```c
#include <stdio.h>

void displayMenu();
char input(char* message);
void switchStatement(char input);

int main(void)
{
    char choice='a';

    while(choice!='c' && choice!='C')
    {
        displayMenu();
        choice=input("\nChoice: ");
        if(choice<'A')
            return 1;

        switchStatement(choice);
    }

    return 0;
}

void displayMenu()
/*Displays text menu for user*/
{
    printf("\na) Arithmetic Operations");
    printf("\nb) Bitwise Operations");
    printf("\nc) Exit");
}

char input(char* message)
/*Asks user for inputed number after message
    Error Checks within a range
    Return -1 for error or users input*/
{
    char* error="\nPlease try again: ";
    char* terminate="\nProgram terminated\n";

    char n;
    printf("%s",message);
    scanf(" %c",&n);

    if(!(n>='a' && n<='c') && !(n>='A' && n<='C'))
    {
        printf("%s",error);
        scanf(" %c",&n);
    }
    if(!(n>='a' && n<='c') && !(n>='A' && n<='C'))
    {
        printf("%s",terminate);
        return 'A'-1;
    }
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    return n;
}

void switchStatement(char input)
/*Takes input char and chooses the appropriate operations
    Does not return a value*/
{
    switch(input)
    {
        case 'a':
        case 'A':
        {
            /*data*/
            unsigned short in1=0,hold1;

            /*input and error check*/
            printf("\nInput positive number: ");
            scanf("%u",&in1);
            int a=0, bin[16]={0};
            hold1=in1;


            /*analyze and store*/
            while(in1!=0)
            {
                bin[a]=in1%2;
                in1=in1/2;
                a++;
            }

            /*output result*/
            a=15;
            while(a>=0)
            {
                printf("%d",bin[a]);
                if(a%4==0)
                    printf(" ");
                a--;
            }
                printf(" = %u\n",hold1);
            break;
        }
        case 'b':
        case 'B':
        {
            /*data*/
            unsigned short in2=0;

            /*input and error check*/
            printf("\nInput positive number: ");
            scanf("%u",&in2);
            unsigned short mask=32768;
            int i=0;
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            /*analyze and store*/
            for(i=0; i<16;i++)
            {
                if ((in2 & mask)==0)
                    printf("0");
                else
                    printf("1");
                if(i%4==3)
                    printf(" ");
                mask = mask >> 1;
            }

            /*output result
            while(b>=0)
            {
                printf("%d",bin2[b]);
                if(b%4==0)
                    printf(" ");
                b--;
            }*/
                printf(" = %u\n",in2);

        }
            break;
        case 'c':
        case 'C':
            printf("\nExitting program\n\n");
            break;
        default:
            //should never happen because of prior analysis
            printf("error");
            break;
    }
}
```