PROJECT PRESENTATION

TITLE :FIBONACCI SERIES AND BINARY SERACH USING RECURSION

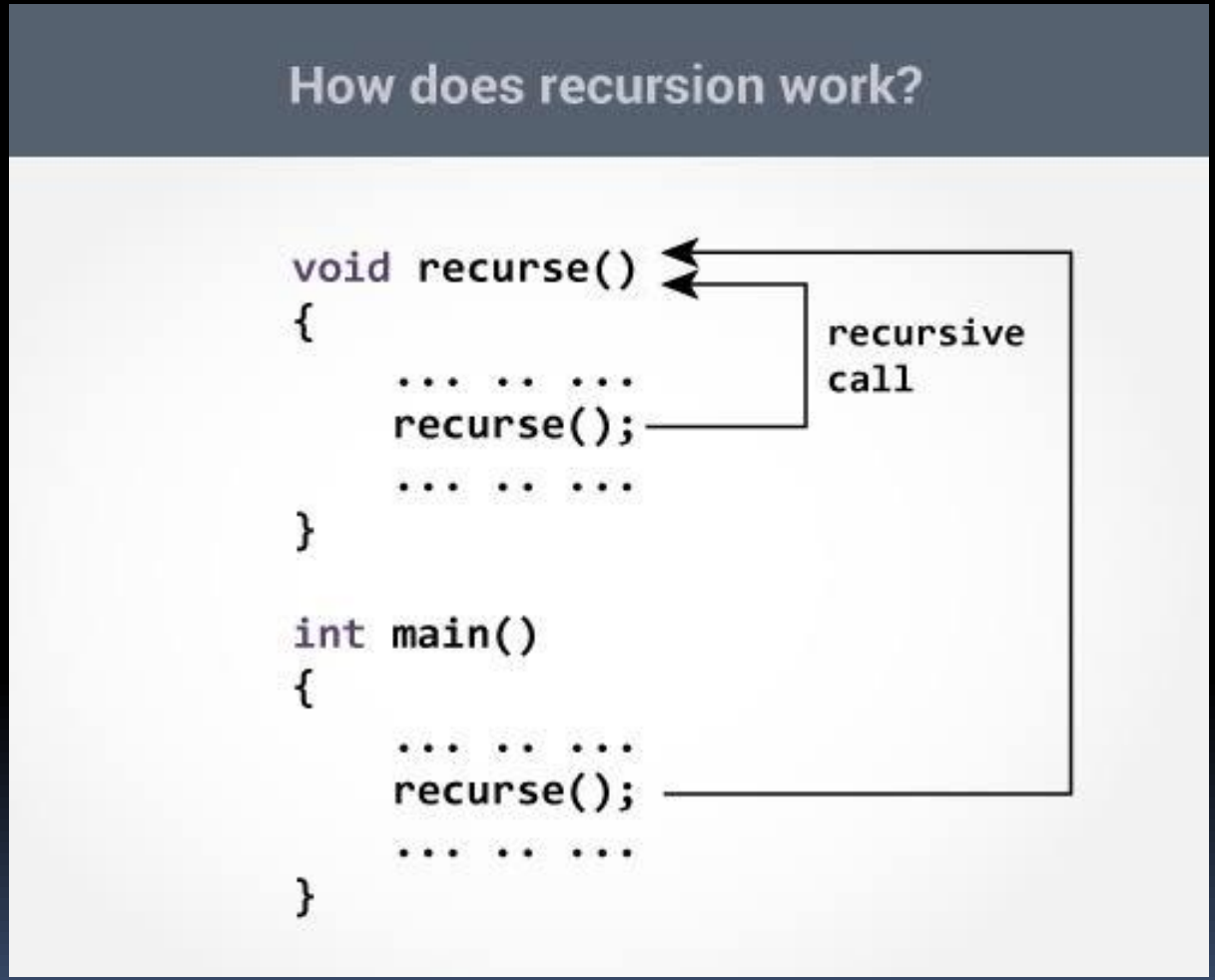
TEAM NAME: TEAM B

TEAM MEMBERS:ABIESH,CHANDRU,BHARATH, DANSON,ANJANA,DEEPA.

DEFINITION OF RECURSIVE FUNCTION

Any function that happens to call itself again and again (directly or indirectly), unless the program satisfies some specific condition/subtask is called a recursive function.

WORKING FLOW OF RECURSIVE FUNCTION

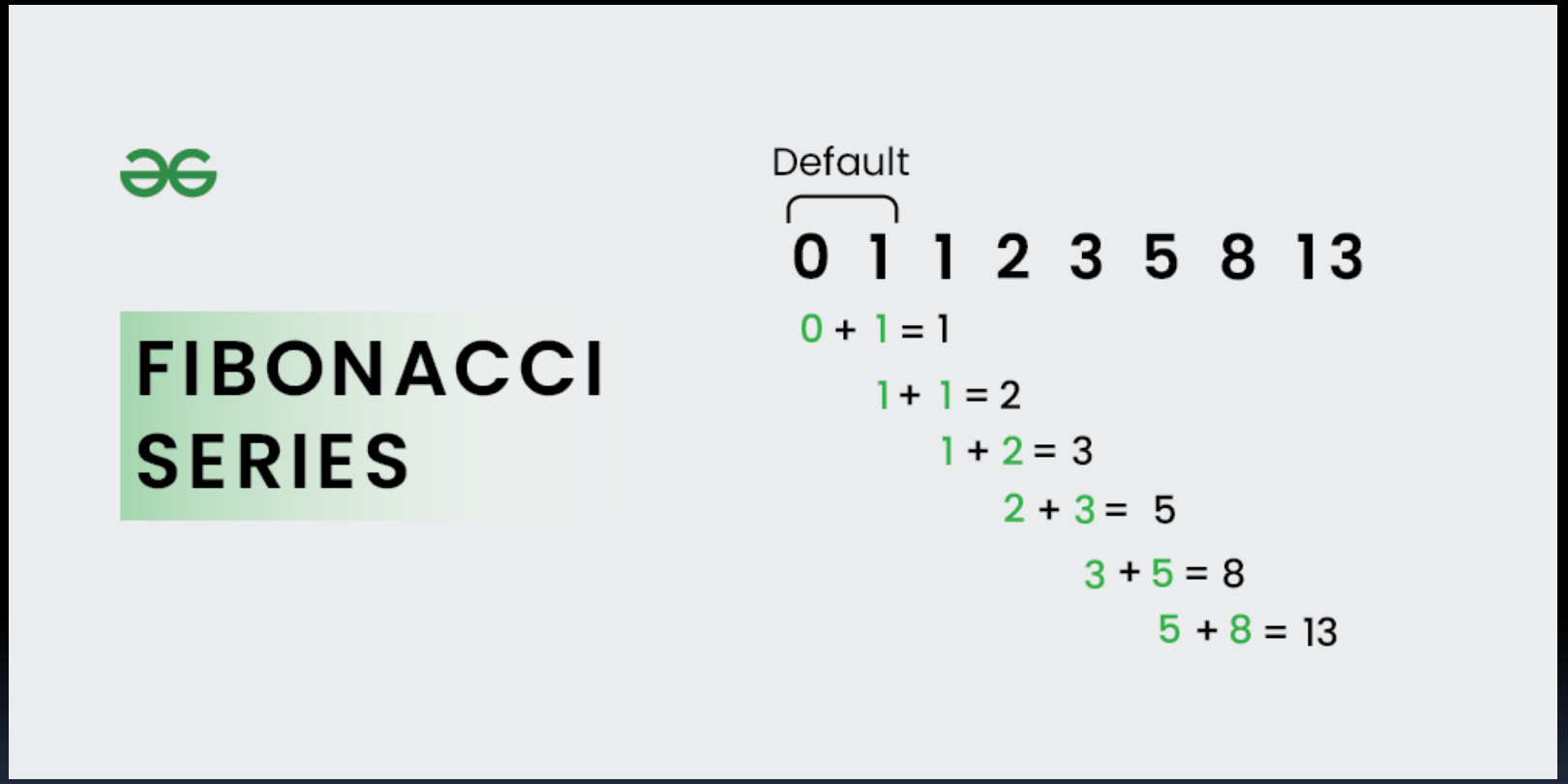


PROJECT OVERVIEW

PROJECT DESCRIPTION: TO FIND THE FIBONACCI SERIES FOR GIVEN NUMBER.

CONCEPTS USED: Function and conditional statements.

LOGIC OF FIBONACCI SERIES



C CODE

```
#include<stdio.h>
int fib(int n,int n1,int n2)
{
  int n3=n1+n2;
   n1=n2;
   n2=n3;
   printf("\n%d",n3);
   if(n>3)
   {
      fib(n-1,n1,n2);
   }
}
void main()
{
  int n,n1=0,n2=1;
   printf("enter the number of terms:");
   scanf("%d",&n);
   printf("\n%d\n %d",n1,n2);
   fib(n,n1,n2);
}
```

OUTPUT

INPUT:

Enter the number of terms: 5

OUTPUT:

0
1
1
2
3

PROJECT OVERVIEW

PROJECT DESCRIPTION:TO FIND THE TARGET ELEMENT IN AN ARRAY

CONCEPTS USED: FUNCTION AND ARRAY OF STRINGS..

LOGIC OF BINARY SEARCH

C CODE

```
#include <stdio.h>
int binarySearch(int  arr[], int  low, int  high, int  target)
{
   if (low <= high)
   {
      int  mid =( low + high) / 2;

 if (arr[mid] == target)
         return mid;

if (arr[mid] > target)
         return binarySearch(arr, low, mid - 1, target);
else
{
  return binarySearch(arr, mid + 1, high, target);
   } }


   return -1;
}
```

```
int main()
{
  int n, target;
  printf("Enter the number of elements in the array: ");
  scanf("%d", &n);
  int arr[n];
  printf("Enter %d elements in sorted order:\n", n);
  for (int i = 0; i < n; i++)
   {
      scanf("%d", &arr[i]);
   }
 printf("Enter the element to search: ");
 scanf("%d", &target);
int result = binarySearch(arr, 0, n - 1, target);
 if (result != -1)
      printf("Element found at index %d\n", result);
  else
      printf("Element not found\n");

  return 0;
}
```

OUTPUT:

INPUT:

ENTER THE NUMBER OF ELEMENTS IN THE ARRAY:5
ENTER 5 ELEMENTS IN SORTED ORDER:2 4 6 8 9
ENTER THE ELEMENT TO SEARCH: 6

OUTPUT:

The element is found at index 2

THANK YOU!!