DAY-1 (Data-Structures) Lab Session

EXP - 1

TITLE : C Program to Find A Given Number is Even or Odd

PROGRAM :

```
#include <stdio.h>
int main()
{
	int a;
	printf("Enter The Number:");
	scanf("%d",&a);
	if(a%2==0)
	{
		printf("Entered Number is Even");
	}
	else
	{
		printf("Entered Number is Odd");
	}
}
```

INPUT AND OUTPUT :

```
Enter The Number:15
Entered Number is Odd
--------------------------------
Process exited after 3.65 seconds with return value 0
Press any key to continue . . .
```

RESULT :

The C Program for Finding Whether a given Number is Even or Odd is Compiled and Executed Using Dev-C++ and the Output is Verified.

DAY-1 (Data-Structures) Lab Session

EXP - 2

TITLE : C Program to Print the Sum of First 'N' Numbers

PROGRAM :

```
#include <stdio.h>
int main()
{
        int sum=0,n,i;
        printf("Enter The range:");
        scanf("%d",&n);
        for(i=1;i<=n;i++)
        {
                sum=sum+i;
        }
        printf("The Sum of First %d Numbers is
%d",n,sum);
}
```

INPUT AND OUTPUT :

```
Enter The range:10
The Sum of First 10 Numbers is 55
--------------------------------
Process exited after 1.807 seconds with return value 0
Press any key to continue . . .
```

RESULT :

The C Program for Finding Sum of First 'N' Numbers is Compiled and Executed Using Dev-C++ and the Output is Verified.

DAY-1 (Data-Structures) Lab Session

EXP - 3

TITLE : C Program to Find the Sum of Even Numbers in First 'N' Numbers

PROGRAM :

```
#include <stdio.h>
int main()
{
        int sum=0,n,i;
        printf("Enter The range:");
        scanf("%d",&n);
        for(i=1;i<=n;i++)
        {
                if(i%2==0)
                { sum=sum+i;}
        }
        printf("The Sum of Even Numbers in First
%d Numbers is %d",n,sum);
}
```

INPUT AND OUTPUT :

```
Enter The range:10
The Sum of Even Numbers in First 10 Numbers is 30
--------------------------------

Process exited after 2.747 seconds with return value 0
Press any key to continue . . .
```

RESULT :

The C Program for Finding Sum Of Even Numbers in First 'N' Numbers is Compiled and Executed Using Dev-C++ and the Output is Verified.

DAY-1 (Data-Structures) Lab Session

EXP - 4

TITLE : C Program to Print the Sum of Odd Numbers in First 'N' Numbers

PROGRAM :

```
#include <stdio.h>
int main()
{
        int sum=0,n,i;
        printf("Enter The range:");
        scanf("%d",&n);
        for(i=1;i<=n;i++)
        {
                if(i%2!=0)
                { sum=sum+i;}
        }
        printf("The Sum of Odd Numbers in First
%d Numbers is %d",n,sum);
}
```

INPUT AND OUTPUT :

```
Enter The range:10
The Sum of Odd Numbers in First 10 Numbers is 25
--------------------------------
Process exited after 1.542 seconds with return value 0
Press any key to continue . . .
```

RESULT :

The C Program for Finding Sum of Odd Numbers in First 'N' Numbers is Compiled and Executed Using Dev-C++ and the Output is Verified.

DAY-1 (Data-Structures) Lab Session

TITLE : C Program to Find the Factorial of a Given Number Without Recursion

EXP - 5

PROGRAM :

```
#include <stdio.h>

int main()

{

        int fact=1,n;

        printf("Enter The Number to find its
Factorial:");

        scanf("%d",&n);

        int k=n;

        while(n!=0)

        {

                fact=fact*n;

                n--;

        }

        printf("The Factorial of the Given Number
is %d",fact);
```

INPUT AND OUTPUT :

```
Enter The Number to find its Factorial:5
The Factorial of the Given Number is 120
--------------------------------

Process exited after 2.056 seconds with return value 0
Press any key to continue . . .
```

RESULT :

The C Program for Finding the Factorial of Given Number without Recursive function is Compiled and Executed Using Dev-C++ and the Output is Verified.

DAY-1 (Data-Structures) Lab Session

TITLE : C Program to Find the Factorial of a Given Number Using Recursion EXP - 6

PROGRAM :

```
#include <stdio.h>
int fact(int n)
{
        int f;
        if(n==1)
        {
                return 1;
        }
        else
        {
                f=n*fact(n-1);
        }
        return f;
}
int main()
{
        int n;
        printf("Enter The Number to Find its Factorial:");
        scanf("%d",&n);
        printf("The Factorial of %d is %d",n,fact(n));}}
```

INPUT AND OUTPUT :

```
Enter The Number to find its Factorial:5
The Factorial of the Given Number is 120
--------------------------------
Process exited after 2.056 seconds with return value 0
Press any key to continue . . .
```

RESULT :

The C Program for Finding the Factorial of Given Number without Recursive function is Compiled and Executed Using Dev-C++ and the Output is Verified.

DAY-1 (Data-Structures) Lab Session

EXP - 7

TITLE : C Program to Print Fibonacci Series Upto 'N' Range Without Recursion

PROGRAM :

```
#include <stdio.h>
int main()
{
	int a=0,b=1,c=0,n;
	printf("Enter The Series Range:");
	scanf("%d",&n);
	while(n!=0)
	{
		printf("%d ",a);
		a=b+c;
		b=c;
		c=a;
		n--;
	}
}
```

INPUT AND OUTPUT :

```
Enter The Series Range:5
0 1 1 2 3
--------------------------------
Process exited after 5.799 seconds with return value 0
Press any key to continue . . .
```

RESULT :

The C Program for Printing Fibonacci Series without using Recursive function is Compiled and Executed Using Dev-C++ and the Output is Verified.

DAY-1 (Data-Structures) Lab Session

EXP - 8

TITLE : C Program to Find the Factorial of a Given Number Using Recursion

PROGRAM :

```
#include <stdio.h>
int fib(int n,int a,int b, int c)
{
        if(n>1)
        {
                printf("%d ",c);
                a=b+c;
                b=c;
                c=a;
                n--;
                fib(n,a,b,c);
        }
        else
        {
                printf("%d ",c);
        }
}
int main()
{
        int a;
        printf("Enter The Range of Series:");
        scanf("%d",&a);
        fib(a,0,1,0);
}
```

INPUT AND OUTPUT :

```
Enter The Series Range:5
0 1 1 2 3
--------------------------------
Process exited after 5.799 seconds with return value 0
Press any key to continue . . .
```

RESULT :

The C Program for Finding the Factorial of Given Number Using Recursive function is Compiled and Executed Using Dev-C++ and the Output is Verified.

DAY-1 (Data-Structures) Lab Session

EXP - 9

TITLE : C Program to Reverse a Given Number

PROGRAM :

```
#include <stdio.h>
int main()
{
	int a,b=0;
	printf("Enter The Number:");
	scanf("%d",&a);
	while(a!=0)
	{
		b=b*10+a%10;
		a/=10;
	}
	printf("The Reversed Number is %d",b);
}
```

INPUT AND OUTPUT :

```
Enter The Number:1478
The Reversed Number is 8741
--------------------------------
Process exited after 9.3 seconds with return value 0
Press any key to continue . . .
```

RESULT :

The C Program to Reverse a Number is Compiled and Executed Using Dev-C++ and the Output is Verified.

DAY-1 (Data-Structures) Lab Session

EXP - 10

TITLE : C Program to Find the Given Number is Palindrome or Not.

PROGRAM :

```
#include <stdio.h>
int main()
{
	int a,b=0;
	printf("Enter The Number:");
	scanf("%d",&a);
	int c=a;
	while(a!=0)
	{
		b=b*10+a%10;
		a/=10;
	}
	if(c==b){
	printf("The Number is Palindrome");}
	else
	{
		printf("The Number is Not a Palindrome");
	}
}
```

INPUT AND OUTPUT :

```
Enter The Number:141
The Number is Palindrome
--------------------------------
Process exited after 1.852 seconds with return value 0
Press any key to continue . . .
```

RESULT :

The C Program for Finding a Given Number is Palindrome or Not is Compiled and Executed Using Dev-C++ and the Output is Verified.

DAY-1 (Data-Structures) Lab Session

EXP - 11

TITLE : C Program to Find the Given Number is an Armstrong Number or Not.

PROGRAM :

```
#include <stdio.h>
int main()
{
	int a,b=0,c=0;
	printf("Enter The Number:");
	scanf("%d",&a);
	int d=a;
	while(a!=0)
	{
		c=a%10;
		b=b+(c*c*c);
		a/=10;
	}
	if(b==d)
	{
		printf("The Number is an Armstrong Number");
	}
	else
	{
		printf("The Number is Not an Armstrong Number");
	}
}
```

INPUT AND OUTPUT :

```
Enter The Number:153
The Number is an Armstrong Number
--------------------------------
Process exited after 2.524 seconds with return value 0
Press any key to continue . . .
```

RESULT :

The C Program for Finding the Factorial of Given Number without Recursive function is Compiled and Executed Using Dev-C++ and the Output is Verified.