**Minor Project- Report**

March 2022-Jul 2022

**Course Faculty:**Prof. Prameetha Pai **Course & code:** SS Mini-Project & 19CS6DLSSL

**Semester:**VI **Date:**20/06/2022

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TITLE OF THE PROJECT | Linker Implementation in C (pass1) | | | |
|  |  | | | |
| STUDENT NAME | Nishant | Omkar G Shet | P R Sai Rahul | Palguni R H |
| USN | 1DS19CS105 | 1DS19CS106 | 1DS19CS107 | 1DS19CS108 |
| INDIVIDUAL  CONTRIBUTION | > Introduction  > Abstract of project | \*Code for  > searchESTAB func.  > showESTAB function | \*Code for  > main function  > pass1 function  \* Design of project | >Input File (3 control section programs)  >Output file creation  >Vs Code installations |
| GUIDE | Prof. Dhara,Prof. Aparna | | | |
|  |  | | | |
| PROJECT ABSTRACT : | A General-purpose linker is implemented regardless of the programming language used in source program. A source program is compiled or assembled using a compiler or assembler respectively.  The object programs can be linked for further execution either by using a linker or a loader which supports both relocation and linking. C language is used for the linker implementation.  A linked file can be of any one of the forms .exe file, .txt file .o file or .dll file. | | | |
| PLATFORM USED  (H/W & S/w tools to be used | VS Code,Text editor , C compiler installations | | | |
|  |  | | | |
| Introduction | Linker is a program in a system which helps to link object modules of a program into a single object file.  It performs the process of linking. Linkers are also called as ***link editors***.  Linking is a process of collecting and maintaining piece of code and data into a single file. Linker also links a particular module into system library. It takes object modules from assembler as input and forms an executable file as output for the loader.  Linking is performed at both compile time, when the source code is translated into machine code and load time, when the program is loaded into memory by the loader. Linking is performed at the last step in compiling a program.  There are 2 types of linkers:  1. Linkage Editor  2. Dynamic Linker | | | |
|  |  | | | |
| Design | **Source file**  **Source file**  **Source file**  **Object code**  **Object code**  **Object code**  Executable or Reference file  .exe , .txt  .dll , .o  Runtime  programs  Linkers | | | |
|  |  | | | |
| Project Source Code Link (Github/ Google DRive) | https://github.com/rahulsaidileep/Linkers-implementation-pass1- | | | |
|  |  | | | |
| Conclusion /FUTURE ENHANCEMENT | >To implement pass2 algorithm For program linking and relocation  >To execute the code in other programming languages | | | |
|  |  | | | |
| Ui sCreenshots | Screenshot (122)  Screenshot (123)  Screenshot (124) | | | |