JAIN
DEEMED-TO-BE UNIVERSITY

Programming in C

Lab File

Experiments No.: 14 to 18

Subject Code: 16BCA1C05L
Class: I Year I Semester (BCA)

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Experiment 14:

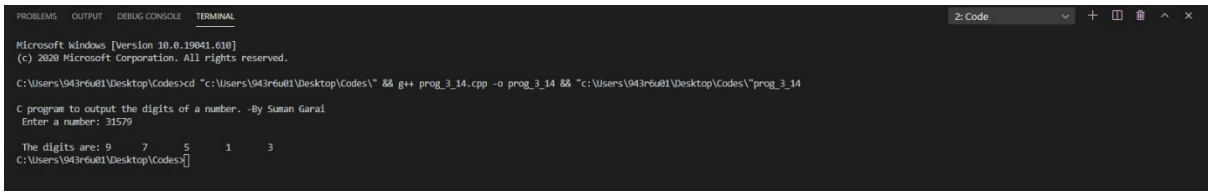
C program to output the digits of a number (while).

Code:

```
#include<stdio.h>
main()
{
    int n, r;
    printf("\nC program to output the digits of a
    number. -By Suman Garai");
    printf("\n Enter a number: ");
    scanf("%d",&n);
    printf("\n The digits are: ");
    while (n!=0)
    {
        r = n % 10;
        printf("%d\t",r);
        n = n / 10;
    }

}
```

Output:



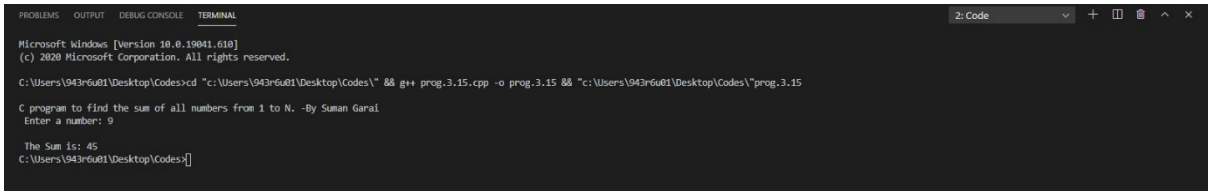
Experiment 15:

C program to find the sum of all numbers from 1 to (while)

Code:

```
#include<stdio.h>
main()
{
    int n, i = 1, s = 0;
    printf("\nC program to find the sum of all
    numbers from 1 to N. -By Suman Garai");
    printf("\n Enter a number: ");
    scanf("%d",&n);
    while (i<=n)
    {
        s = s + i;
        ++i;
    }
    printf("\n The Sum is: %d", s);
}
```

Output:



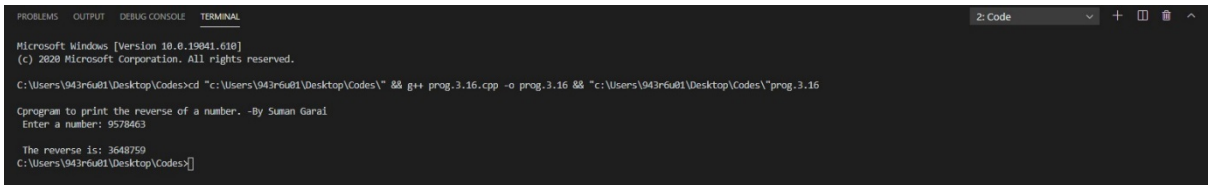
Experiment 16:

C program to reverse a number (while).

Code:

```
#include<stdio.h>
main()
{
    int n, r, s = 0;
    printf("\nCprogram to print the reverse of a
    number. -By Suman Garai");
    printf("\n Enter a number: ");
    scanf("%d",&n);
    while (n!=0)
    {
        r = n % 10;
        s = s * 10 + r;
        n = n / 10;
    }
    printf("\n The reverse is: %d", s);
}
```

Output:



Experiment 17:

C program to calculate compound interest (do-while).

Code:

```
#include<stdio.h>
main()
{
    int i = 0;
    float pi, p, y, r;
    printf("\nCprogram to print the the Compund
Interest. -By Suman Garai");
    printf("\nEnter The PRINCIPAL Ammount: ");
    scanf("%f",&p);
    printf("Enter The NUMBER 0f YEAR(S): ");
    scanf("%f",&y);
    printf("Enter The RATE 0f INTEREST(%): ");
    scanf("%f",&r);
    do
    {
        pi = p * r / 100;
        p = p + pi;
        i++;
    } while (i<y);
    printf("The C0MP0UND INTEREST: %f\n",p);
}
```

Output:

Experiment 18a:

C program to convert from decimal to binary (do-while).

Code:

```
#include <stdio.h>
main()
{
    int num,dec,bin,r,k;
    printf("\nCprogram to convert a number from
decimal to binary. -By Suman Garai");
    printf("\nEnter a Decimal number: ");
    scanf("%d", &num);
    bin = 0;
    k = 1;
    do
    {
        r = num % 2;
        num = num / 2;
        bin = bin + r * k;
        k = k * 10;
    } while (num!=0);
    printf("\nBinary Number : %d", bin);
}
```

Output:

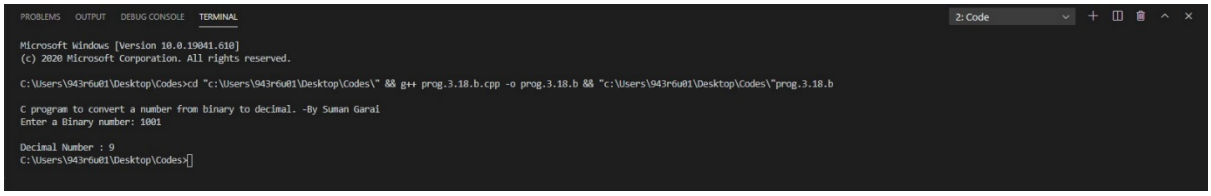
Experiment 18b:

C program to convert from binary to decimal (do-while).

Code:

```
#include <stdio.h>
#include <math.h>
main()
{
    int num,dec = 0,r,k,i = 0;
    printf("\nC program to convert a number from
binary to decimal. -By Suman Garai");
    printf("\nEnter a Binary number: ");
    scanf("%d", &num);
    do
    {
        r = num % 10;
        num = num / 10;
        dec = dec + r * pow(2, i);
        i++;
    } while (num!=0);
    printf("\nDecimal Number : %d", dec);
}
```

Output:



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