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## Printing a Bit Dump of Floating Point Types

The following example illustrates a C programming technique that is not necessarily Macintosh-specific.

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// Printing a bit dum of floating point types
// The following example shows a way to do a bit dump
// of the floating point types float and double

#include <stdio.h>

union {
    float      x;
    unsigned char c[sizeof(float)];
} fnum;

union {
    double      x;
    unsigned char c[sizeof(double)];
} dnum;

main()
{
    int i,j;

    fnum.x = 1.008;
    dnum.x = fnum.x;

    printf("float = %g\n", fnum.x);
    for (i = 0; i < 4; i++) {
        for (j = 0; j < 8; j++)
            printf("%c", (fnum.c[i] & j ? '1' : '0'));
        printf("|");
    }
    printf("\n");

    printf("double = %g\n", dnum.x);
    for (i = 0; i < 10; i++) {
        for (j = 0; j < 8; j++)
            printf("%c", (dnum.c[i] & j ? '1' : '0'));
        printf("|");
    }
    printf("\n");
}
```