

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

“Jnana Sangama”, Belagavi, Karnataka 590018

17ISL58-FS LABORATORY MINI-PROJECT REPORT

on

## Animedesk Application

*Submitted in partial fulfillment of the requirement for the award of the degree of*

Bachelor of Engineering in

Information Science & Engineering by

Mr.Adithya M(1BG17IS003)

Mr.Rajat M Jain(1BG17IS0)

**Approved by AICTE, Affiliated to VTU, Accredited as grade A Institution by NAAC.**

**All UG branches – CSE, ECE, EEE, ISE & Mech.E accredited by NBA for academic years 2018-19 to2020-21 & valid upto30.06.2021**

Post box no. 7087, 27th cross, 12th Main, Banashankari 2nd Stage, Bengaluru- 560070, INDIA Ph: 91-80- 26711780/81/82 Email: [principal@bnmit.in,](mailto:principal@bnmit.in) [www.](http://www/) bnmit.org

Department of Information Science and Engineering

2019 – 2020

# Abstract

# Introduction

File structure is an organization of data in Secondary Storage Device in such a way that it minimizes the access time and the storage space. It is a combination of representation for data in files and of operations for accessing the data. Early in the computing history,secondary storage was in the form of magnetic tape and punched cards. Storage was cheap but access was limited to sequential.In 1956, IBM introduced the RAMAC magnetic disk device . Data could be accessed directly instead of sequentially. This was the drawn of the study of file structures. Advances in OS gave rise to more research on operating systems. The next analogy that was come up was the Direct Access which is the analogy to access to position in array. Indexes were invented and list of keys and pointers were stored in small files.This allowed direct access to a large primary file.But as the file grows the same problem arise as with the primary memory.Tree structures emerged for main memory in 1960’s. This involved balanced and self-adjusting Binary Search trees (BST) eg: AVL trees (1963) . In 1979, a tree structure suitable for files was invented: B trees and B+ trees good for accessing millions of records with three or four dist accesses.Theory on Hashing tables were developed over 60’s and 70’s good for those files that do not change much over time. Expandable and dynamic Hashing were invented in late 70’s and 80’s which provided for one or two disk accesses even if file grow dramatically.

A good File Structure aims at:

* Fast access to greater capacity.
* Reduce the number of disk accesses by collecting data into buffers, blocks or buckets.
* Manage growth by splitting these collections.

The objective is to develop a mini project to implement Indexed sequential access file method for file containing records of Animes.Implement add(), search(), display(), delete() and modify().

The project aims at developing a mini project that allows the end user to store information about Anime records that it has linkup with, in a file with all the necessary details along with it. It helps the end user to insert an anime’s details and with a unique id that can be used to access the information of that anime, it also helps the end user to search the information of a particular anime with the help of the unique id is assigned to it.

# SYSTEM REQUIREMENTS

To be used efficiently, all computer software needs certain hardware components or other software resources to be present on a computer. These prerequisites are known as (computer) **system requirements** and are often used as a guideline as opposed to an absolute rule. Most software defines two sets of system requirements: minimum and recommended. With increasing demand for higher processing power and resources in newer versions of software, system requirements tend to increase over time. Industry analysts suggest that this trend plays a bigger part in driving upgrades to existing computer systems than technological advancements. A second meaning of the term of System requirements, is a generalisation of this first definition, giving the requirements to be met in the design of a system or sub-system.

## : Hardware Requirements:

* Hardware: Dual Core
* Hard Disk: 50 GB
* Speed: 1.4 GHz
* RAM :1GB
* Key Board: Standard Keyboard
* Touch Pad: Button Mouse
* Monitor: LED

## : Software Requirements:

* Operating System: Windows
* IDE: PyCharm Community Edition 2019.3.3 x64
* Technology: Python
* Web Technologies: Html, CSS

### Technologies used in project:

* + PyCharm IDE as front end
  + Files as back end

**File organization**

A file is named collection of related information that is recorded on secondary storage such as magnetic disks, magnetic tables and optical disks.

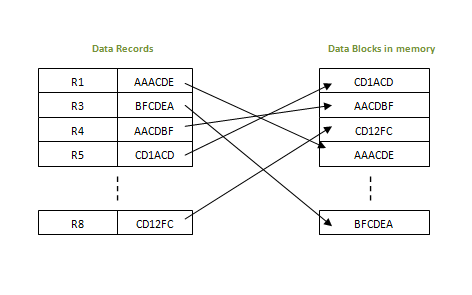
File Organization refers to the logical relationships among various records that constitute the file, particularly with respect to the means of identification and access to any specific record. In simple terms, Storing the files in certain order is called file Organization. **File Structure** refers to the format of the label and data blocks and of any logical control record.

In our project we are

# Methodology

**Indexed sequential access file organization**

* Indexed sequential access file combines both sequential file and direct access file organization.
* In indexed sequential access file, records are stored randomly on a direct access device such as magnetic disk by a primary key.
* This file have multiple keys. These keys can be alphanumeric in which the records are ordered is called primary key.
* The data can be access either sequentially or randomly using the index. The index is stored in a file and read into memory when the file is opened.



**Advantages of Indexed sequential access file organization**

* In indexed sequential access file, sequential file and random file access is possible.
* It accesses the records very fast if the index table is properly organized.
* The records can be inserted in the middle of the file.
* It provides quick access for sequential and direct processing.
* It reduces the degree of the sequential search.

**Disadvantages of Indexed sequential access file organization**

* Indexed sequential access file requires unique keys and periodic reorganization.
* Indexed sequential access file takes longer time to search the index for the data access or retrieval.
* It requires more storage space.
* It is expensive because it requires special software.
* It is less efficient in the use of storage space as compared to other file organizations.

# Snapshots of Files

This session consists of the screenshots about the anime records, that describes files used in the Application.

# Snapshots of Application

This session consists of the screenshots of the basic GUI of Animedesk applicaton, that

Helps us perform certain specific actions