#include <stdio.h>

#include <string.h>

int main()

{

char hex[17], bin[65] = "";

int i = 0;

/\* Input hexadecimal number from user \*/

printf("Enter any hexadecimal number: ");

gets(hex);

/\* Extract first digit and find binary of each hex digit \*/

for(i=0; hex[i]!='\0'; i++)

{

switch(hex[i])

{

case '0':

strcat(bin, "0000");

break;

case '1':

strcat(bin, "0001");

break;

case '2':

strcat(bin, "0010");

break;

case '3':

strcat(bin, "0011");

break;

case '4':

strcat(bin, "0100");

break;

case '5':

strcat(bin, "0101");

break;

case '6':

strcat(bin, "0110");

break;

case '7':

strcat(bin, "0111");

break;

case '8':

strcat(bin, "1000");

break;

case '9':

strcat(bin, "1001");

break;

case 'a':

case 'A':

strcat(bin, "1010");

break;

case 'b':

case 'B':

strcat(bin, "1011");

break;

case 'c':

case 'C':

strcat(bin, "1100");

break;

case 'd':

case 'D':

strcat(bin, "1101");

break;

case 'e':

case 'E':

strcat(bin, "1110");

break;

case 'f':

case 'F':

strcat(bin, "1111");

break;

default:

printf("Invalid hexadecimal input.");

}

}

printf("Hexademial number = %s\n", hex);

printf("Binary number = %s", bin);

return 0;

}