# Web Defacement Monitoring Tool

**Project Implementation**
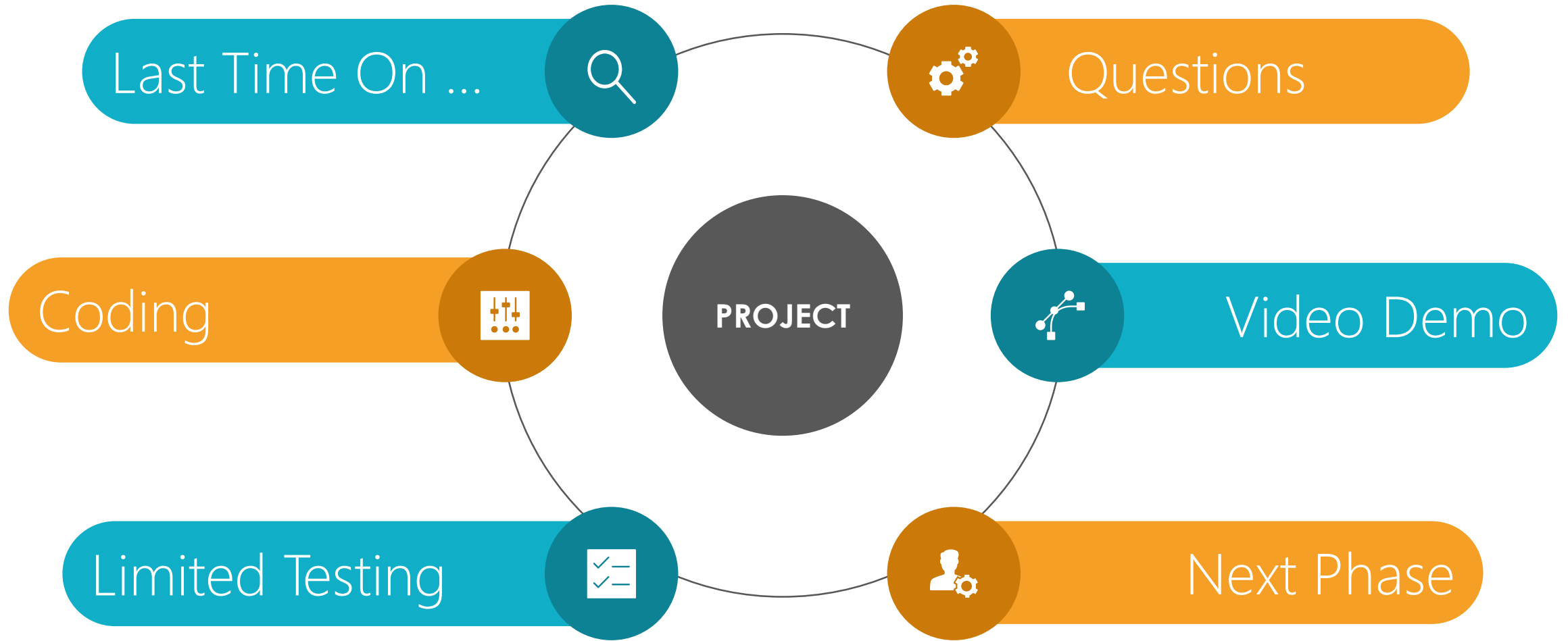
# Greetings!

I am Jia-Cong (Johnny) Hou

Project Supervisor Dr Norman
Project Co-supervisor Mr Mutemwa
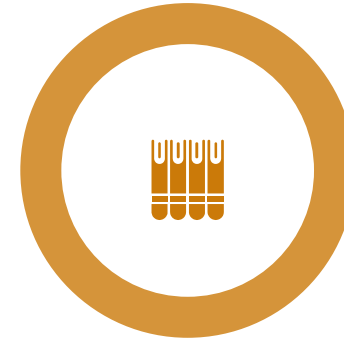(CSIR)

# Overview

Last Time On ...

Questions

Coding

Video Demo

Limited Testing

Next Phase

PROJECT

# Last Time On

User Interface
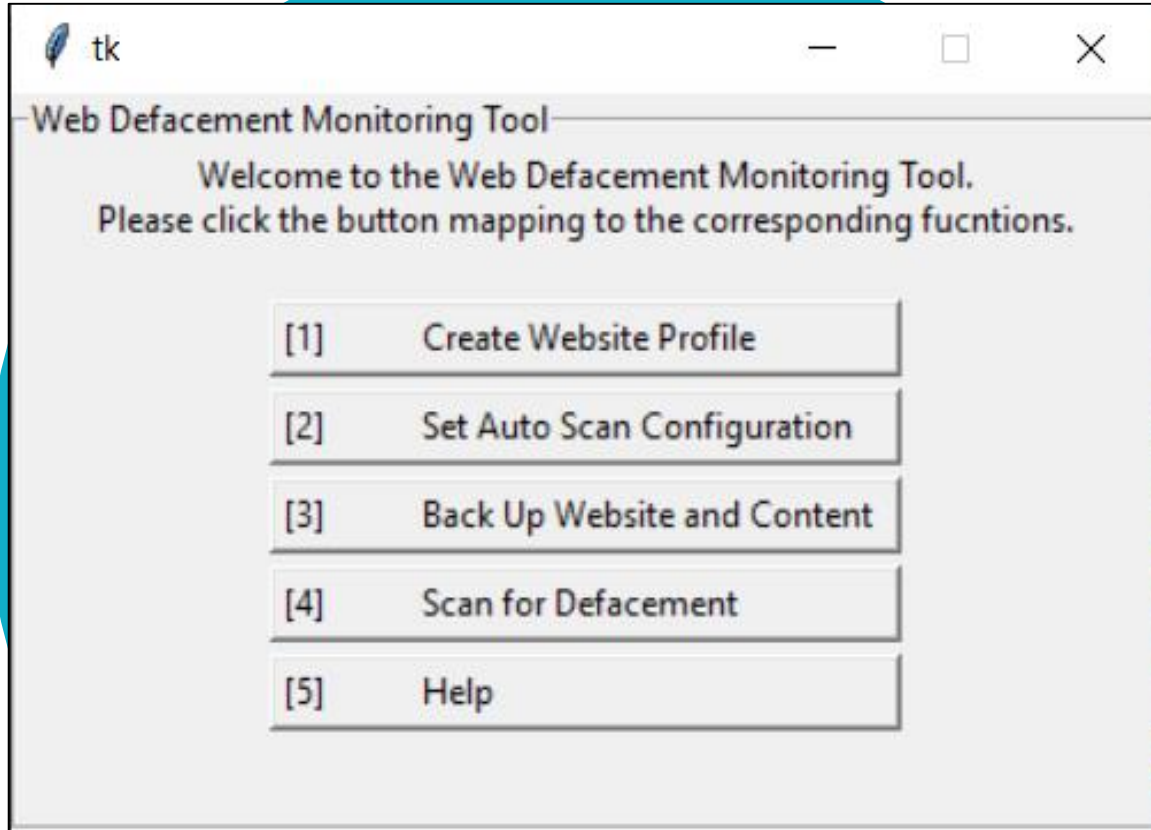
GUI

High-Level Design

Process Flow

Low-Level Design

Hash Process

# Last Time On



GUI

Feedback

Input Validation

Understandability

GUI

# High-Level Design

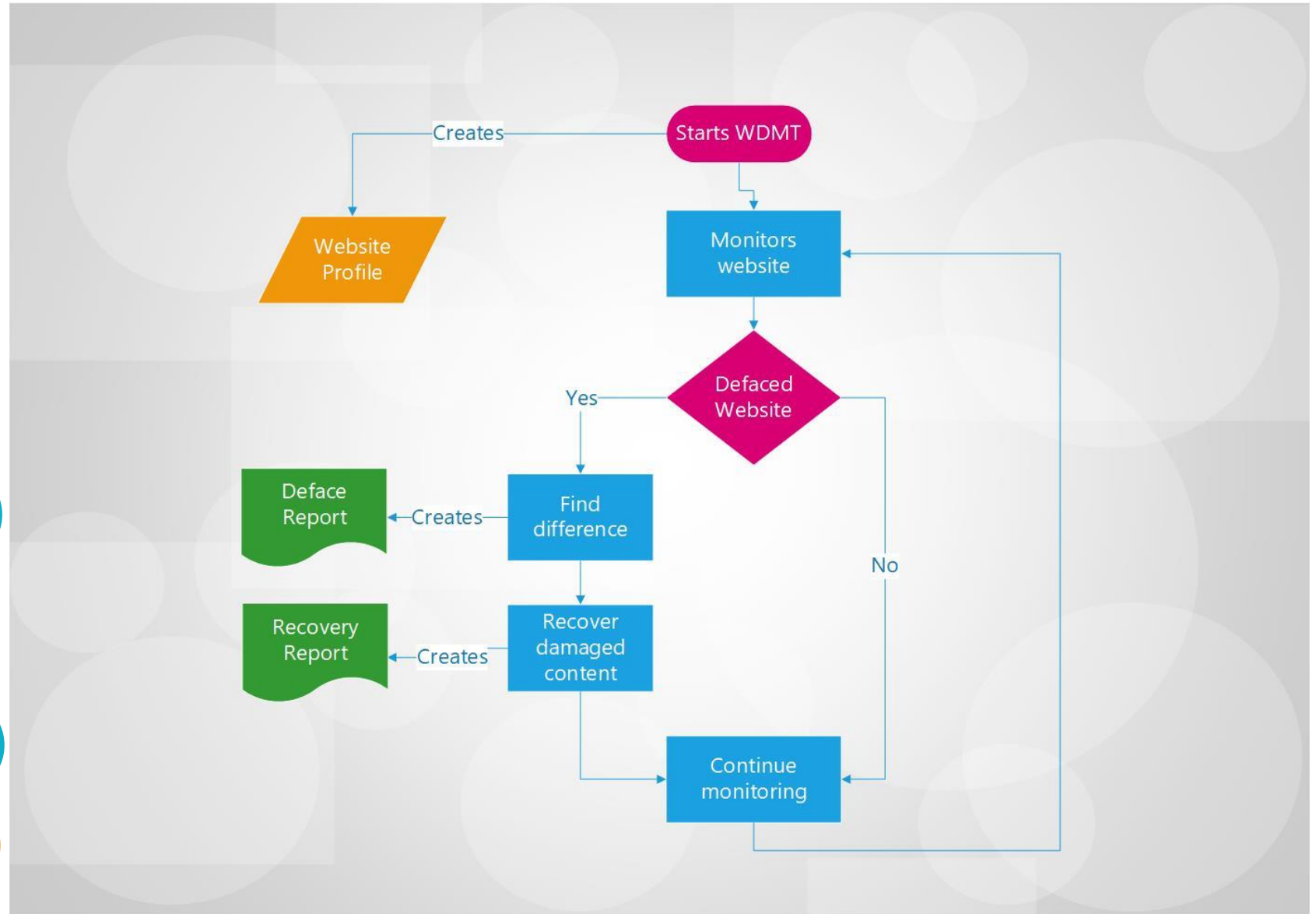Input

Website Directory

Monitoring

Hashing files

Differences

Byte-to-byte

Report

2 versions

Creates — Starts WDMT

Website Profile

Monitors website

Defaced Website

Yes

Deface Report — Creates — Find difference

No

Recovery Report — Creates — Recover damaged content

Continue monitoring

# Low-Level Design

**Big Files**

**Only segments**

**Small Files**

**Hash everything**

**Differences**

**Byte-to-byte**

**Hash Algorithm**

**BLAKE2b**

Hash file

Website Profile

Using BLAKE2 for video and image format

Compare beginning and end chunks of data

Uses

Identified Defacement

Yes

Byte-to-byte file comparison
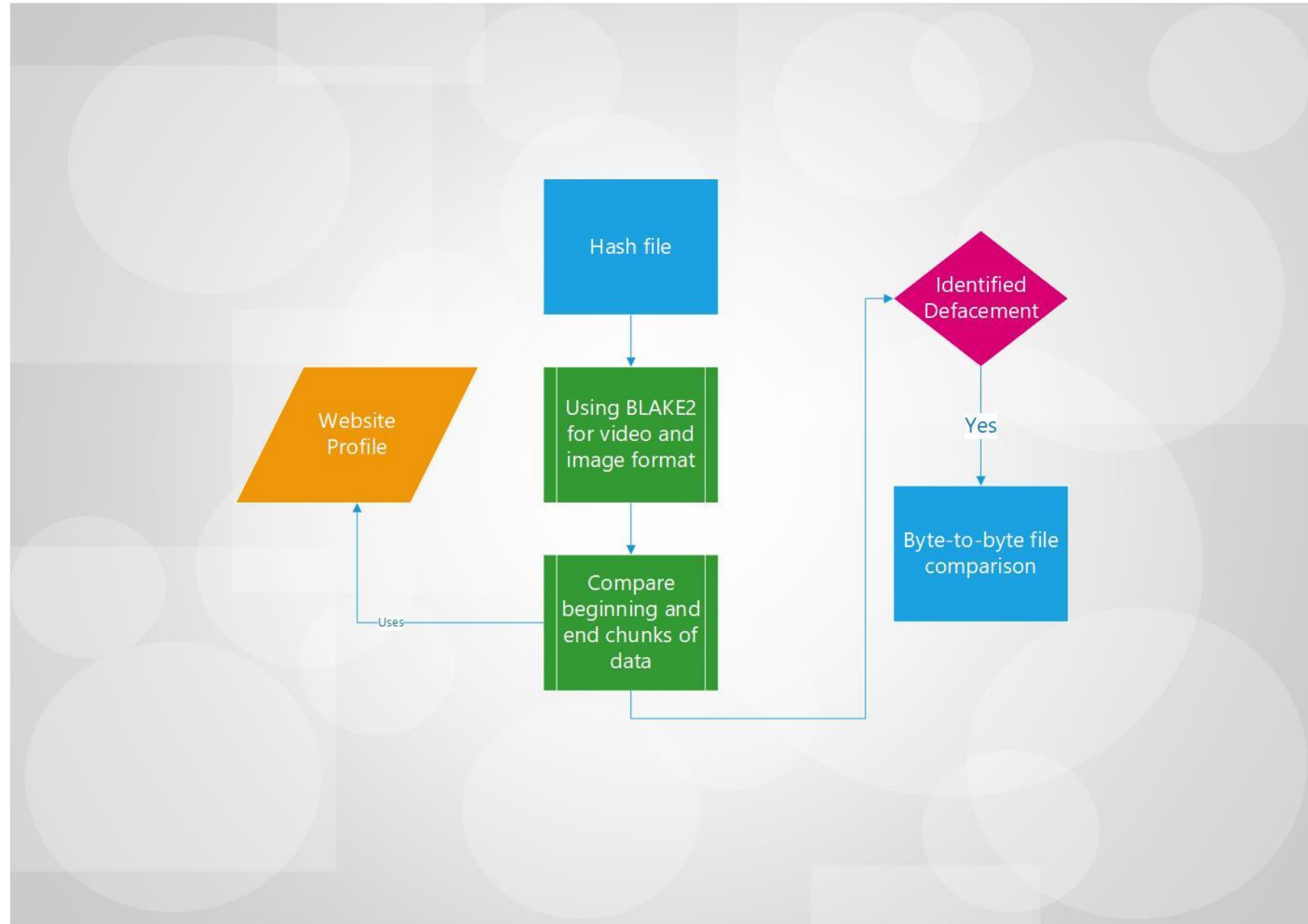
# Coding

## Libraries

Tkinter

os

pathlib

datetime

PYBLAKE2

## Method

blake2hash
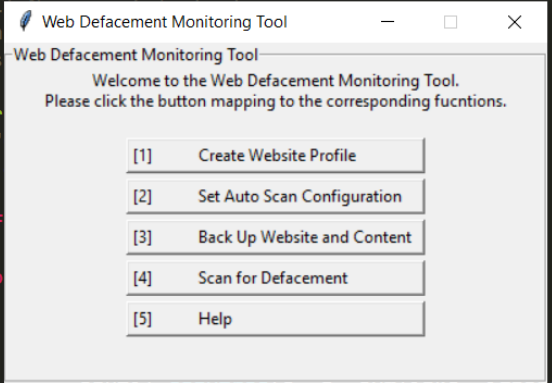
ScanDefacement

Repair

GUI

# Implementation

# Limited Testing

## Features

- Scan folder structure
- Hash files
- Deface File Detect
- Back up files
- Both OS Testing

# Project Plan

## Term 1

- Project Analysis
- Requirements
- Requirement Analysis Design
- Project Plan
- Presentation

## Term 2

- Project Design and Prototyping
- User Interface
- High-Level Design (HLD)
- Low-Level Design (LLD)
- Presentation

## Term 3

- Project Implementation
- Limited Testing the WDMT
- Demo
- Presentation

## Term 4

- Project Testing, Evaluation and Presentation
- Host and Implement
- Improvise, Adapt and Overcome
- Presentation

# Reference

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[2] D. Dorothy, "Georgetown Journal of International Affairs," *The Rise of Hacktivism,* 2015 September 2015.

[3] M. Mxolisi, "Presidency website up and running after hacking attack," News24, 7 July 2018. [Online]. Available: https://www.news24.com/SouthAfrica/News/breaking-presidency-website-hacked-20180707. [Accessed 6 March 2019].

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[6] K. Tushar, "Implementing a Web Browser with Web Defacement," *World of Computer Science and Information Technology Journal (WCSIT),* vol. 1, no. 7, pp. 307-310, 2011.

# Thank You