DAY: 1 LAB PROGRAMS

main.c

Run

Output

```c
#include<stdio.h>
int main()
{
int first=0, second=1, i, n, sum=0;
printf("Enter the number of terms: ");
scanf("%d",&n);
printf("Fibonacci Series:");
printf("0 1");
for(i=2 ; i<n ; i++)
{
sum=first + second;
first=second;
second=sum;

printf(" %d",sum);
}
return 0;
}
```

```
/tmp/uL9Wz8sfQX.o
Enter the number of terms: 5
Fibonacci Series:0 1 1 2 3

=== Code Execution Successful ===
```

```c
#include <stdio.h>
int hcf(int n1, int n2);
int main() {
    int n1, n2;
    printf("Enter two positive integers: ");
    scanf("%d %d", &n1, &n2);
    printf("G.C.D of %d and %d is %d.", n1, n2, hcf(n1, n2));
    return 0;
}
int hcf(int n1, int n2) {
    if (n2 != 0)
        return hcf(n2, n1 % n2);
    else
        return n1;
}

```

```
/tmp/16k3Nx6nw2.o
Enter two positive integers: 2 3
G.C.D of 2 and 3 is 1.

=== Code Execution Successful ===
```

main.c

Run

Output

Clear

```c
#include <stdio.h>
int main() {
  int n;
  double arr[100];
  printf("Enter the number of elements (1 to 100): ");
  scanf("%d", &n);

  for (int i = 0; i < n; ++i) {
    printf("Enter number%d: ", i + 1);
    scanf("%lf", &arr[i]);
  }

  // storing the largest number to arr[0]
  for (int i = 1; i < n; ++i) {
    if (arr[0] < arr[i]) {
      arr[0] = arr[i];
    }
  }

  printf("Largest element = %.2lf", arr[0]);

  return 0;
}

```

```
/tmp/T2hKKHdQ7B.o
Enter the number of elements (1 to 100): 5
Enter number1: 5
Enter number2: 2
Enter number3: 3
Enter number4: 9
Enter number5: 4
Largest element = 9.00

=== Code Execution Successful ===
```

main.c

Run

```c
#include<stdio.h>
long int multiplyNumbers(int n);
int main() {
    int n;
    printf("Enter a positive integer: ");
    scanf("%d",&n);
    printf("Factorial of %d = %ld", n, multiplyNumbers(n));
    return 0;
}

long int multiplyNumbers(int n) {
    if (n>=1)
        return n*multiplyNumbers(n-1);
    else
        return 1;
}
```

Output

```
/tmp/ECxLfKOg7F.o
Enter a positive integer: 5
Factorial of 5 = 120

=== Code Execution Successful ===
```

```c
#include <stdio.h>

void recur(char [], char [], int);

int main()
{
    char str[30], str1[30];

    printf("Enter The String: ");
    scanf("%[^\n]s", str);
    recur(str, str1, 0);
    printf("Executed Successfully\n");
    printf("The input String: %s\n", str);
    printf("The Copied String: %s\n", str1);
    return 0;
}

void recur(char str[], char str1[], int index)
{
    str1[index] = str[index];
    if (str[index] == '\0')
        return;
    recur(str, str1, index + 1);
}
```

```
/tmp/uWHl5EDreA.o
Enter The String: apple
Executed Successfully
The input String: apple
The Copied String: apple


=== Code Execution Successful ===
```

```c
# include <stdio.h>
void reverse(char *str)
{
if (*str)
{
    reverse(str + 1);
    printf("%c", *str);
}
}
int main()
{
char a[] = "apple";
reverse(a);
return 0;
}
```

```
/tmp/fptb2HjfTi.o
elppa

=== Code Execution Successful ===
```

```c
#include <stdio.h>
int checkPrimeNumber(int number)
{
    int i, f = 1;
    for (i = 2; i <= number / 2; ++i)
    {
        if (number % i == 0)
        {
            f = 0;
            break;
        }
    }
    return f;
}
int main()
{
    int num1 = 2, num2 = 10, j, f;

    printf("Prime numbers between %d and %d are: ",
           num1, num2);
    for (j = num1; j < num2; ++j)
    {
        f = checkPrimeNumber(j);
        if (f == 1)
        {
            printf("%d ", j);
```

```
Prime numbers between 2 and 10 are: 2 3 5 7

=== Code Execution Successful ===
```

```c
#include <stdio.h>
#include <string.h>

void check(char [], int);

int main()
{
    char word[15];

    printf("Enter a word to check if it is a palindrome\n");
    scanf("%s", word);
    check(word, 0);

    return 0;
}

void check(char word[], int index)
{
    int len = strlen(word) - (index + 1);
    if (word[index] == word[len])
    {
        if (index + 1 == len || index == len)
        {
            printf("The entered word is a palindrome\n");
            return;
        }
```

```
Enter a word to check if it is a palindrome
malayalam
The entered word is a palindrome


=== Code Execution Successful ===
```

```c
#include <stdio.h>
void checkPrime(int N)
{
    int flag = 1;
    for (int i = 2; i <= N / 2; i++) {
        if (N % i == 0) {
            flag = 0;
            break;
        }
    }
    if (flag) {
        printf("The number %d is a Prime Number\n", N);
    }
    else {
        printf("The number %d is not a Prime Number\n", N);
    }
    return;
}
int main()
{
    int N = 546;
    checkPrime(N);
    return 0;
}
```

```
The number 546 is not a Prime Number


=== Code Execution Successful ===
```