

```
#include <stdio.h>
```

```
//1 0 yazdirmek icin bu fonksiyonu yaziyoruz
```

```
void printBinary(unsigned int n, int i)
```

```
{
```

```
    int j;
```

```
    for (j = i - 1; j >= 0; j--) {
```

```
        if ((n >> j) & 1)
```

```
            printf("1");
```

```
        else
```

```
            printf("0");
```

```
    }
```

```
}
```

```
//Mantissa exponent sign tanımlamak için yapıyoruz
```

```
typedef union {
```

```
    float f;
```

```
    struct
```

```
{
```

```
        unsigned int mantissa : 23;
```

```
    unsigned int exponent : 8;
```

```
    unsigned int sign : 1;
```

```
    } raw;
```

```
} myfloat;
```

```
typedef union {
```

```
    double f;
```

```
    struct
```

```
    {
```

```
        unsigned long long fraction : 52;
```

```
        unsigned int exponent : 11;
```

```
        unsigned int sign : 1;
```

```
    } raw;
```

```
} mydouble;
```

```
// fonksiyonumuzu yaziyoruz
```

```
void printFloatIEEEF(myfloat var)
```

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

```
void printDoubleIEEEF(mydouble var)
```

```
{  
  
    printf("%d | ", var.raw.sign);  
    printBinary(var.raw.exponent, 11);  
    printf(" | ");  
    printBinary(var.raw.fraction, 53);  
    printf("\n");  
}
```

```
int main() {
```

```
    // Degiskenleri veriyoruz
```

```
    double sayi;
```

```
myfloat floatSayi;  
mydouble doubleSayi;
```

```
// Kullanici sayi alma , sayi harici girilirse hata almamak icin  
printf("Donusturmek istediginiz sayiyi giriniz: ");  
while (scanf("%lf", &sayi) != 1)  
{  
    printf("Donusturmek istediginiz sayiyi giriniz: ");  
    while (getchar() != '\n');// sadece sayi degilse hata vermesin  
    tekrardan calistirsın diye  
}
```

```
floatSayi.f = sayi;  
doubleSayi.f = sayi;
```

```
int secim;// menu olusturmak icin tanimladik
```

```
do // do while sebebi 1 2 girilsin aksi halde programi  
kapatmasin menu tekrarlasın  
{  
    printf("--- Menu ---\n");
```

```
printf("1 - float\n");
printf("2 - double\n");
printf("Seciminiz:");
scanf("%d", &secim);
printf("\n\n");

switch (secim)
{
case 1: printfFloatIEEEF(floatSayi);
        break;
case 2: printfDoubleIEEEF(doubleSayi);
        break;
default: printf("Yanlis Secim. Tekrar giriniz. \n");
        break;
}
} while (secim != 1 || secim != 2);
}
```