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**Learning Report**

Linux OS & Programming



Version Number:

Team Members :

Team No:

Module: Model Based System Engineering

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| **Ver. Rel. No.** | **Release Date** | **Prepared. By** | **Reviewed By** | **To be Approved By** | **Remarks/Revision Details** |
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**Document History**

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1. **Activity1: -** Design and Implementation Of Static And Dynamic Libraries…………………………….…..4

# Activity 1 – Design and Implementation of Makefile, Static And Dynamic Libraries

# Description:

In this activity concepts which got covered are: -

implementation of C program in Linux OS and the linking of those programs with the libraries.

It includes the following execution process:

* **Step0 – Preparation**

Make the various source file and header files as mentioned in the question.

* **Step1a - Simple Make file**

Make a simple Makefile assuming all the source and header files are in the same folder.

* **Step1b- Simple Make file with Inc and Src Folders**

Make a Makefile connecting all the source and header files assuming they are in separate folders – inc and src respectively.

* **Step 2- Static Libraries**

Generate all the required libraries. Link the static libraries with the test code and test the statically linked executable.

* **Step 3- Dynamic Libraries**

Generate all the required libraries. Link the static libraries with the test code and test the dynamically linked executable.

# Learning Outcomes:

* Learnt to club the files into two separate folders as source and header files and to link them with the libraries.
* Learnt to create a Makefile using those source and header files by executing Linux commands.
* Generated the required libraries and linked the static libraries with test code.
* Learnt to test the statically linked and dynamically linked executable files.

# Challenges:

* Faced challenge while linking the Include header file with the whole executable code.
* Faced challenge with Linux commands on implementing the Makefile.

**GitHub Link : https://github.com/99003699/Linux-assignment/tree/main/Assignment1**