



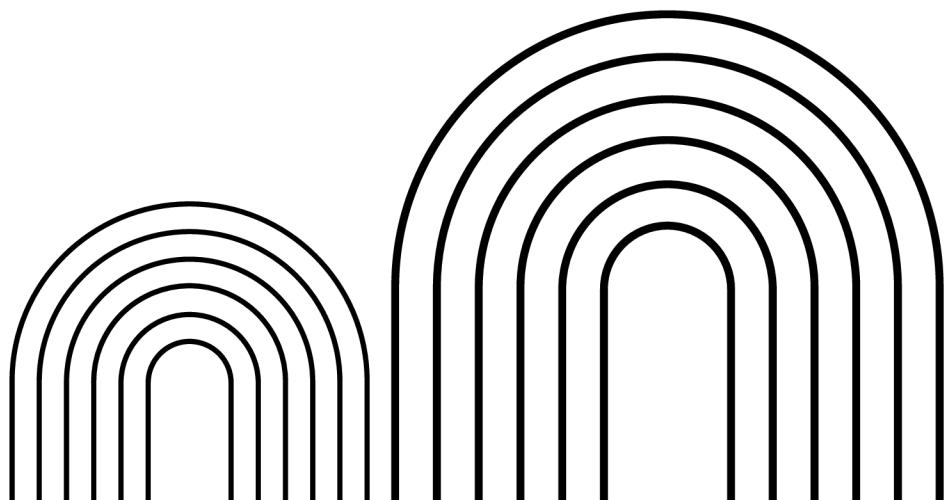
The New Indian School WLL
Kingdom of Bahrain

TASKFLO

Simplifying Learning, One Task at a Time

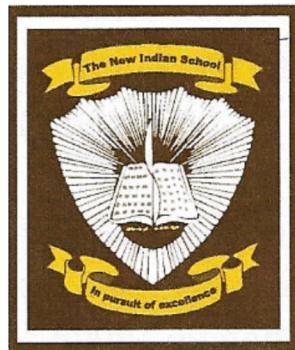
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THE NEW INDIAN SCHOOL W.L.L.
KINGDOM OF BAHRAIN

Certificate of Completion



Senior Secondary School
Affiliated to CBSE, New Delhi

This is to certify that Fidha Salam of class XII F

Roll No.-----

has successfully completed INFORMATICS PRACTICES

Project on the topic “TaskFlo”
for the academic year 2024-2025

Internal Examiner

External Examiner

Date:-----

School Seal:

Preface

The main aim of science technology is to understand the natural event. A computer is a gift of science, which also works like a brain, computer has just become a part of our Life.

Computer education in India was started somewhere in the sixties. Now with the advent of microcomputers, it has become possible to have

mass education in this field. A computer can store a lot of information and solve our problems within a very short duration. So, keeping these things in view, I have computerized my small project work “TASKFLO”. I have maintained this project work on the suitable and advanced language i.e., “Python” with the CSV

Acknowledgement

I am immensely grateful to everyone who supported me in the creation of my project, TaskFlo, developed as part of my Informatics Practices curriculum. This journey has been a rewarding experience filled with learning and innovation.

- Heartfelt thanks to my teacher, Mrs.JYOTHI, for their constant encouragement, expert guidance, and invaluable feedback, which were instrumental in shaping this project into its final form.
- Special appreciation to my family and friends, whose unwavering support and motivation kept me focused and inspired throughout this endeavor.
- Gratitude to the various tools, resources, and technologies that enabled me to bring my ideas to life. Their capabilities empowered me to create an effective and efficient solution.

This project has not only strengthened my technical skills but has also deepened my passion for problem-solving and innovation.

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Introduction to Python

It can model real-world entities being an object-oriented programming language. It is also dynamically typed, carrying out type-checking at run-time. Python is an interpreted language that executes one line at a time in the Python Integrated Development Environment (IDLE).

Advantages of Python

i. Data Science

Python has taken over the scientific and research community, and the reason is because of its ease of use and simplified syntax. Thanks to its versatility, Python has become a sort of skill one can have to join the data science community or any computer science-based development community. Python is incredibly productive as it makes frameworks available with APIs, with addition to the scientific packages coming from the industry.

ii. Machine learning

Since Python is a full-fledged general-purpose language, it has become popular amongst people coming from various disciplines, experimenting with machine learning. People trying to bring the power of AI to their fields also drag the use of Python and its importance in their respective fields also.

TaskFlo

iii. Web Development

Backend development can be covered by Python language. It is extremely hard to cover all the designing requirements from scratch and to also take care of reliability and effectiveness. To cover all these prospects, developers use frameworks that can do the same.

The most popular ones are Django and Flask (Python).

iv. Job Opportunity and Salary Base

Each Language provides a different set of job opportunities but it is worth noting that Python is making more strides than other languages, looking at the current situation.

Python's recent updates, such as fixing error messages, modify paths in Windows installer, etc. have made it easier for coders to work with it.

As far as the job is concerned, Python has a slight edge. Python seems to be an exception when the salary distribution is concerned.

Python's use is just like a helpful assistant that is handling you tools. It serves as a glue language for beginners and experts to come together and collaborate for scientific development.

Introduction to Interface Python with CSV

CSV (Comma Separated Values) is a simple file format used to store tabular data, such as a spreadsheet or database. A CSV file stores tabular data (numbers and text) in plain text. Each line of the file is a data record. Each record consists of one or more fields, separated by commas. Below are some operations that we perform while working with CSV files in Python

- Reading a CSV file
- Writing to a CSV file

Reading a CSV file

Reading from a CSV file is done using the reader object. The CSV file is opened as a text file with Python's built-in open() function, which returns a file object. In this example, we first open the CSV file in READ mode, file object is converted to csv.reader object and further operation takes place.

TaskFlo

Writing to a CSV file

To write to a CSV file, we first open the CSV file in WRITE mode. The file object is converted to csv.writer object and further operations takes place

Why choose Python for database programming:
Following are the reason to choose python for database programming

- Programming more efficient and faster compared to other languages.
- Portability of python programs.
- Support platform independent program development.
- Python supports CSV format.
- Python itself take care of open and close of connections.

About Project

TaskFlo is a centralized platform designed to simplify and streamline academic assignment management for both teachers and students. It offers a user-friendly interface that enables users to efficiently manage, track, and access assignments.

The platform ensures a seamless workflow with features like secure user authentication, personalized dashboards, and robust tools for uploading, organizing, and tracking assignments.

Students benefit from an intuitive submission portal, timely notifications for deadlines, and the ability to search and filter assignments by due dates. Teachers can save time by easily managing assignments directly through the platform.

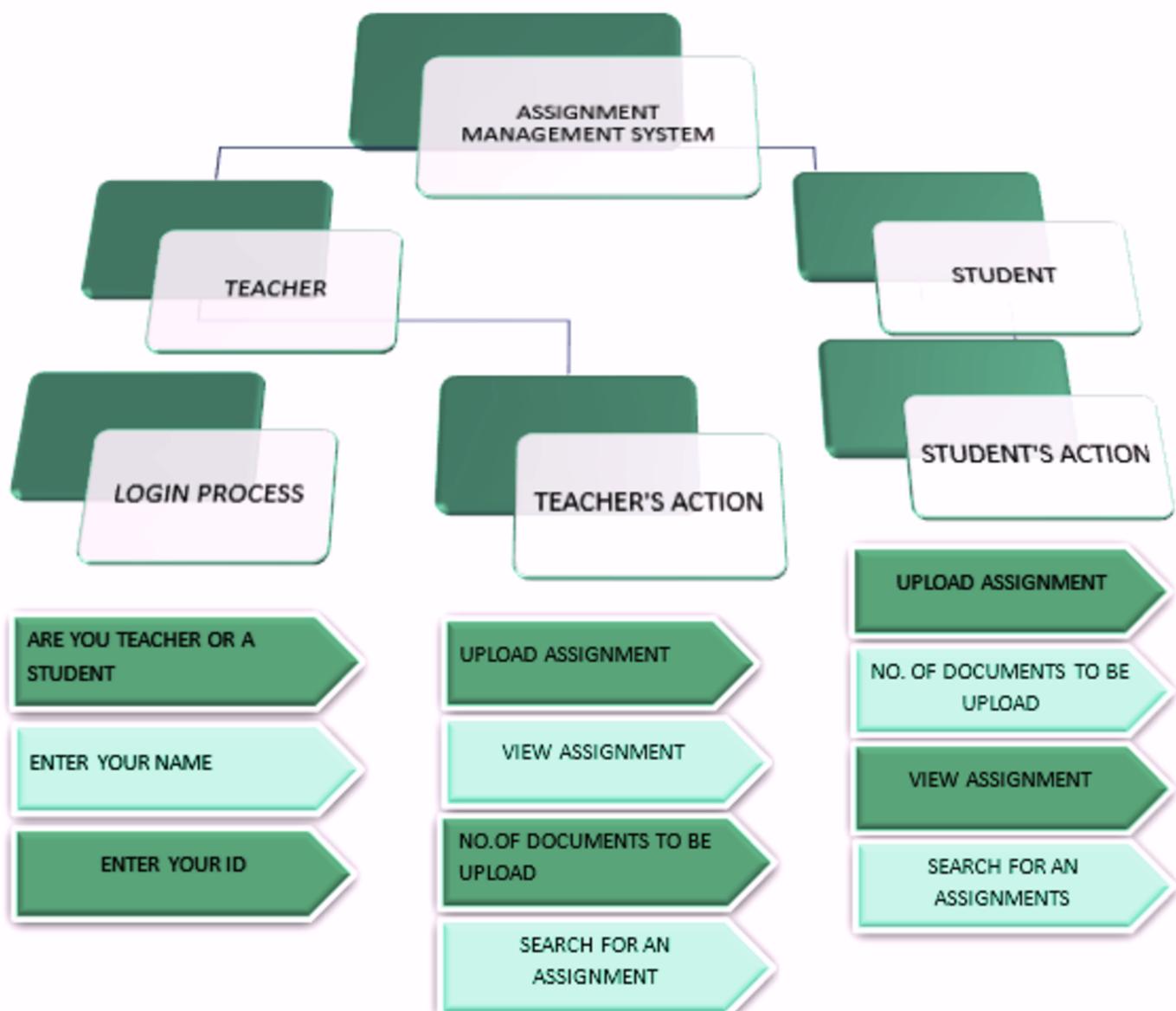
Additionally, TaskFlo incorporates progress tracking, file storage, and integration with existing educational tools, making it a comprehensive solution for enhancing academic productivity and fostering a more organized and stress-free learning environment.

Objectives of the Project

Our consideration while developing TaskFlo was to achieve the following goals:

1. TaskFlo is designed for academic assignment management, providing features that cater to the needs of both teachers and students in an educational setting.
2. It helps streamline assignment-related workflows, reducing the time and effort spent on managing submissions, tracking deadlines, and organizing resources.
3. The software minimizes the need for manual paperwork by digitizing assignment management and centralizing all data in one platform.
4. Teachers can efficiently manage assignments, track submissions, and provide feedback, while students can easily access, filter, and submit assignments.
5. TaskFlo allows users to generate progress reports and maintain records of assignments, submissions, and grades with ease.

Hierarchichal Diagram of the Project



Feasibility Study

It has very important place in the study of any software because if the project are not feasible then working on this software is not a good work.

So I conducted the feasibility study in order to check out whether our software “TASKFLO” is feasible or not. So we study about three types of feasibility:-

- ✓ Economic Feasibility
- ✓ Technical Feasibility
- ✓ Operational Feasibility

So brief description of above are following

1. Economic Feasibility:-

In this study, I was concerned about broad range of factors. Our software has no need of any other equipment or software. It saves very much time and lots of manual work. It also saves the paper work of the person.

So, in short we can say that it is economic feasible software and saves lots of expenses of the person and time as well.

2. Technical Feasibility:-

In technical feasibility we studied that the system is technical feasible or not. If system is not feasible then, a system analyst takes a decision about software that will be proceeding out or not. So, we take care of that our software is overall technically feasible. I take care of the development and technology for ensuring availability of the hardware and software needs for implementation of this project and that is minimal.

3. Operational feasibility:-

Our software is user friendly. So a person who does not have any technical background can operate this software, prior knowledge of computer is not mandatory for operating the software. Icons menus and its options describing its meaning itself, input and output form are designed in user friendly way for providing proper instructions with user.

So we specially take care of that software is operational feasible

Data Structure

CSV files used in the project:

- tchrdf.csv
- studentdf.csv
- assigndf.csv

Structure of the CSV files used:

- tchrdf.csv(Teacher's name, teacher's ID, subject)
- studentdf.csv(Students Name, Class and Section, student ID)
- assigndf.csv(Assignment name, Mathematics, Economics, Informatics practices, Accountancy, English, Business Studies, Date date, Teacher's name)



1. studentdf.csv

2. tchrdf.csv

3. assigndf.csv

Hardware and Software Requirements

1. HARDWARE:

- Processor
- Keyboard
- Minimum memory - 2GB

2. SOFTWARE:

- Operating System - OS10
- Python IDLE 3.12
- MS Excel

SOURCE CODE

```
import pandas as pd
print("Welcome to TaskFlo")
login_desc = input("Are you a Teacher or a Student? ").strip()
login_name = input("Please enter your name: ").strip()
login_id = int(input("Please enter your ID: "))

tchr_df = pd.read_csv("C:\\Users\\fidha\\Downloads\\tchrdf.csv")
tchr_df.columns = tchr_df.columns.str.lower().str.replace(' ', '_')
print(tchr_df.columns)
stu_df = pd.read_csv("C:\\Users\\fidha\\Downloads\\studentdf.csv")
stu_df.columns = stu_df.columns.str.lower().str.replace(' ', '_')

assign_df = pd.read_csv("C:\\Users\\fidha\\Downloads\\assigndf.csv")
assign_df.columns = assign_df.columns.str.lower().str.replace(' ', '_')
```

```
if login_desc.lower() == 'teacher':
    print("Hello ", login_name)
    action = int(input("What do you want to do today? upload assignments(1), view all assignments(2): "))
    if action == 1:
        print('Upload assignment')
        pdf_links = []
        num_of_doc = int(input('Enter number of documents to be uploaded: '))
        for i in range(num_of_doc):
            pdflink = input(f'Enter the PDF link for document {i + 1}: ').strip()
            pdf_links.append(pdflink)
        if 'pdf_link' not in assign_df.columns:
            assign_df['pdf_link'] = None
        assign_df.to_csv('C:/Users/fidha/Downloads/assignment_.csv', index=False)
        print("PDF links have been successfully added/updated in the CSV.")
    elif action == 2:
        print('View all assignments')
        print(assign_df)
    else:
        print('Invalid choice!')
```

SOURCE CODE

```
elif login_desc.lower() == 'student':
    print("Hello ", login_name)
    action = int(input("What do you want to do today? upload assignments(1), view by due date(2), search for an assignment(3): "))
    if action == 1:
        print('Upload assignment')
        pdf_links = []
        num_of_doc = int(input('Enter number of documents to be uploaded: '))
        for i in range(num_of_doc):
            pdflink = input(f'Enter the PDF link for document {i + 1}: ').strip()
            pdf_links.append(pdflink)
        if 'pdf_link' not in assign_df.columns:
            assign_df['pdf_link'] = None
        assign_df.to_csv("C:\\\\Users\\\\fidha\\\\Downloads\\\\assigndf.csv", index=False)
        print("PDF links have been successfully added/updated in the CSV.")

    elif action == 2:
        due_on = input("Enter due date (YY-MM-DD): ").strip()
        due_df = assign_df[assign_df['date_date'] == due_on]
        if (assign_df['date_date'] == due_on).any():
            print("Assignments due:")
            print(due_df)
        else:
            print("No assignments due on this date.")

    elif action == 3:
        print('Search and filter')
        searching_for = input("Enter file name: ")
        assign_df['assignment_name'] = assign_df['assignment_name'].str.strip().str.lower()
        searching_for = searching_for.strip().lower()
        found=assign_df[assign_df['assignment_name'] == searching_for]
        if searching_for in assign_df['assignment_name'].values:
            print("File found!")
            print(found)
        else:
            print("File not found!")
        else:
            print("Invalid choice!")

    else:
        print("Invalid login description!")
```

OUTPUT SCREENS

Welcome to TaskFlo

Are you a Teacher or a Student? Teacher

Please enter your name: Nilan

Please enter your ID: 1231

Hello Nilan

What do you want to do today? upload assignments(1), view all assignments(2), search for an assignment(3): 1

Upload assignment

Enter number of documents to be uploaded: 1

Enter the PDF link for document 1: C:/Users/fidha/Downloads/Development Experiences _school notes.pdf

PDF links have been successfully added/updated in the CSV.

Hello Nilan

What do you want to do today? upload assignments(1), view all assignments(2), search for an assignment(3): 2

View all assignments

assignment_name ... teacher's_name_

- | | | |
|----|---|---------------|
| 0 | Matrices assignment-1 ... | Nilan |
| 1 | Money and banking assignment-1 ... | Aadhirai |
| 2 | Python Pandas assignment-1 ... | Abishek kumar |
| 3 | Admission of a partner assignment-1 ... | Lakshmi |
| 4 | The last lesson assignment-1 ... | Sara |
| 5 | Principles of management assignment-1 ... | Moshika |
| 6 | Matrices assignment-2 ... | Aanya |
| 7 | Money and banking assignment-2 ... | jenika |
| 8 | Python Pandas assignment-2 ... | shreenika |
| 9 | Admission of a partner assignment-2 ... | sudha |
| 10 | The last lesson assignment-2 ... | trishika |
| 11 | Principles of management assignment-2 ... | aditi |
| 12 | Python Pandas assignment-3 ... | fatima |
| 13 | Admission of a partner assignment-3 ... | saanvi |
| 14 | The last lesson assignment-3 ... | inaya |

Hello Nilan

What do you want to do today? upload assignments(1), view all assignments(2), search for an assignment(3): 3

Search and filter

Enter file name: Python Pandas assignment-1

File found!

assignment_name mathematics ... teacher's_name_ pdf_link

- | | | | | |
|---|----------------------------|---------------|---------------|-----|
| 2 | Python Pandas assignment-1 | submitted ... | Abishek kumar | NaN |
|---|----------------------------|---------------|---------------|-----|

OUTPUT SCREENS

Welcome to TaskFlo

Are you a Teacher or a Student? Student

Please enter your name: Anu

Please enter your ID: 1223

Hello Anu

What do you want to do today? upload assignments(1), view by due date(2), search for an assignment(3): 1

Upload assignment

Enter number of documents to be uploaded: 1

Enter the PDF link for document 1: C:/Users/fidha/Downloads/School/Chapter 2_ Principles of Management.pdf

PDF links have been successfully added/updated in the CSV.

Hello Anu

What do you want to do today? upload assignments(1), view by due date(2), search for an assignment(3): 2

Enter due date (YY-MM-DD): 24-02-24

Assignments due:

assignment_name mathematics ... teacher's_name_ pdf_link

1 Money and banking assignment-1 Not submitted ... Aadhirai NaN

Hello Anu

What do you want to do today? upload assignments(1), view by due date(2), search for an assignment(3): 3

Search and filter

Enter file name: Python Pandas assignment-2

File found!

assignment_name mathematics ... teacher's_name_ pdf_link

8 python pandas assignment-2 submitted ... shreenika NaN

Bibliography

- <https://slideshare.net>
- <https://studentsprojectguide.com>
- <https://www.scribd.com>