***Exercise 1 –*** *Find the factorial of any given number. An example would be as follows:*

Enter the value of N: 6

The factorial of 6 is 720

*Program –*

#include<stdio.h>

int factorial(int n)

{

if(n==0)

{

return 1;

}

else

{

return n\*factorial(n-1);

}

}

int main()

{

int n;

printf("Enter the value of N: ");

scanf("%d",&n);

if(n<0)

{

printf("Invalid");

}

else

{

printf("The factorial of %d is %d",n,factorial(n));

}

return 0;

}

*Output –*

Enter the value of N: 6

The factorial of 6 is 720

Enter the value of N: -3

Invalid

***Exercise 2 –*** *Print the Fibonacci series. An example would be as follows:*

Enter the value of N: 5

The series is as follows: 0, 1, 1, 2, 3

*Program –*

#include<stdio.h>

int fibonacci(int n)

{

if(n==0 || n==1)

{

return n;

}

else

{

return (fibonacci(n-1)+fibonacci(n-2));

}

}

int main()

{

int n,i,m=0;

printf("Enter the value of N: ");

scanf("%d",&n);

if(n<0)

{

printf("Invalid");

}

else

{

printf("The series is as follows: ");

for(i=1;i<=n;i++)

{

printf("%d ",fibonacci(m));

m++;

}

}

return 0;

}

*Output –*

Enter the value of N: 5

The series is as follows: 0 1 1 2 3

***Exercise 3 –*** *Find the GCD of two numbers. An example would be as follows:*

Enter two integer values: 6 10

GCD of 6 and 10 is 2

*Program –*

#include<stdio.h>

int gcd(int a,int b)

{

if(a==0)

{

return b;

}

else if(b==0)

{

return a;

}

else if (a>b)

{

return gcd(a-b,b);

}

else

{

return gcd(a,b-a);

}

}

int main()

{

int a,b;

printf("Enter two integer values: ");

scanf("%d%d",&a,&b);

printf("GCD of %d and %d is %d",a,b,gcd(a,b));

return 0;

}

*Output –*

Enter two integer values: 6 10

GCD of 6 and 10 is 2

***Exercise 4–****Find the reverse any given number. An example would be as follows:*

Enter any integer number: 3571

Reverse of 3571 is 1753

*Program –*

#include<stdio.h>

int reverse(int a)

{

static int r=0,b=1;

if(a>0)

{

reverse(a/10);

r+=(a%10)\*b;

b\*=10;

}

return r;

}

int main()

{

int a;

printf("Enter any number: ");

scanf("%d",&a);

printf("Reverse of %d is %d.",a,reverse(a));

return 0;

}

*Output –*

Enter any integer number: 3571

Reverse of 3571 is 1753