

## Assignment 2

U20CS110

Krishna Pandey

Q1:

Ans:

```
//main.c

#include <stdio.h>
#include "1.h"

int main()
{
    int a, b;
    printf("Enter dividend a in decimal number: ");
    scanf("%d", &a);
    printf("Enter divisor b in decimal number: ");
    scanf("%d", &b);

    division_unsigned_binary_numbers_U20CS110(a, b);
}
```

1.h

```
//1.h (header file)

#include <stdio.h>

int binAddition(int a, int b)
{
    int c;
    while (b != 0)
    {
        c = (a & b) << 1;

        a = a ^ b;
        b = c;
    }
    return a;
}
```

```

int binSubtraction(int a, int b)
{
    int carry;

    b = binAddition(~b, 1);

    while (b != 0)
    {
        carry = (a & b) << 1;

        a = a ^ b;
        b = carry;
    }
    return a;
}

void division_unsigned_binary_numbers_U20CS110(int a, int b)
{
    int count = 0;
    int rem;

    while (a >= b)
    {
        a = binSubtraction(a, b);
        count++;
    }
    rem = a;
    printf("The answer is %d with a remainder of %d ", count, rem);
}

```

Output:

```

PS C:\Krishna Pandey> cd "c:\Krishna Pandey\c by vs\CO\assign2\" ; if ($?) { gcc main.c -o main } ; if ($?) { .\main }
Enter dividend a in decimal number: 38
Enter divisor b in decimal number: 5
The answer is 7 with a remainder of 3
PS C:\Krishna Pandey\c by vs\CO\assign2> 

```

