Green University

BASIC C PROGRAMMING

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Submitted to

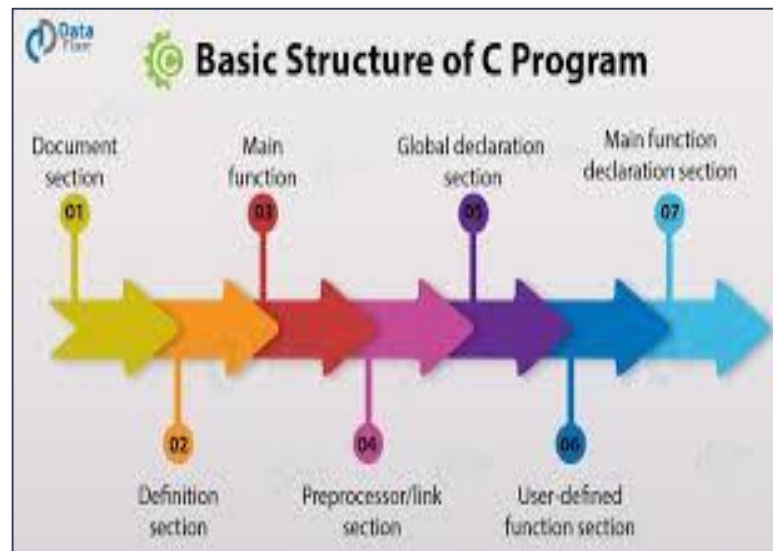**Md. Solaiman Mia**

Assistant Professor

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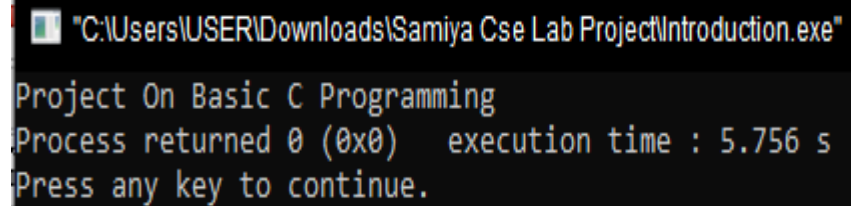# BASIC C PROGRAMMING

Basic Structure of a C Program

Basic Structure of C Program

CONTENTS

➢ Introduction

➢ Decision Making In C

➢ Functions

➢ Arrays and Pointers

➢ Strings

➢ Structures

➢ File

Introduction:

```c
#include <stdio.h>
int main() {
  // printf() displays the string inside quotation
  printf("Basic C Programming!");
  return 0;
}
```

Output

```
"C:\Users\USER\Downloads\Samiya Cse Lab Project\Introduction.exe"

Project On Basic C Programming
Process returned 0 (0x0)   execution time : 5.756 s
Press any key to continue.
```
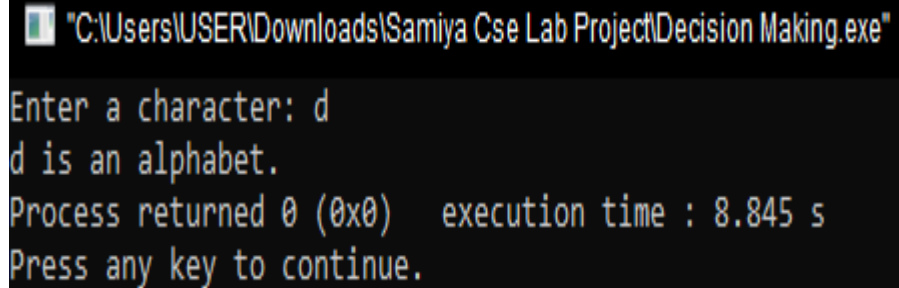
Decision Making In C

```c
#include <stdio.h>
int main() {
    char c;
    printf("Enter a character: ");
    scanf("%c", &c);

    if ((c >= 'a' && c <= 'z') || (c >= 'A' && c <= 'Z'))
        printf("%c is an alphabet.", c);
    else
        printf("%c is not an alphabet.", c);

    return 0;
}
```

OUTPUT

"C:\Users\USER\Downloads\Samiya Cse Lab Project\Decision Making.exe"

```
Enter a character: d
d is an alphabet.
Process returned 0 (0x0)   execution time : 8.845 s
Press any key to continue.
```
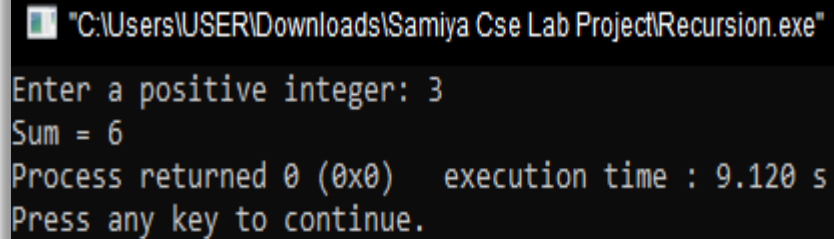
Functions

```c
#include <stdio.h>

int addNumbers(int n);

int main() {

  int num;
  printf("Enter a positive integer: ");
  scanf("%d", &num);
  printf("Sum = %d", addNumbers(num));
  return 0;
}
int addNumbers(int n) {
  if (n != 0)
    return n + addNumbers(n - 1);
  else
    return n;
}
```

Output

```
"C:\Users\USER\Downloads\Samiya Cse Lab Project\Recursion.exe"

Enter a positive integer: 3
Sum = 6
Process returned 0 (0x0)    execution time : 9.120 s
Press any key to continue.
```

Arrays and Pointers
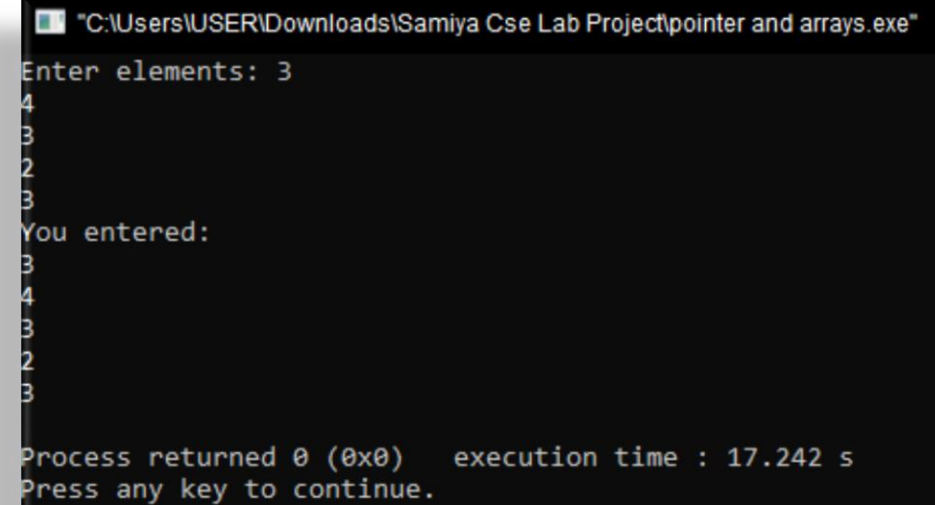
```c
#include <stdio.h>
int main() {
    int data[5];

    printf("Enter elements: ");
    for (int i = 0; i < 5; ++i)
        scanf("%d", data + i);

    printf("You entered: \n");
    for (int i = 0; i < 5; ++i)
        printf("%d\n", *(data + i));
    return 0;
}
```

OUTPUT

```
"C:\Users\USER\Downloads\Samiya Cse Lab Project\pointer and arrays.exe"
Enter elements: 3
4
3
2
3
You entered:
3
4
3
2
3

Process returned 0 (0x0)    execution time : 17.242 s
Press any key to continue.
```

STRINGS

```c
#include <stdio.h>
int main() {
    char s[] = "Programming is fun";
    int i;

    for (i = 0; s[i] != '\0'; ++i);

    printf("Length of the string: %d", i);
    return 0;
}
```

Output

"C:\Users\USER\Downloads\Samiya Cse Lab Project\Length of string.exe"

```
Length of the string: 18
Process returned 0 (0x0)    execution time : 5.549 s
Press any key to continue.
```

SUMMARY

➢ 'C' was developed by Dennis Ritchie in 1972.
➢ It is a robust language.
➢ It is a low programming level language close to machine language
➢ It is widely used in the software development field.
➢ It is a procedure and structure oriented language.
➢ It has the full support of various operating systems and hardware platforms.
➢ Many compilers are available for executing programs written in 'C'.
➢ A compiler compiles the source file and generates an object file.
➢ A linker links all the object files together and creates one executable file.
➢ It is highly portable.

THANQ YOU