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Department of Information Technology

Academic Year: 2023-24

Lab Work: Computer programming Paradigms Lab(CPPL) ITL303

Name of Student: Kumawat Rahul Gajanand
Class : SE-IT-1
Batch: I3
Rollno.: 51

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Experiment No. 01a : Write a program to print first 'n' terms of fibonacci series.

Theory:

Steps to implement the program:

-Defining a fibonacci function fibonacci_series(int n) which generates and prints fibonacci series up to 'n' terms. Initialize first_term and second_term to 0 and 1, respectively. Print a message indicating the number of terms to be printed.

-Looping to generate a series, Use a for loop to iterate 'n-2' times. Calculate the next term 'j' by adding first_term and second_term. Print the term 'j'. Update the first_term and second_term for the next iteration.

Program Code:

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

```
void     fibonacci_series(int n){
    int first_term = 0;
    int second_term = 1;
    printf("The first %d terms of fibonacci series are : ", n);
    printf("%d ", first_term);
    printf("%d ", second_term);

    // Looping for next elements
    for (int i = 0; i<n-2; i++){
        int j = (first_term+second_term);
        printf("%d ", j);
        first_term = second_term;
        second_term = j;
    }
    printf("\n \n \n ");
}


int main(){
    int n; // Number of terms in series entered by user
    printf("\n \nEnter the number of terms you want for fibonacci series : ");
    scanf("%d", &n);
    fibonacci_series(n);
    return 0;
}
```

Output:

```
Enter the number of terms you want for fibonnacci series : 7
The first 7 terms of fibonacci series are : 0 1 1 2 3 5 8




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

Conclusion:

-Understood the implementation of for loop, which is used for iterating a specific
number of times.
- Understood to define and call the functions.

Marks Obtained: