**Exp 35 Single Precision Representation**

#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:**

