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/* GEM demonstrations from the 'C'
programming language */
/* Written using the Metacomco Lattice C
compiler */
/* By Steve Pedler for Page 6 Magazine,
England */
/* Version 0.2 March 13 1987 */

```

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/* Lattice include files */

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```

#include "stdio.h"
#include "osbind.h"

```

```

/* ----- declarations,
constants -----*/
#define WORD short int
#define SOLID 1

```

```

char resalert[]="[3][ Use only low
resolution ! when running this program
][ OK ]",
hello_box[]="[1][
Demonstrations of GEM in 'C' ! by Steve
Pedler ! for Page 6 Magazine 1987 ][ OK
]";

```

```

WORD contrl[ 12 ], intin[ 256 ],
ptsin[ 256 ],
intout[ 256 ], ptsout[ 256],
work_handle, dum, temp_col,
old_pal[ 16 ], new_pal[ 16 ],
button,
col_index[]={ 0, 2, 3, 6, 4,
7, 5, 8, 9, 10, 11, 14, 12, 15, 13, 1
},

```

```

demol();

int finished;

```

```

/* ----- program starts
here -----*/
main()
{

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    WORD c;

    init_gem();
    while( finished !=0 ){
        c=demol();
        if( c==3 ){
            finished=0; break;
        }
    }
    finish_gem();
}

```

```

/* ----- initialisation
-----*/

```

```

init_gem()
{
    int i;
    WORD resol;

    finished=1;
    appl_init(); /*
initialise GEM */
    work_handle=graf_handle( &dum,
&dum, &dum, &dum ); /* get the device
handle */
    for( i=1; i<10; ++i )
        intin[ i ]=1;
    intin[ 10 ]=2;
    v_opnvwk( intin, &work_handle,
intout ); /* open workstation */
    for( i=0; i<16; old_pal[ i
]=Setcolor( i++, -1 ));
    for( i=0; i<16; ++i )
        new_pal[ i ]=old_pal[ i
];

    resol=Getrez();
    if( resol>0 ){

```

```

        form_alert( 1, resalert
);
        finished=0;
    } else {
        form_alert( 1, hello_box
);
    }
}

```

```

/* ----- demonstration #1
-----*/

```

```

/* draw a circle in quadrants and
animate by colour rotation */
WORD demol()
{

```

```

    int delay, count, step, i;
    WORD starta, stopa, a, c;

```

```

    Setpalette( new_pal );
    v_hide_c( work_handle );
    v_clrwk( work_handle );
    vsf_interior( work_handle,

```

```

SOLID );
    starta=0;
    stopa=200;
    for( i=0; i<3; ++i ){
        for( a=1; a<7; a++ ){
            vsf_color(
work_handle, col_index[ a ] );
            v_pieslice(
work_handle, 160, 100, 80, starta, stopa
);

```

```

                starta=starta+200;
                stopa=stopa+200;
            }
        }
    }

```

```

    vst_height( work_handle, 6,
&dum, &dum, &dum, &dum );
    v_gtext( work_handle, 8, 185,
"Demo 1 - Spinning disc" );
    c=0;
    count=5000;
    step=100;
    while( c<2 ){
        temp_col=new_pal[ 6 ];
        for( a=5; a>0; a-- ){
            new_pal[ a+1
]=new_pal[ a ];

```

```

        }
        new_pal[ 1 ]=temp_col;
        Setpalette( new_pal );
        for( delay=1;
delay<count; ++delay )
            /* don't miss
this semicolon! */
            graf_mkstate( &dum, &dum,
&button, &dum );
        if( button==1 ) {
            count=count+step;
            if( count>30000 ){
count<300 ){ step=step * -1;
                count=count+ste

```

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P;
            }
        }
        if( button>1 ) c=button;
    }
    return( c );
}

```

```

/* ----- exit the GEM
application
-----*/

```

```

finish_gem()
{
    WORD reset;
    reset=0;
    v_show_c( work_handle,
reset);
    Setpalette( old_pal );
    v_clsvwk( work_handle );
    appl_exit();
}

```