

# Shri G.S Institute of Technology and Science

## CO24497 : PROGRAMMING PRACTICES

### Mini project

November-2022

## Project Report

### 1 Objective of Project:-

- This mini project is just a basic guide for C language.
- It's just a try to make it user-friendly with the best possible indentation to make it as much as visible.

#### Included Chapter:-

- Header Files in C
- Basic Syntax
- How to print
- Different types of Data-Types
- Reserved Key-words
- Operators
- Arrays
- Loops
- Pointer
- Functions
- Practice Sets

The main objective of this mini project is to make users familiar with C language.....

### 2 Function Description:-

There are 11 functions, 8 sub-functions, and 1 main function  
Each function is defined as a Unique chapter.

#### Chapter-1:- Header files in C

- It includes all header files.

#### Chapter-2:- Basic Syntax

- This chapter describes the basic syntax and all needed information required for C.

#### Chapter-3:- How to print

- This chapter describes how C language prints giving data terminal.
- In this chapter there are three methods for printing in C.

#### Chapter-4:- Different types of Data-Types

- This chapter describes different types of data types.

#### Chapter-5:- Reserved Key-words

- In this chapter there is the list of reserved keywords
- Reserved key word are those keywords which can't be used for declaration name for datatype.

#### Chapter-6:- Operators

- In this chapter all kind of operator that are used in c is discussed.

#### Chapter-7:- Arrays

- In this chapter definition and declaration of arrays are discus.

#### Chapter-8:- Loops

- There are three kind of loops that is For loop,While loop,do-While loop all are disscus in this chapter.

#### Chapter-9:- Pointers

- Different kinds of defination and its part are define in this chapter.

#### Chapter-10:- Functions

- How can we use function in C are define here .

#### Chapter-11:- Practice-set

- It's just a implementation of above chapters.....

### 3 GDB screen shoots :-

```
PS C:\Users\Divyanshu jain\Desktop\Coding journey\Projects\Mini project college> gcc -g Main.c  
PS C:\Users\Divyanshu jain\Desktop\Coding journey\Projects\Mini project college> ./a.exe  
  
Welcome to the Basic C guid  
  
Enter your name :  
Divyanshu jain  
Define your self:-  
its me  
File created and saved successfully. :)  
  
C is a general-purpose, procedural, imperative computer programming language.  
C is the most widely used computer language. It keeps fluctuating at number one scale of popularity along with Java programming language, which is also e  
qually popular and most widely used among modern software programmers.  
  
The main features of C Language are:-  
  
->Easy to learn  
->Structured language  
->It produces efficient programs  
->It can handle low-level activities  
->It can be compiled on a variety of computer platforms  
  
Choss which chapter you want to read:-  
  
1. Header files  
2. Basic syntax  
3. How to print  
4. Datatypes  
5. Reserved keywords  
6. Operators  
  
Choss which chapter you want to read:-  
  
Enter your choice:-  
0  
  
Thank you for using your guid Divyanshu jain  
  
Have a nice day  
  
PS C:\Users\Divyanshu jain\Desktop\Coding journey\Projects\Mini project college> gdb a.exe  
GNU gdb (GDB) 7.6.1  
Copyright (C) 2013 Free Software Foundation, Inc.  
License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.html>  
This is free software: you are free to change and redistribute it.  
There is NO WARRANTY, to the extent permitted by law. Type "show copying"  
and "show warranty" for details.  
This GDB was configured as "mingw32".  
For bug reporting instructions, please see:  
-<http://www.gnu.org/software/gdb/bugs/>...  
Reading symbols from c:\Users\Divyanshu jain\Desktop\Coding journey\Projects\Mini project college\a.exe...done.  
(gdb) break main  
Breakpoint 1 at 0x401471: file Main.c, line 41.  
(gdb) run  
Starting program: C:\Users\Divyanshu jain\Desktop\Coding journey\Projects\Mini project college/a.exe  
[New Thread 32920.0x1638]  
[New Thread 32920.0x50e4]  
[New Thread 32920.0x7ba0]  
[New Thread 32920.0x27d8]  
  
Breakpoint 1, main (argc=1, argv=0xfffff1608) at Main.c:41  
41 printf("\n\n\n")  
(gdb) n  
Welcome to the Basic C guid\n\n\n\n";
```

```
Windows PowerShell x Settings x + -
C is a general-purpose, procedural, imperative computer programming language.
C is the most widely used computer language. It keeps fluctuating at number one scale of popularity along with Java programming language, which is also e
qually popular and most widely used among modern software programmers.

84 printf("The main features of C language are:-\n\n");
(gdb) n
The main features of C language are:-

85 printf("-->Easy to learn\n-->Structured language\n-->It produces efficient programs\n-->It can handle low-level activities\n-->It can be compiled
on a variety of computer platforms\n\n"); // Features
(gdb) n
-->Easy to learn
-->Structured language
-->It produces efficient programs
-->It can handle low-level activities
-->It can be compiled on a variety of computer platforms

86 printf("Choss which chapter you want to read:-\n\n");
(gdb) n
Choss which chapter you want to read:-

87 printf("1. Header files\n2. Basic syntax\n3. How to print\n4. Datatypes\n5. Reserved keywords\n6. Operators\n7. Arrays\n8. Loops\n9. Pointer\
\n10. Functions\n11. Practice set\n\n"); // Chapeter
(gdb) n
1. Header files
2. Basic syntax
3. How to print
4. Datatypes
5. Reserved keywords
6. Operators
7. Arrays
8. Loops
9. Pointer
10. Functions
11. Practice set

5. Reserved keywords
6. Operators
7. Arrays
8. Loops
9. Pointer
10. Functions
11. Practice set

90 printf("Enter your choice:-\n");
(gdb) n
Enter your choice:-
91 scanf("%d", &choice);
(gdb) n
2
93 while (choice != 0)
(gdb) n
96 switch (choice)
(gdb) print choice
$1 = 2
(gdb) n
102 basicSyntax();
(gdb) n

Basic syntax :-

#include<Header_Filename>

int main(int argc, char const *argv[]){
    printf("Hello World\n");\\printing hello world
    return 0;
}

-->Here we 1st need to import Header files
```

```
Windows PowerShell x Settings x + -
(gdb) n

0. For Quite
1. Header files
2. Basic syntax
3. How to print
4. Datatypes
5. Reserved keywords
6. Operators
7. Arrays
8. Loops
9. Pointer
10. Functions
11. Practice set

136         printf("\n\nChoss which chapter you want to read:-\n\n");
(gdb) n

Choss which chapter you want to read:-

137         printf("Enter your choice:-\n");
(gdb) n
Enter your choice:-
138         scanf("%d", &choice);
(gdb) n
0
93         while (choice != 0)
(gdb) print choice
$2 = 0
(gdb) n
140         printf("\n\nThank you for using your guid %s\n\n", name);
(gdb) n

136         printf("\n\nChoss which chapter you want to read:-\n\n");
(gdb) n

Choss which chapter you want to read:-

137         printf("Enter your choice:-\n");
(gdb) n
Enter your choice:-
138         scanf("%d", &choice);
(gdb) n
0
93         while (choice != 0)
(gdb) print choice
$2 = 0
(gdb) n
140         printf("\n\nThank you for using your guid %s\n\n", name);
(gdb) n

Thank you for using your guid

141         printf("\n\nHave a nice day\n\n");
(gdb) n

Have a nice day

142         return 0;
(gdb) n
143     }
(gdb) n
0x00401288 in __register_frame_info ()
(gdb) n
Single stepping until exit from function __register_frame_info,
which has no line number information.
0x0040128a in __register_frame_info ()

17°C
Haze
Windows PowerShell x Settings x + -
17°C
Haze
Windows PowerShell x Settings x + -
```