

UNIVERSITY OF DAR ES SALAAM



COLLEGE OF INFORMATION AND COMMUNICATION TECHNOLOGIES (CoICT).

DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING.

ES 499: FINAL YEAR PROJECT

PROGRESS REPORT

PROJECT TITTLE:	SECURED WIRELESS USB FLASH DRIVE.
STUDENT`S NAME:	KOWERO, WALIDI WAZIRI
REG. NO:	2020-04-04390
PROGRAM:	BSc. IN ELECTRONICS ENGINEERING
SUPERVISOR`S NAME:	PROF BARAKA MAISELI.
SUBMISSION DATE:	17 th , April 2023

NON-WIRELESS USB FLASH DRIVE

WHAT IS DONE SO FAR

1. Changing of mass storage USB controller to sm3276. Due to incompatibility issues CBM2096 was not responding to most of Nand devices hence sm3276 controller. Using sm3276, only small community was found hence hard to trouble shoot and debug. The process may result to high risk of copyright problems since it lacks guidance from manufacturer. Also, manufacturer had seized production and does not provide support.

WIRELESS USB FLASH DRIVE

WHAT IS DONE SO FAR

1. Online ordering ESP32S3N16R8 development module, for 35ksh only as the main part of the wireless usb flash drive which was delivered after 2.5 week.
2. Simulating web server on wokwi. This involved making of an asynchronous webserver in esp32s3.
3. Preparing library ('nandflashReader.h ') for reading parallel NAND mt29f16g08ababa using esp32 gpio. This includes programming the timing for reading, writing and managing pages and blocks in Nand flash memory.
4. General implementation of USB Mass storage Server using SD Card as a flash memory.

WHAT IS BEING IMPLEMENTED

1. Troubleshooting esp32s3 on serial programming problem.
2. Linking Nand and usb Mass Storage to work as flash drive using esp32s3.
3. Creating a User Interface for configuration using captive portal.

WHAT IS TO BE DONE

1. To concatenate the above parts (that is Webserver, USB Mass Storage Server and SMB server).
2. To create and design stand-alone system in pcb
3. To design 3D encasing for the system