**BASAVARAJESHWARI GROUP OF INSTITUTIONS**

# Ballari Institute of Technology & Management

# AUTONOMOUS INSTITUTE UNDER VISVESVARAYYATECHNOLOGICALUNIVERSITY,JNANASANGAMA,BELAGAV,I590018



## Internship Report On

**“C Programming Language”**

Submitted in partial fulfillment of the requirements for the award of degree of

**Bachelor of Engineering In**

# COMPUTERSCIENCE&ENGINEERING

**Submitted by**

**Raghavendra**

**3BR21CS125**

# Internship Carried Out

# By

**“DESTINATION TECHNOLOGIES”**

**IIT,GUWAHATI**

**Internal Guide External Guide**

**Mr. Mr.Anirudha gaikwad**

**Asst Professor Technical Trainer**

**Department of CSE**

**BITM, Ballari**

### BALLARI INSTITUTE OF TECHNOLOGY& MANAGEMENT

NAAC Accredited Institution\*

**(Recognized by Govt.of Karnataka, approved byAICTE,NewDelhi&AffiliatedtoVisvesvarayaTechnologicalUniversity,Belagavi)**

**"Jnana Gangotri" Campus, No.873/2, Ballari-Hospet Road, Allipur,Ballar1-583104(Karnataka)(India)**

**Ph:08392–237100/237190,Fax:08392–237197**

# 2022-2023

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**Ballari583104(Karnataka)(India)**

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# DEPARTMENTOFCOMPUTERSCIENCEANDENGINEERING

**CERTIFICATE**

This is to certify that the Internship entitled **“TITLE”** has been successfully completed by **Raghavendra** bearing USN **3BR21CS125** a bonafide student of Ballari Institute of Technology and Management, Ballari. For the partial fulfillment of the requirements for the

**Bachelor’s Degree in Computer Science and Engineering** of theVISVESVARAYA TECHNOLOGICAL UNIVERSITY, Belagavi during the academic year 2022-2023.

|  |  |  |  |
| --- | --- | --- | --- |
| **Signature of Internship**  **Co-ordinator** |  | **Signature of HOD** |  |
| **Mr.** |  | **Dr.RNKulkarni** |  |
|  |  |  |  |

Organization certificate:

**DECLARATION**

I **Raghavendra,** second year student of Computer Science and Engineering, Ballari Institute of Technology, Ballari declare that Internship entitled **“C PROGRAMMING LANGUAGE”** is a part of Internship Training successfully carried out by **“Destination Technologies”** IIT,GUWAHATI**,** at “**BITM, BALLARI”.** This report is submitted in partial fulfillment of the requirements for the award of the degree Bachelor of Engineering in Computer Science and Engineering of the Visvesvaraya Technological University, Belagavi.

**Date: Signature of Student**

**Place: Ballari**

# ACKNOWLEDGEMENT

The satisfactions that a company the successful completion of my internship on “C PROGRAMMING LANGUAGE ” would be incomplete without the mention of people who made it possible, whose noble gesture, affection, guidance, encouragement and support crowned my efforts with success. It is my privilege to express my gratitude and respect to all those who inspired me in the completion of my internship.

I am gratefull to our respective coordinator “”forhis/hernoblegesture,supportco-ordinationandvaluablesuggestionsgiventomeinthecompletionofInternship.

I also thank **Dr. R N Kulkarni,** H.O.D. Department of Computer Science and Engineering for extending all his valuable support and encouragement.

### 

**Pattern programming in c language**

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**ABSTRACT**

Pattern programming is a technique used in computer programming to create designs or shapes by printing a series of characters or symbols in a specific sequence. These patterns can be used for various purposes, such as decorative designs, user interfaces, and data visualization. Pattern programming can be implemented in any programming language, and it requires knowledge of basic programming concepts such as loops, conditionals, and variables. The process involves identifying the pattern to be created, defining the sequence of characters or symbols, and using loops or conditional statements to print the pattern repeatedly. Pattern programming can be used in various fields, such as web development, software development, and game development, to create visually appealing and functional designs.

**Pattern programming in C.**

**Introduction of pattern programming in c**

Pattern programming in C involves using loops and control structures to print patterns of symbols or characters on the console or output screen. It is a common exercise in beginner-level programming courses as it helps students understand the use of loops, conditional statements, and basic programming constructs.

To print patterns in C, you need to use loops to control the number of characters printed on each line and the number of lines printed. You can use nested loops to print patterns that require multiple lines or multiple characters on a single line.

**MODULE DESCRIPTION**

This program defines functions to print individual letters (LETTERS IN OUR NAME WITH COMMA AND DON’T REPEATE THEM EX : A, B, AND C ) using a 9x9 matrix of asterisks and spaces. The main function calls these functions and prints out the letters side-by-side with a gap between them using a nested loop.

The program does not take any user input and simply prints out the letters in a fixed format. It also does not have any error checking or handling.

The program is a C program that uses nested loops to print out the letters (LETTERS IN UR NAME WITH COMMA AND DON’T REPEATE THEM EX : A, B, AND C ) in a certain style. The program defines six 9x9 arrays (WRITE LIKE THIS printA, printB, AND printC) and uses functions to populate them with asterisks (\*) and spaces ( ) in certain patterns that form the letters. The main function then uses nested loops to print out the letters in a horizontal line with a gap of five spaces between each letter.

Overall, the program seems to be a simple demonstration of how to print out letters using nested loops and arrays in C.

**ALGORITHM**

This program generates an output of the letters (YOUR NAME IN DOUBLE COUTS) in a stylized format using ASCII art. The letters are created as arrays of asterisks (\*) and spaces ( ) and then printed out using a series of nested loops. The program also includes a function for creating a gap between the letters.

Here is a step-by-step breakdown of the program:

Step 1 :The program starts with the global declaration of six 9x9 arrays to hold the ASCII art for each letter.

Step 2 :Next, there are six functions defined for each letter: (LETTERS IN UR NAME WITH BRACKETS, COMMA AND DON’T REPEATE THEM EX : A(), B(), AND C() ). Each function fills its respective array with asterisks and spaces to form the letter.

Step 3 :The gap() function is defined to create a gap between each letter in the output. It uses a nested loop to print out five spaces.

Step 4 :In the main function, the six letter functions are called to fill their respective arrays.

Step 5 :Finally, there is a nested loop that prints out each row of the ASCII art for each letter, with gaps between each letter. The innermost loop prints out each character in the row, using the respective array for each letter.

Step 6 :The program ends with a newline character to improve the readability of the output.

**Source Code**

#include <stdio.h>

Int printR[7][5];

Int printA[7][5];

Int printG[7][5];

Int printH[7][5];

Int printA1[7][5];

Int printV[7][5];

Void gap(){

For(int i=0;i<7;i++){

For(int j=0;j<1;j++)

{

Printf(“ “);

}

}

}

Void printConsole(){

For(int i=0;i<7;i++){

// gap();

For(int j=0;j<5;j++){

Char ch=printR[i][j];

Printf(“%c”,ch);

}

Gap();

For(int j=0;j<5;j++){

Char ch=printA[i][j];

Printf(“%c”,ch);

}

Gap();

For(int j=0;j<5;j++){

Char ch=printG[i][j];

Printf(“%c”,ch);

}

Gap();

For(int j=0;j<5;j++){

Char ch=printH[i][j];

Printf(“%c”,ch);

}

Gap();

For(int j=0;j<5;j++){

Char ch=printA1[i][j];

Printf(“%c”,ch);

}

Gap();

For(int j=0;j<5;j++){

Char ch=printV[i][j];

Printf(“%c”,ch);

}

Printf(“\n”);

} // end top most for

} // end printConsole()\*/

Void R(){

System(“color 6A”);

For(int i=0;i<7;i++){

For(int j=0;j<5;j++){ If(j==0||i==0||j==4&&i<3||i==3||i==3&&j==1||i==4&7j==2

||i==5&&j==3||i==6&&j==4||i==4&&j==2)

{

printR[i][j]=42;

}

Else{

printR[i][j]=32;

}

}}}

Void A(){

For(int i=0;i<7;i++){

For(int j=0;j<5;j++){

If(j==0&&i!=0||i==0&&j!=0&&j!=4||j==4&&i!=0||i==3)

{

printA[i][j]=42;

}

Else{

printA[i][j]=32;

}

}}}

Void G(){

For(int i=0;i<7;i++){

For(int j=0;j<5;j++){ If(j==0&&i!=0&&i!=6||i==0&&j!=0&&j!=4||i==6&&j!=0&&j!=4||j==4

&&i>4&&i!=6||i==4&&j!=1&&j!=0||i==1&&j==4)

{

printG[i][j]=42;

}

Else{

printG[i][j]=32;

}

}}}

Void H(){

For(int i=0;i<7;i++){

For(int j=0;j<5;j++){

If(j==0||i==3||j==4)

{

printH[i][j]=42;

}

Else{

printH[i][j]=32;

}

}}}

Void A1(){

For(int i=0;i<7;i++){

For(int j=0;j<5;j++){

If(j==0&&i!=0||i==0&&j!=0&&j!=4||j==4&&i!=0||i==3)

{

printA1[i][j]=42;

}

Else{

printA1[i][j]=32;

}

}}}

Void V(){

For(int i=0;i<7;i++){

For(int j=0;j<5;j++){

If(j==0&&i<5||j==4&&i<5||i==4&&j==0||i==5&&j==1||i==6&&

j==2||i==5&&j==3||i==4&&j==4)

{

printV[i][j]=42;

}

Else{

printV[i][j]=32;

}

}}}

Void main(){

R();

A();

G();

H();

A1();

V();

printConsole();

}

**Output**

**Conclusion**

The pattern program helps us to understand the concept of for loops, arrays, and functions in a very interesting way. The program displays a person’s name in one’s desired pattern, for example printing name using star or hash. This can be done by assigning the ASCII values in the for loops for respective letters.

But for a change we will be printing each letter with the help of its respective ASCII value. This method can also be used to print different patterns for different purposes. This can be used to make a presentation more interesting and also helps in increasing our logical thinking.

With a good knowledge of the loops, such as the for and while loops, a pattern program in C is simple to create.