SINGLE PRECISION REPRESENTATION:

PROGRAM:

#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",

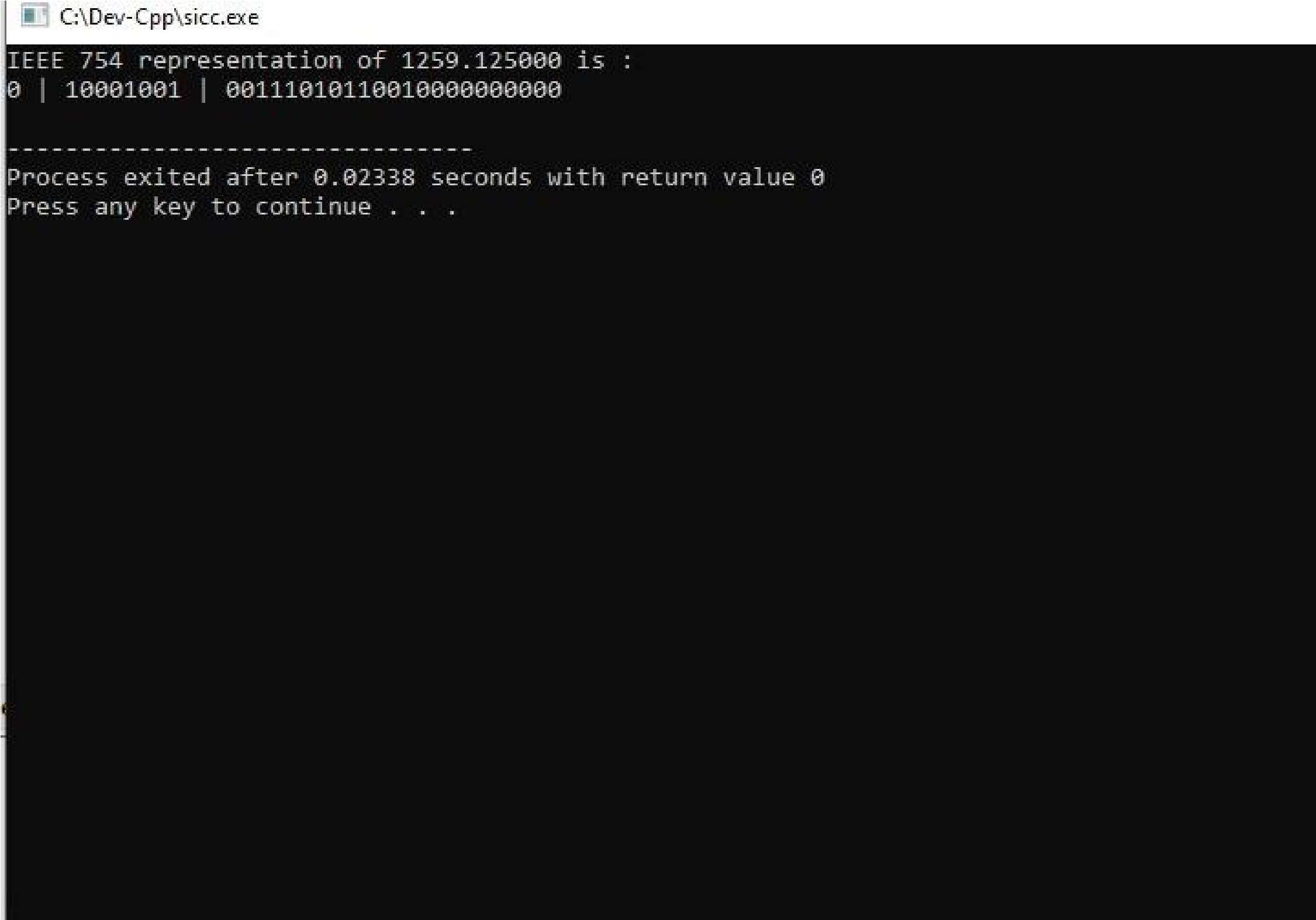
var.f);

printIEEE(var);

return 0;

}

INPUT & OUTPUT:



**RESULT:** Thus the program was executed successfully using DevC++.