Web Defacement Monitoring Tool

Project Design and Prototyping Presentation
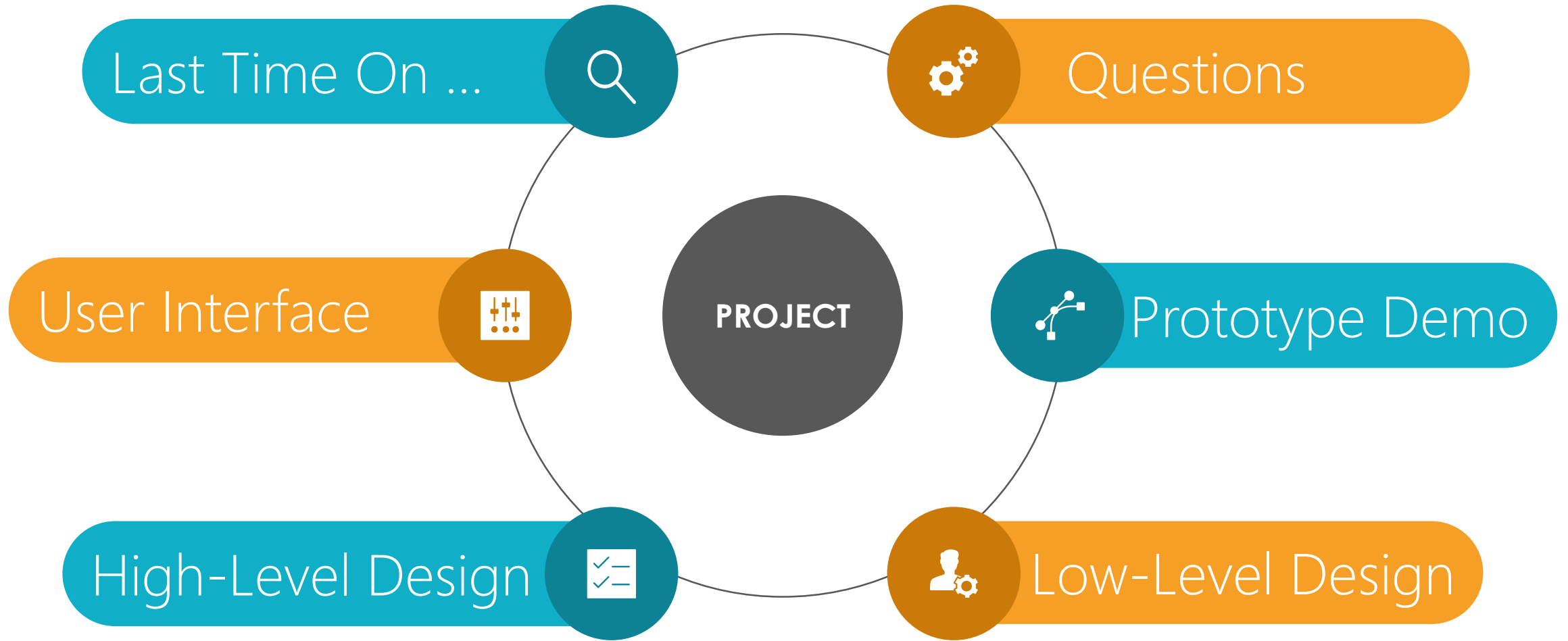
Greetings!

I am Jia-Cong (Johnny) Hou

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

Overview

Last Time On ...

Questions

User Interface

Prototype Demo

High-Level Design

Low-Level Design
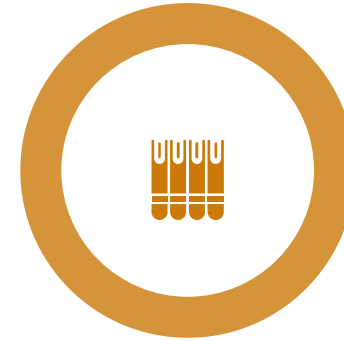
PROJECT

Last time On

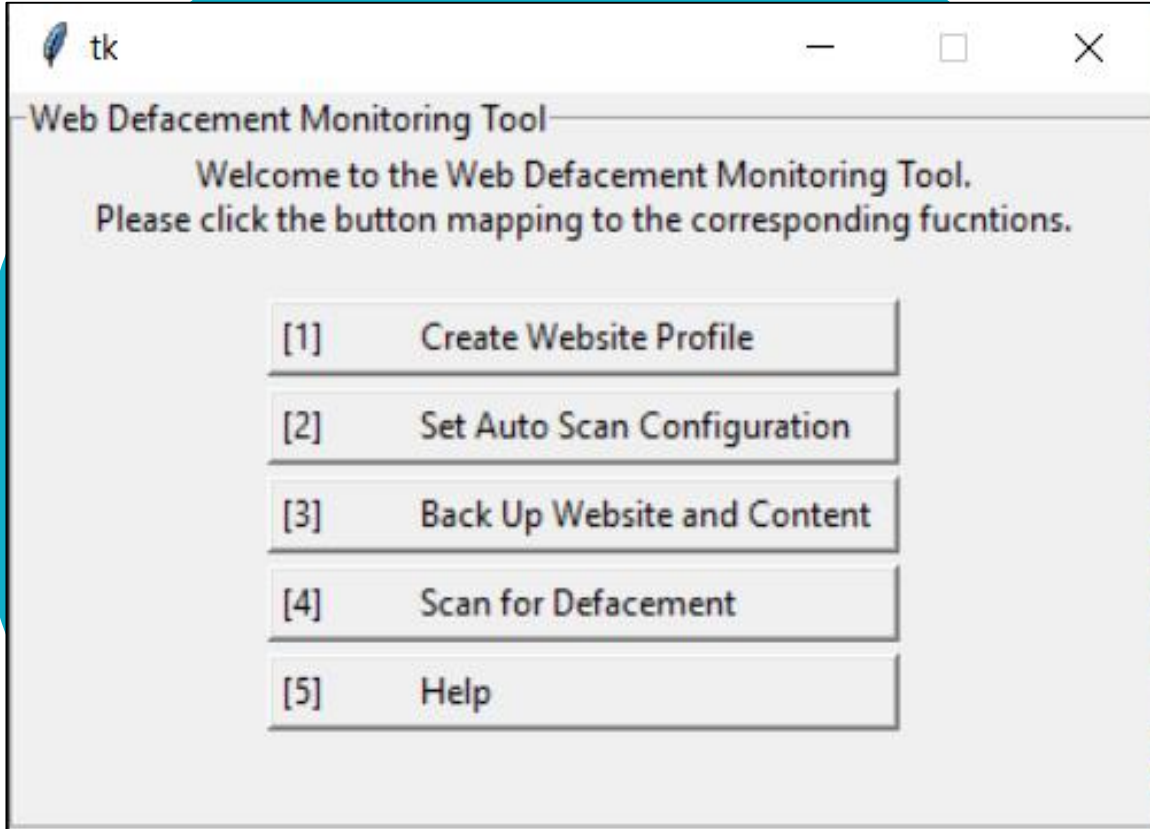Background

Damage

Objective

User Requirements

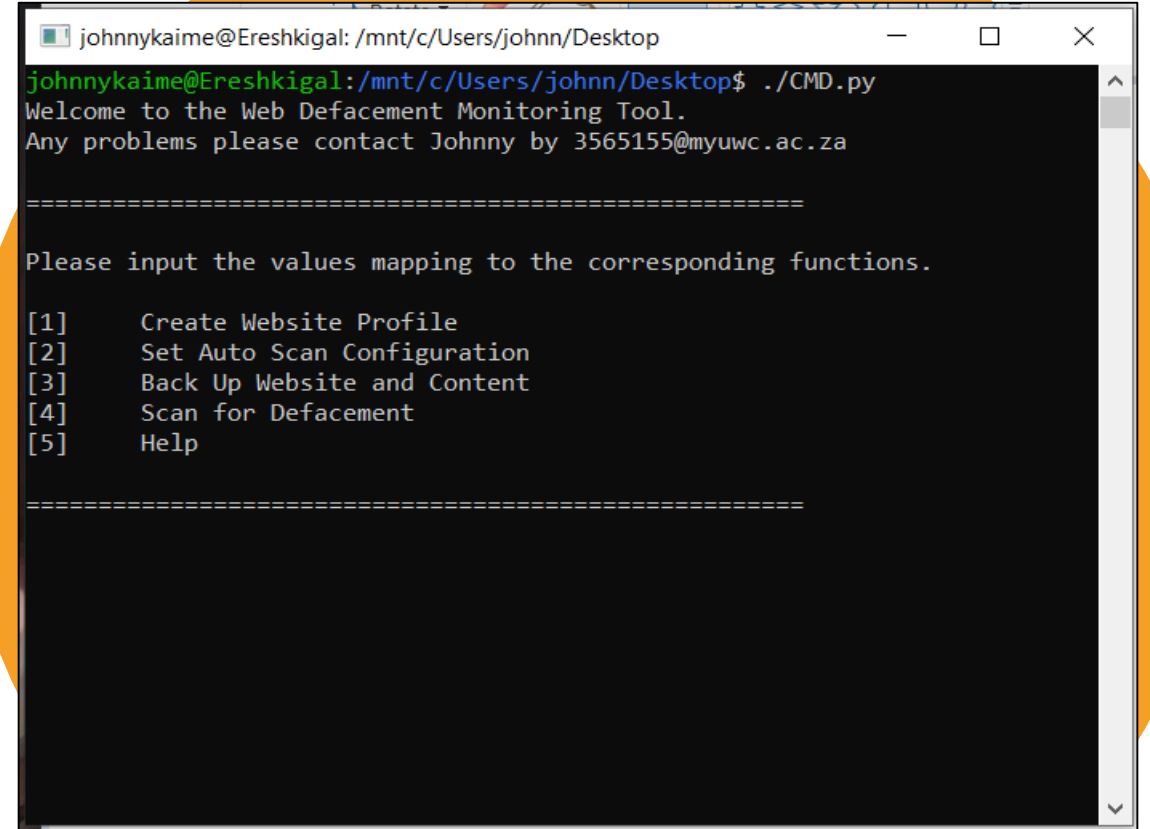Web Defacement Monitoring Tool

Functionality

User Interface

GUI

Terminal

High-Level Design

Input
Website Directory

Monitoring
Hashing files
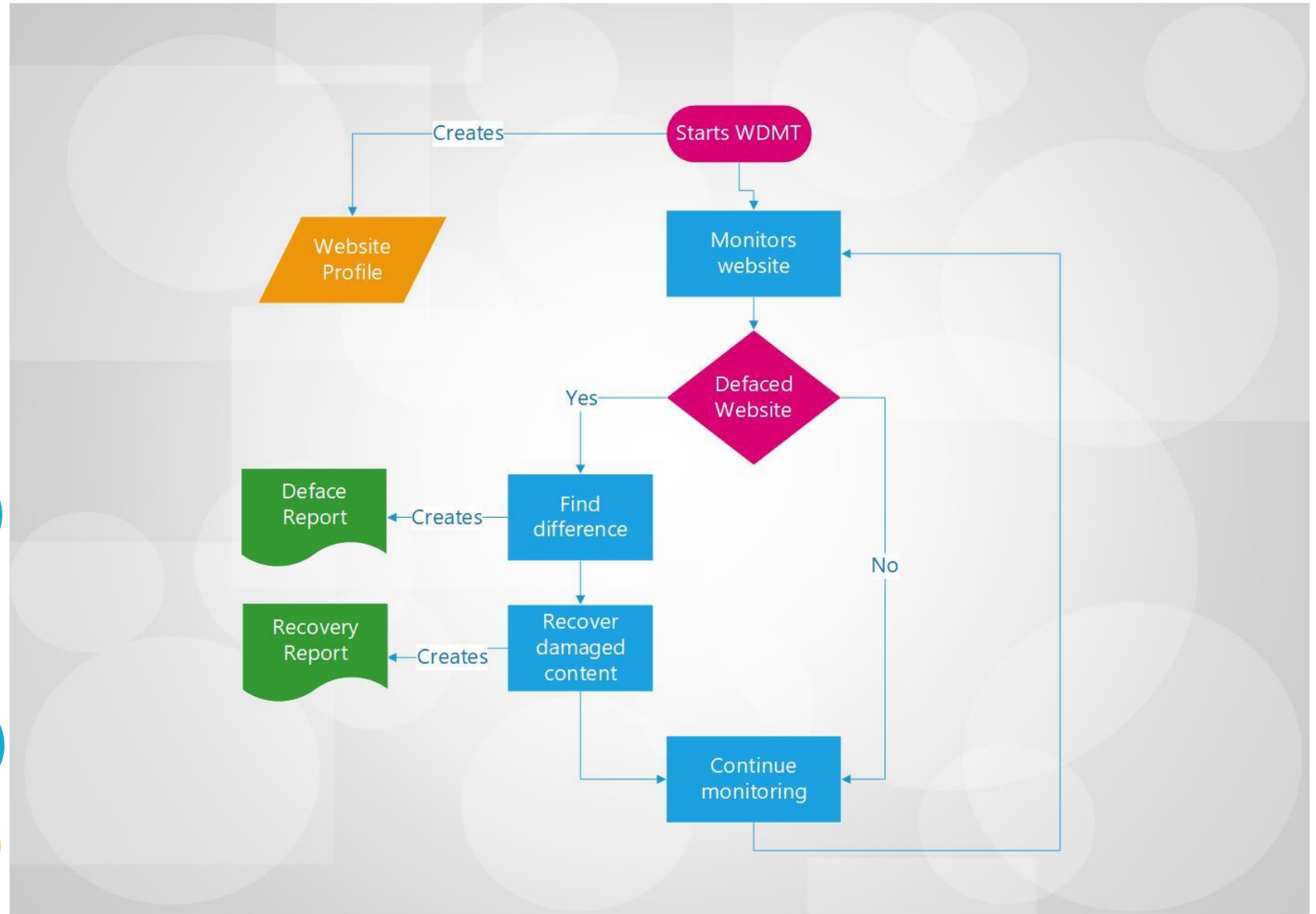
Differences
Byte-to-byte

Report
2 versions

Creates — Starts WDMT

Website Profile

Monitors website

Defaced Website

Yes

Deface Report — Creates — Find difference

Recovery Report — Creates — Recover damaged content

No

Continue monitoring

Low-Level Design

Big Files

Only segments

Small Files

Hash everything

Differences

Byte-to-byte

Hash Algorithm

BLAKE2b
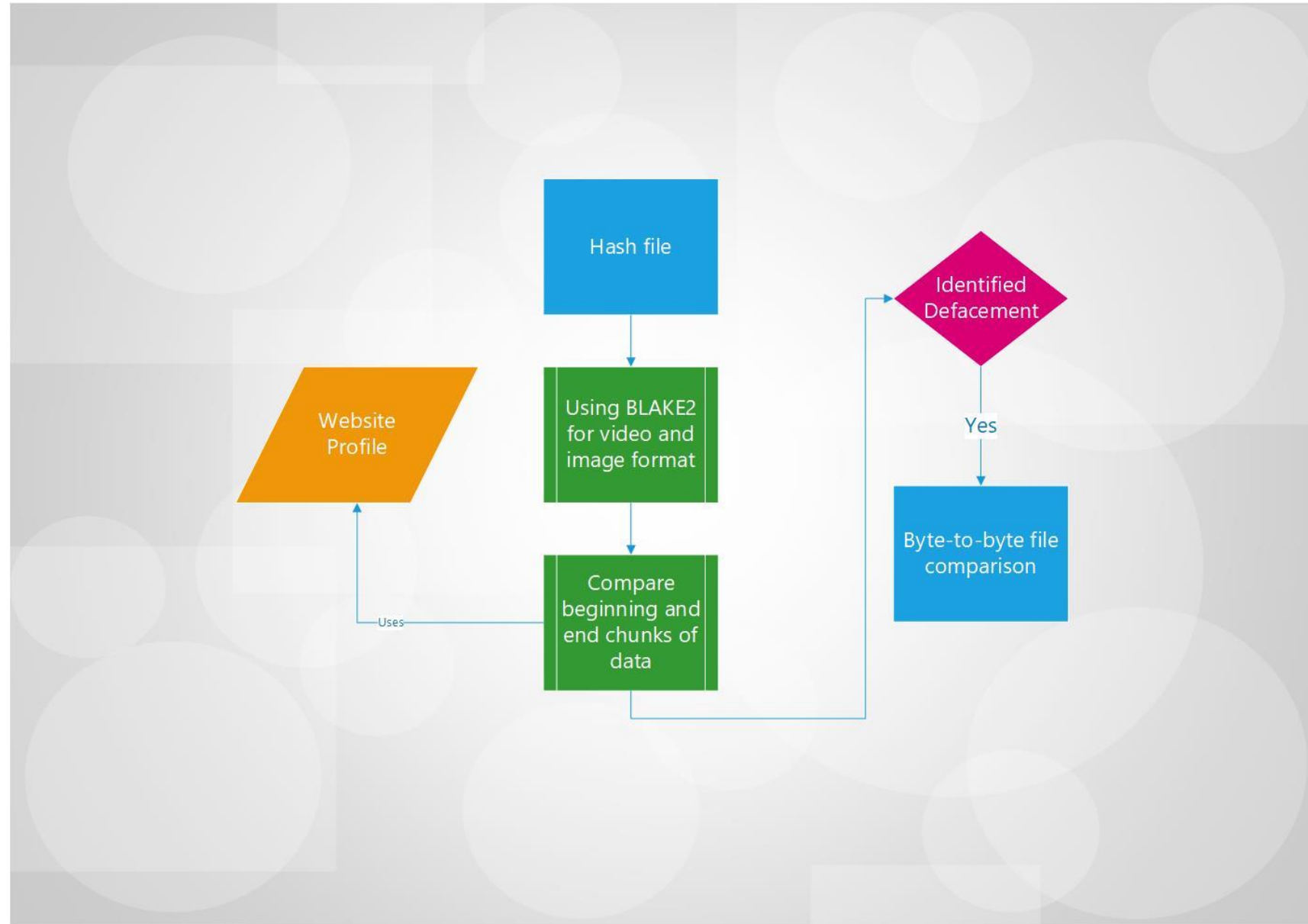
Prototype Design

Software

- Python3
- Tkinter
- hashlib
- PYBLAKE2
- shutil

Hardware

- PC
- Win OS
- Ubuntu
- 64bit machine

Prototype Demo

Features

- Scan folder structure
- Hash files
- Save to Hash table
- Back up files
- Prototype coded ./

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
- Test the WDMT
- Host and Implement
- Demo
- Presentation

Term 4

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

Reference

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[4] N. Mphathi, "SA Presidency website hacked," Independent Online (IOL), 11 July 2018. [Online]. Available: https://www.iol.co.za/dailynews/news/sa-presidency-website-hacked-15950026. [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