

```
main.c
75 printf("Enter the number to convert: ");
76 scanf("%s", str);
77 printf("Enter the base of the input number: ");
78 scanf("%d", &from_base);
79
80 printf("Enter the base to convert to: ");
81 scanf("%d", &to_base);
82
83 if (is_valid_number(str, from_base)) {
84     int decimal = toDeci(str, from_base);
85
86     if (decimal != -1) {
87         printf("Decimal equivalent: %d\n", decimal);
88         toBase(decimal, to_base);
89     }
90 } else {
91     printf("Error: Invalid input\n");
92 }
93
94 return 0;
95 }
96
```

input

Enter the number to convert: 123-45-6
Enter the base of the input number: 44
Enter the base to convert to: 23
Error: Invalid input

```
main.c
1 #include <stdio.h>
2 #include <string.h>
3 #include <stdbool.h>
4
5 int val(char c) {
6     if (c >= '0' && c <= '9')
7         return (int)c - '0';
8     else
9         return (int)c - 'A' + 10;
10 }
11
12 bool is_valid_number(char *str, int base) {
13     if (base < 2) {
14         return false;
15     }
16     for (int i = 0; i < strlen(str); i++) {
17         if (val(str[i]) >= base) {
18             return false;
19         }
20     }
21     return true;
22 }
23
```

input

Enter the base of the input number: 46
Enter the base to convert to: 23
Decimal equivalent: 73231470
Result: B8FJHM

```
def float_bin(number, places):  
    wholenumber = int(number)   
    decimalnumber = float("0." + decimalnumber)  
  
    # Convert the decimal part to a float between 0 and 1  
    decimalnumber = float("0." + decimalnumber)  
  
    # Initialize the result string with the binary representation of the whole part  
    res = bin(wholenumber).lstrip("0b") + "."  
  
    # Iterate to calculate the binary representation of the decimal part  
    for _ in range(places):  
        # Multiply the decimal part by 2  
        decimalnumber *= 2  
  
        # Split the result into whole and decimal parts  
        whole, dec = str(decimalnumber).split(".")  
  
        # Add the whole part to the result string  
        res += whole  
  
        # Update the decimal part for the next iteration  
        decimalnumber -= int(whole)  
  
    return res  
  
# Take user input for the floating-point number and desired decimal places  
n = float(input("Enter floating Number: "))  
p = int(input("Enter the number of decimal places of the result: "))  
  
# Call the function and print the result  
print(float_bin(n, places=p))
```

```
def float_bin(number, places):  
    wholenumber = int(number)   
    decimalnumber = float("0." + decimalnumber)  
  
    # Convert the decimal part to a float between 0 and 1  
    decimalnumber = float("0." + decimalnumber)  
  
    # Initialize the result string with the binary representation of the whole part  
    res = bin(wholenumber).lstrip("0b") + "."  
  
    # Iterate to calculate the binary representation of the decimal part  
    for _ in range(places):  
        # Multiply the decimal part by 2  
        decimalnumber *= 2  
  
        # Split the result into whole and decimal parts  
        whole, dec = str(decimalnumber).split(".")  
  
        # Add the whole part to the result string  
        res += whole  
  
        # Update the decimal part for the next iteration  
        decimalnumber -= int(whole)  
  
    return res  
  
# Take user input for the floating-point number and desired decimal places  
n = float(input("Enter floating Number: "))  
p = int(input("Enter the number of decimal places of the result: "))  
  
# Call the function and print the result  
print(float_bin(n, places=p))
```

Enter floating Number: 26.625
Enter the number of decimal places of the result: 14
11010.1010000000000000