHeightMM (
Display * ,
int
) ;
extern int XDisplayKeycodes (
Display * ,
int * ,
```

# Código

```
int *  
) ;  
extern int XDisplayPlanes (  
Display * ,  
int  
) ;  
extern int XDisplayWidth (  
Display * ,  
int  
) ;  
extern int XDisplayWidthMM (  
Display * ,  
int
```

# Código

```
);  
extern int XDrawArc (  
Display *,  
Drawable ,  
GC ,  
int ,  
int ,  
unsigned int ,  
unsigned int ,  
int ,  
int  
) ;  
extern int XDrawArcs (
```

# Código

```
Display * ,  
Drawable ,  
GC ,  
XArc * ,  
int  
) ;  
extern int XDrawImageString (  
Display * ,  
Drawable ,  
GC ,  
int ,  
int ,  
const char * ,
```

# Código

```
int
);
extern int XDrawImageString16 (
Display * ,
Drawable ,
GC ,
int ,
int ,
const XChar2b * ,
int
);
extern int XDrawLine (
Display * ,
```

# Código

```
Drawable ,  
GC ,  
int ,  
int ,  
int ,  
int  
) ;  
extern int XDrawLines (  
Display * ,  
Drawable ,  
GC ,  
XPoint * ,  
int ,
```



# Código

```
int
);
extern int XDrawPoint (
Display * ,
Drawable ,
GC ,
int ,
int
);
extern int XDrawPoints (
Display * ,
Drawable ,
GC ,
```

# Código

```
XPoint * ,  
int ,  
int  
) ;  
extern int XDrawRectangle (  
Display * ,  
Drawable ,  
GC ,  
int ,  
int ,  
unsigned int ,  
unsigned int  
) ;
```

# Código

```
extern int XDrawRectangles (  
Display * ,  
Drawable ,  
GC ,  
XRectangle * ,  
int  
) ;  
extern int XDrawSegments (  
Display * ,  
Drawable ,  
GC ,  
XSegment * ,  
int
```

# Código

```
);  
extern int XDrawString (  
Display *,  
Drawable ,  
GC ,  
int ,  
int ,  
const char * ,  
int  
) ;  
extern int XDrawString16 (  
Display * ,  
Drawable ,
```

# Código

```
GC ,  
int ,  
int ,  
const XChar2b * ,  
int  
) ;  
extern int XDrawText (  
Display * ,  
Drawable ,  
GC ,  
int ,  
int ,  
XTextItem * ,
```

# Código

```
int
) ;
extern int XDrawText16 (
Display * ,
Drawable ,
GC ,
int ,
int ,
XTextItem16 * ,
int
) ;
extern int XEnableAccessControl (
Display *
```

# Código

```
) ;  
extern int XEventsQueued (  
Display * ,  
int  
) ;  
extern int XFetchName (  
Display * ,  
Window ,  
char * *  
) ;  
extern int XFillArc (  
Display * ,  
Drawable ,
```

# Código

```
GC ,  
int ,  
int ,  
unsigned int ,  
unsigned int ,  
int ,  
int  
);  
extern int XFillArcs (  
Display * ,  
Drawable ,  
GC ,  
XArc * ,
```



# Código

```
int
) ;
extern int XFillPolygon (
Display * ,
Drawable ,
GC ,
XPoint * ,
int ,
int ,
int
) ;
extern int XFillRectangle (
Display * ,
```

# Código

```
Drawable ,  
GC ,  
int ,  
int ,  
unsigned int ,  
unsigned int  
) ;  
extern int XFillRectangles (  
Display * ,  
Drawable ,  
GC ,  
XRectangle * ,  
int
```

# Código

```
) ;  
extern int XFlush (  
Display *  
) ;  
extern int XForceScreenSaver (  
Display * ,  
int  
) ;  
extern int XFree (  
void *  
) ;  
extern int XFreeColormap (  
Display * ,
```

# Código

```
Colormap
);
extern int XFreeColors (
Display * ,
Colormap ,
unsigned long * ,
int ,
unsigned long
);
extern int XFreeCursor (
Display * ,
Cursor
);
```

# Código

```
extern int XFreeExtensionList (
char * *
) ;
extern int XFreeFont (
Display * ,
XFontStruct *
) ;
extern int XFreeFontInfo (
char * * ,
XFontStruct * ,
int
) ;
extern int XFreeFontNames (
```

# Código

```
char * *  
) ;  
extern int XFreeFontPath (  
char * *  
) ;  
extern int XFreeGC (  
Display * ,  
GC  
) ;  
extern int XFreeModifiermap (  
XModifierKeymap *  
) ;  
extern int XFreePixmap (
```

# Código

```
Display * ,  
Pixmap  
) ;  
extern int XGeometry (  
Display * ,  
int ,  
const char * ,  
const char * ,  
unsigned int ,  
unsigned int ,  
unsigned int ,  
int ,  
int ,
```

# Código

```
int * ,  
int * ,  
int * ,  
int *  
);  
extern int XGetErrorDatabaseText (  
Display * ,  
const char * ,  
const char * ,  
const char * ,  
char * ,  
int  
);
```



# Código

```
extern int XGetErrorText (  
Display * ,  
int ,  
char * ,  
int  
) ;  
extern int XGetFontProperty (  
XFontStruct * ,  
Atom ,  
unsigned long *  
) ;  
extern int XGetGCValues (  
Display * ,
```

# Código

```
GC ,  
unsigned long ,  
XGCValues *  
) ;  
extern int XGetGeometry (  
Display * ,  
Drawable ,  
Window * ,  
int * ,  
int * ,  
unsigned int * ,  
unsigned int * ,  
unsigned int * ,
```

# Código

```
unsigned int *  
) ;  
extern int XGetIconName (  
Display * ,  
Window ,  
char * *  
) ;  
extern int XGetInputFocus (  
Display * ,  
Window * ,  
int *  
) ;  
extern int XGetKeyboardControl (
```

# Código

```
Display * ,  
XKeyboardState *  
) ;  
extern int XGetPointerControl (  
Display * ,  
int * ,  
int * ,  
int *  
) ;  
extern int XGetPointerMapping (  
Display * ,  
unsigned char * ,  
int
```

# Código

```
);  
extern int XGetScreenSaver (  
Display * ,  
int * ,  
int * ,  
int * ,  
int *  
);  
extern int XGetTransientForHint (  
Display * ,  
Window ,  
Window *  
);
```

# Código

```
extern int XGetWindowProperty (  
Display * ,  
Window ,  
Atom ,  
long ,  
long ,  
int ,  
Atom ,  
Atom * ,  
int * ,  
unsigned long * ,  
unsigned long * ,  
unsigned char * *)
```

# Código

```
);  
extern int XGetWindowAttributes (  
Display * ,  
Window ,  
XWindowAttributes *  
);  
extern int XGrabButton (  
Display * ,  
unsigned int ,  
unsigned int ,  
Window ,  
int ,  
unsigned int ,
```

# Código

```
int ,  
int ,  
Window ,  
Cursor  
);  
extern int XGrabKey (  
Display * ,  
int ,  
unsigned int ,  
Window ,  
int ,  
int ,  
int
```



# Código

```
);  
extern int XGrabKeyboard (  
Display * ,  
Window ,  
int ,  
int ,  
int ,  
Time  
) ;  
extern int XGrabPointer (  
Display * ,  
Window ,  
int ,
```

# Código

```
unsigned int ,  
int ,  
int ,  
Window ,  
Cursor ,  
Time  
);  
extern int XGrabServer (  
Display *  
);  
extern int XHeightMMOfScreen (  
Screen *  
);
```

# Código

```
extern int XHeightOfScreen (
Screen *
) ;
extern int XIfEvent (
Display * ,
XEvent * ,
int ( * ) (
Display * ,
XEvent * ,
XPointer
) ,
XPointer
) ;
```

# Código

```
extern int XImageByteOrder (  
Display *  
) ;  
extern int XInstallColormap (  
Display * ,  
Colormap  
) ;  
extern KeyCode XKeysymToKeycode (  
Display * ,  
KeySym  
) ;  
extern int XKillClient (  
Display * ,
```

# Código

```
XID
);
extern int XLookupColor (
Display * ,
Colormap ,
const char * ,
XColor * ,
XColor *
);
extern int XLowerWindow (
Display * ,
Window
);
```

# Código

```
extern int XMapRaised (  
Display * ,  
Window  
) ;  
extern int XMapSubwindows (  
Display * ,  
Window  
) ;  
extern int XMapWindow (  
Display * ,  
Window  
) ;  
extern int XMaskEvent (  

```

# Código

```
Display * ,  
long ,  
XEvent *  
);  
extern int XMaxCmapsOfScreen (  
Screen *  
);  
extern int XMinCmapsOfScreen (  
Screen *  
);  
extern int XMoveResizeWindow (  
Display * ,  
Window ,
```

# Código

```
int ,  
int ,  
unsigned int ,  
unsigned int  
);  
extern int XMoveWindow (  
Display * ,  
Window ,  
int ,  
int  
);  
extern int XNextEvent (  
Display * ,
```



# Código

```
XEvent *  
) ;  
extern int XNoOp (  
Display *  
) ;  
extern int XParseColor (  
Display * ,  
Colormap ,  
const char * ,  
XColor *  
) ;  
extern int XParseGeometry (  
const char * ,
```

# Código

```
int * ,  
int * ,  
unsigned int * ,  
unsigned int *  
);  
extern int XPeekEvent (  
Display * ,  
XEvent *  
);  
extern int XPeekIfEvent (  
Display * ,  
XEvent * ,  
int ( * ) (
```

# Código

```
Display * ,  
XEvent * ,  
XPointer  
) ,  
XPointer  
) ;  
extern int XPending (  
Display *  
) ;  
extern int XPlanesOfScreen (  
Screen *  
) ;  
extern int XProtocolRevision (  

```

# Código

```
Display *  
) ;  
extern int XProtocolVersion (  
Display *  
) ;  
extern int XPutBackEvent (  
Display * ,  
XEvent *  
) ;  
extern int XPutImage (  
Display * ,  
Drawable ,  
GC ,
```

# Código

```
XImage * ,  
int ,  
int ,  
int ,  
int ,  
unsigned int ,  
unsigned int  
);  
extern int XQLength (  
Display *  
);  
extern int XQueryBestCursor (  
Display * ,
```

# Código

```
Drawable ,  
unsigned int ,  
unsigned int ,  
unsigned int * ,  
unsigned int *  
);  
extern int XQueryBestSize (  
Display * ,  
int ,  
Drawable ,  
unsigned int ,  
unsigned int ,  
unsigned int * ,
```

# Código

```
unsigned int *  
) ;  
extern int XQueryBestStipple (  
Display * ,  
Drawable ,  
unsigned int ,  
unsigned int ,  
unsigned int * ,  
unsigned int *  
) ;  
extern int XQueryBestTile (  
Display * ,  
Drawable ,
```

# Código

```
unsigned int ,  
unsigned int ,  
unsigned int * ,  
unsigned int *  
);  
extern int XQueryColor (  
Display * ,  
Colormap ,  
XColor *  
);  
extern int XQueryColors (  
Display * ,  
Colormap ,
```



# Código

```
XColor * ,  
int  
) ;  
extern int XQueryExtension (  
Display * ,  
const char * ,  
int * ,  
int * ,  
int *  
) ;  
extern int XQueryKeymap (  
Display * ,  
char [ 32 ]
```