

SINGLE PRECISION FORMAT

```
#include <stdio.h>

void printBinary(int n, int i)
{
    int k;
    for (k = i - 1; k >= 0; k--) {
        if ((n >> k) & 1)
            printf("1");
        else
            printf("0");
    }
}

typedef union {
    float f;
    struct
    {
        unsigned int mantissa : 23;
        unsigned int exponent : 8;
        unsigned int sign : 1;
    } raw;
} myfloat;

void printIEEE(myfloat var)
{
    printf("%d | ", var.raw.sign);
    printBinary(var.raw.exponent, 8);
    printf(" | ");
    printBinary(var.raw.mantissa, 23);
    printf("\n");
}

int main()
{
    myfloat var;
```

```
var.f = 1259.125;

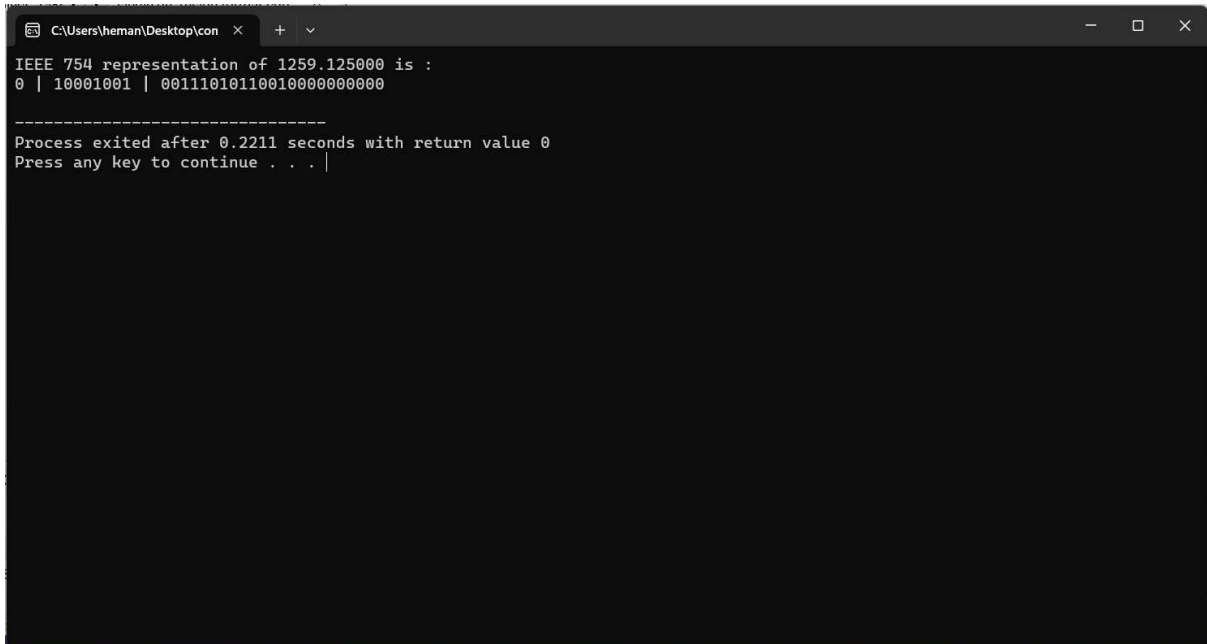
printf("IEEE 754 representation of %f is : \n",
    var.f);

printIEEE(var);

return 0;

}
```

Output



```
C:\Users\heman\Desktop\con  X  +  v

IEEE 754 representation of 1259.125000 is :
0 | 10001001 | 001110101100100000000000

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Process exited after 0.2211 seconds with return value 0
Press any key to continue . . . |
```