

# Muhammad Ali Jinnah University

## Final Year Project (FYP)

Faculty of Computing  
Department of Computer Science

### Final Year Project Proposal

	Day			Month			Year			
DATE	1	8	–	1	0	–	2	0	2	2

<b>PROJECT TITLE:</b>	DigiDrive
<b>KEY WORDS:</b>	Mechatronics, Hard drive, Portable, Data transfer.
<b>DOMAIN OF THE PROJECT:</b>	To achieve the portability and security of using hard drives without connecting it to a personal computer or laptops.
<b>SUPERVISOR'S NAME:</b>	Dr. Shaukat Wasi

STUDENT INFORMATION				
Sr.	Student ID	Name	Email	Mobile
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### PROBLEM STATEMENT

The process to manage data of hard drive requires a personal pc or laptop which is not portable, and the data is not secure too. Moreover, transferring data to a hard drive requires a medium which can be any pc, also a hard drive can be infected with malware too so direct connection to a computer can be dangerous for a computer too.

### EXECUTIVE SUMMARY

This system will help the user not to carry laptop to manage the data of a hard drive making it more easy to manageable in a small portable device which can not only manage the data but can transfer it to USBs through ports and also the data of the hard drive will be more secure as it is not connected with a system that is already having a process in the background and having an internet connection which can compromise any sensitive data. Moreover, organizations which consider their main system to be more valuable don't have to connect any outsource USB direct to their computer to view or manage data they can connect it with this drive making it a portable, secure and better for any organization or any other purposes. The drive can be removable and can be change so there is also the benefit of using multiple hard drive data management through this device.

### INTRODUCTION

After considering that the data management is an important part of many life and they can't carry laptops or other bigger devices to immediately transfer it to a hard drive, having no secure environment, Digi Drive provide you all these functionalities and provide you with all these benefits.

### COMPETITORS/COMPETITIVE ANALYSIS



SSK SSM F200 PORTABLE  
WIRELESS HARD DISK  
(MAIN FOCUS).



**TOSHIBA**

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### OBJECTIVES

The main objectives of the project are:

- A portable device that can manage all the data.
- A device that has secure environment.
- A device that can help you to prevent any malware to be in your main system.
- Fully secured environment for both data management and data transfer

### MOTIVATION

As we can see that many people who are travellers or having a portable hard drive want to transfer and manage data in their hard drive but all they need is a system which can do carrying laptop at different places is not that easy, moreover now a day's organizations like universities specially MAJU also don't recommend any USB to be connected with any system. Similarly, teachers also want to view someone's project files in their personal laptops but also they are not comfortable weather the USB is containing any malware or not so they universities should have that device that could be more beneficial for the safety of the system. Some organizations can't afford to have their data expose they have confidential data so the secure environment is their first priority, this device will lead to solve all these problems

### FEATURES OF PROJECT

#### **Data management**

The data can be viewable, can be move from one drive to other drives.

#### **Security**

The environment is fully secured even transferring data require some permission which is helpful in not compromising any of the data.

#### **Detect any problems**

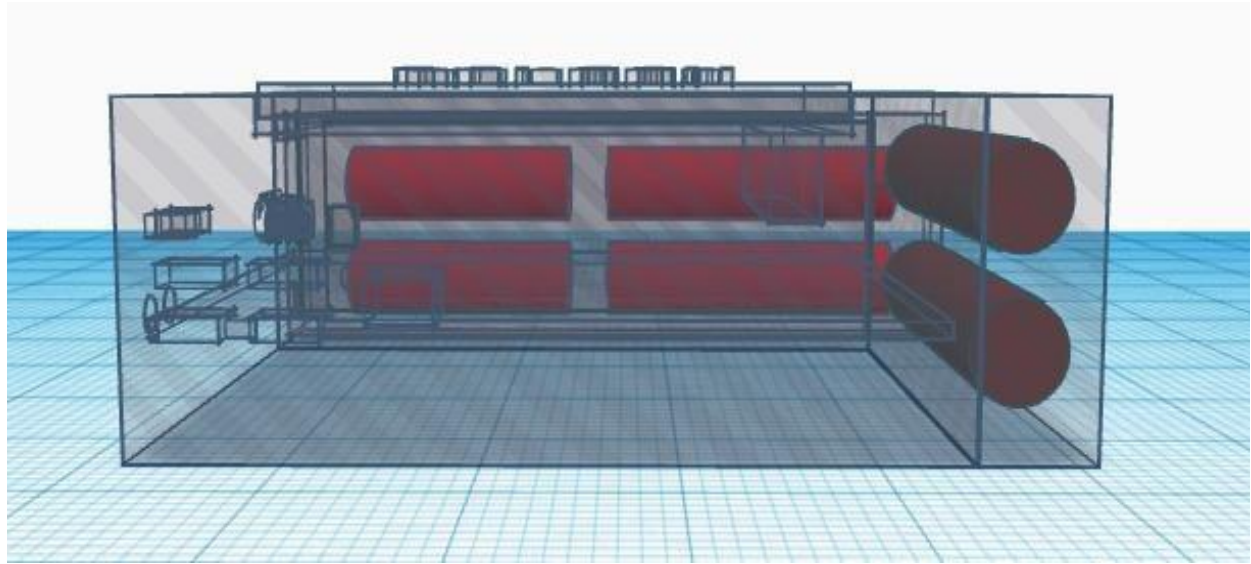
Can detect any of the problem of the hard drive that it contains any malware or it is corrupted or it is broken or wasted.

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### ARCHITECTURAL DESIGN



### IMPLEMENTATION TOOLS AND TECHNIQUES

As we are making a project of mechatronics we need some hardware component and have to connect it with the software we have these components

#### Hardware Components

- A raspberry pi microcomputer.
- Battery to provide it backup of 10 hours.
- A mini 5-inch touch screen to manage data.
- A SSD
- A Micro SD card containing the OS that will run on the device
- Other small components

#### Software

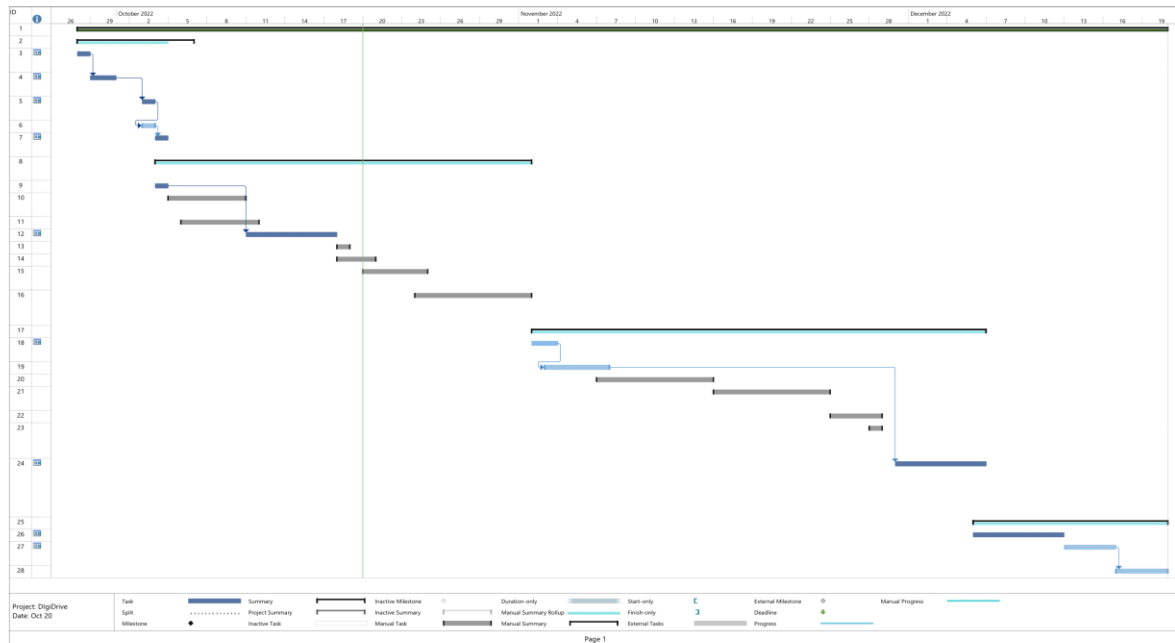
Any flavor of Linux or raspberry pi OS to provide fully control on the data management which can apply the security and provide secure environment.

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### PROJECT PLAN

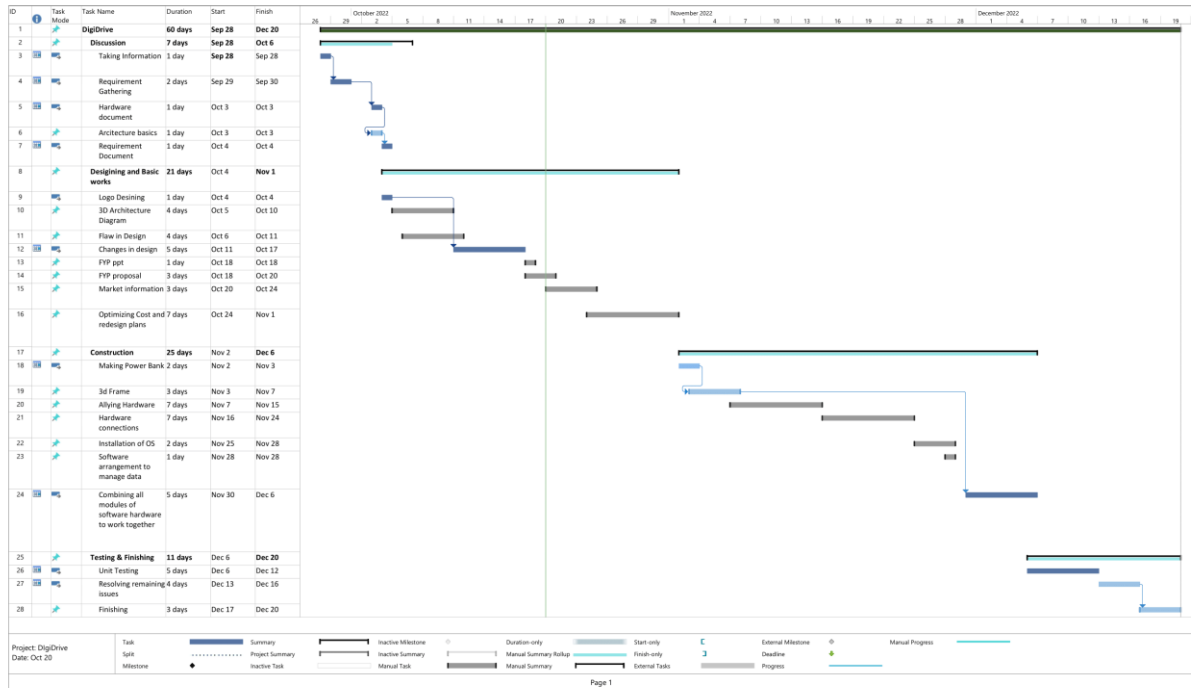


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## REFERENCES

- <https://www.aliexpress.com/item/33027653277.html>
- <https://eezpc.com/product/transcend-2tb-storejet-25m3-anti-shock-external-hard-drive-iron-gray/>

Supervisor's Signature: -

FYP-Coordinator's Signature: -