**Project Name Design Document**

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**Authors**:

Tamar Herbst

Michal Jacobsohn

Michal Avraham

Revision History

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# Introduction

## Definitions, Acronyms & Abbreviations

This section lists all the definitions, acronyms and abbreviations in this document.

|  |  |
| --- | --- |
| Abbreviation | Interpretation |
|  |  |

## Reference Materials

This section lists all the reference material relevant for this design.

|  |  |  |
| --- | --- | --- |
| Item | Name (Linked) | Revision |
|  |  |  |

## Overview \ Background

This chapter describe the high level description of the project and the problem it should solve.

The project's target is to compress and decompress file for saving storage.

The main goal is that the file will come back in its entirety after compression or decompression and to do it as quickly as possible.

The algorithms that the project implements will be combination of Lempel Ziv 77 and Hufman code.

## Requirements

This chapter lists in details the requirements that the design shall address

**1.**The system should compress the input file.  
**2.**       The system should decompress file to its original size.  
**3.**       The system should guarantees a lossless compression.  
**4.**       The system should compare between the compressed and the decompressed files, and inspect for lost data.  
**5.**       The system should demonstrate compression ratio with the specific algorithm.  
**6.**       The system log the operations history and print it if needed.  
**7.**       The system should print information while running that will allow future exceptions (bugs?) to be investigated.  
**8.**The system should apply to different file types.

# High Level Design

This chapter describes the design of the project in high level, including:

## Block Diagram

visual representation of the system.

## High Level Flows

Description of main flows in high level

## Assumptions

Assumptions that the design considers

## Limitations of the suggested design.

Limitations of the suggested design

# Detailed Design

This chapter describes the design of the project in details, including:

## Detailed Description of flows.

## Flowcharts (when needed).

## Data structures.

## Public API’s signatures.

# Testing

This chapter describes how it’s planned to test this project.

# Open Issues