# ONLINE EXAMINATION AUTOMATION

By

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# INTRODUCTION

Robotic Process Automation (RPA) is revolutionizing the way repetitive and rule-based tasks are performed in various fields, including education. Online examination automation using RPA focuses on streamlining and simplifying the management of exams by automating tasks that traditionally require significant manual effort.

In the context of examination scheduling, RPA bots can efficiently handle processes such as organizing subject schedules for various departments and academic years. By leveraging RPA, institutions can eliminate the risks of human errors, reduce time consumption, and ensure conflict-free scheduling.

# ABSTRACT


- This project focuses on using Robotic Process Automation (RPA) to automate the scheduling of online exams for different departments and academic years. The system is designed to handle tasks like gathering subject and student data and ensuring exams are scheduled without conflicts.
- With RPA, the process becomes faster, more accurate, and requires less human effort. This automation helps schools and colleges save time, reduce errors, and improve the way exams are managed.

# NEED FOR AUTOMATION IN ONLINE EXAMIANTIONS

- **Time Efficiency**: Automation significantly reduces the time needed to create exam schedules, enabling institutions to focus on other important tasks.
- **Conflict-Free Scheduling**: Automated systems ensure no overlapping exams for students, minimizing errors and avoiding last-minute adjustments.
- **Scalability**: Automation can handle complex schedules for large institutions with multiple departments and academic years.
- **Flexibility**: Automated scheduling can quickly adapt to changes, such as rescheduling exams or accommodating new requirements.
- **Accuracy**: Automation ensures precise scheduling, reducing human errors and ensuring compliance with institutional policies.

# COMPONENTS OF ONLINE EXAMINATION AUTOMATION

## 1. Input Module

- **Department Details**: Allows input of department names (e.g., Computer Science, Mechanical Engineering).
- **Year Information**: Captures the academic year (e.g., 1st year, 2nd year).
- **Exam Dates**: Input for specifying the range or specific dates for scheduling exams.
- **Subject Names**: List of subjects for each department and year.

## 2. User Interface (UI)

- **Input Form**: A simple interface for entering department, year, dates, and subject names.
- **Schedule Viewer**: Displays the generated schedule in a clear, user-friendly format (e.g., a table or list).

## 3. Automation and Validation Module

- **Data Processing**: Validates input to ensure all required details are provided (e.g., no missing subjects or dates).
- **Schedule Validation**: Ensures there are no duplicate or conflicting entries in the schedule.

## 4. Output Module

- **Schedule Report**: Generates and exports the final schedule in formats like Excel or PDF for distribution.

# WORKFLOW

**Step 1: Input Data Collection**

- Department (e.g., Computer Science, Mechanical Engineering).
- Academic Year (e.g., 1st Year, 2nd Year).
- Available Exam Dates (e.g., a range of dates or specific ones).
- Subject Names for each department and year.

**Step 2: Data Validation**

- Check that all required fields are filled (no missing departments, years, or subjects).
- Validate date range to ensure it is appropriate for scheduling.
- Ensure no duplicate subjects are entered for the same year or department.

**Step 3: Schedule Generation**

- Allocate one subject per date for each department and year.
- Ensure no overlapping of subjects for the same department and year.
- Apply any additional rules or preferences (e.g., specific subjects on certain dates).

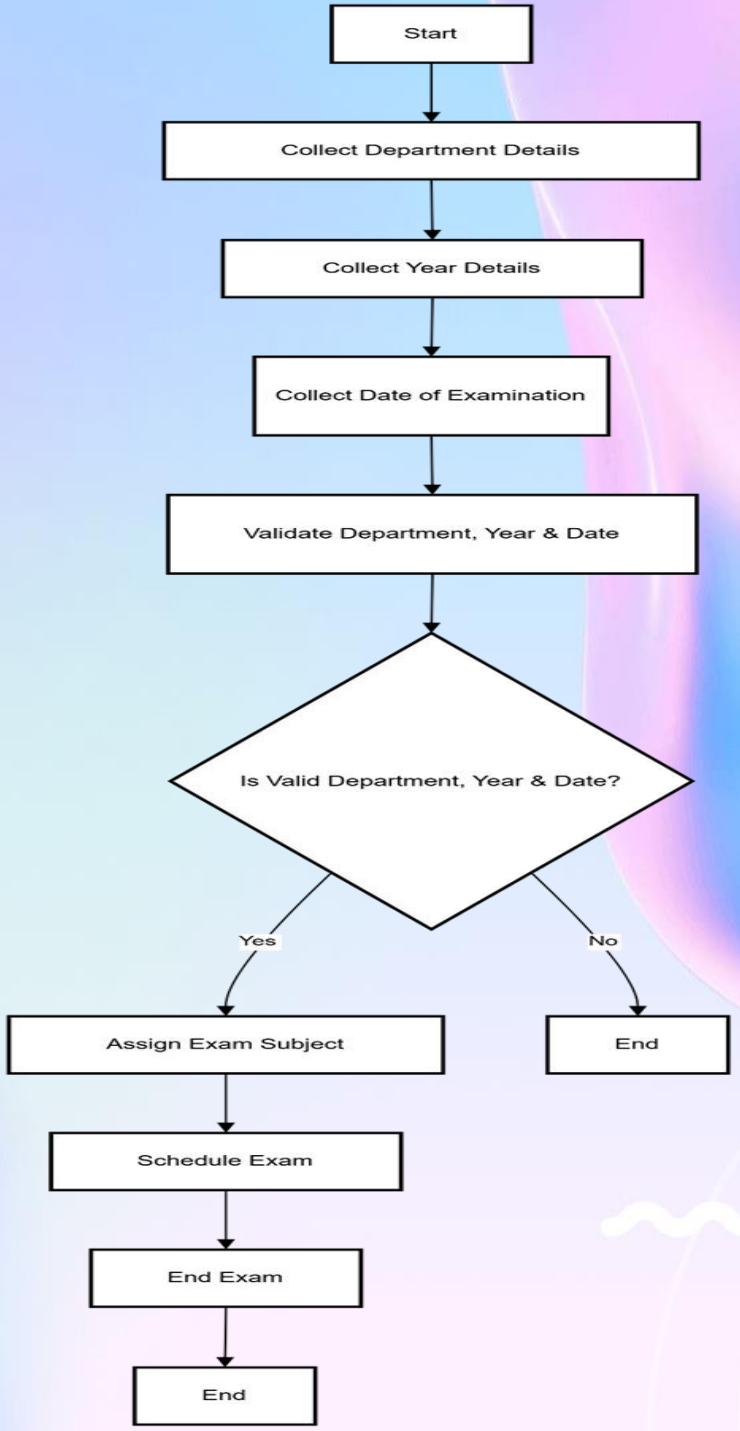
**Step 4: Review and Adjustment**

- Generate a draft schedule for review.
- Allow the administrator to manually adjust the schedule if needed (e.g., changing subject order).

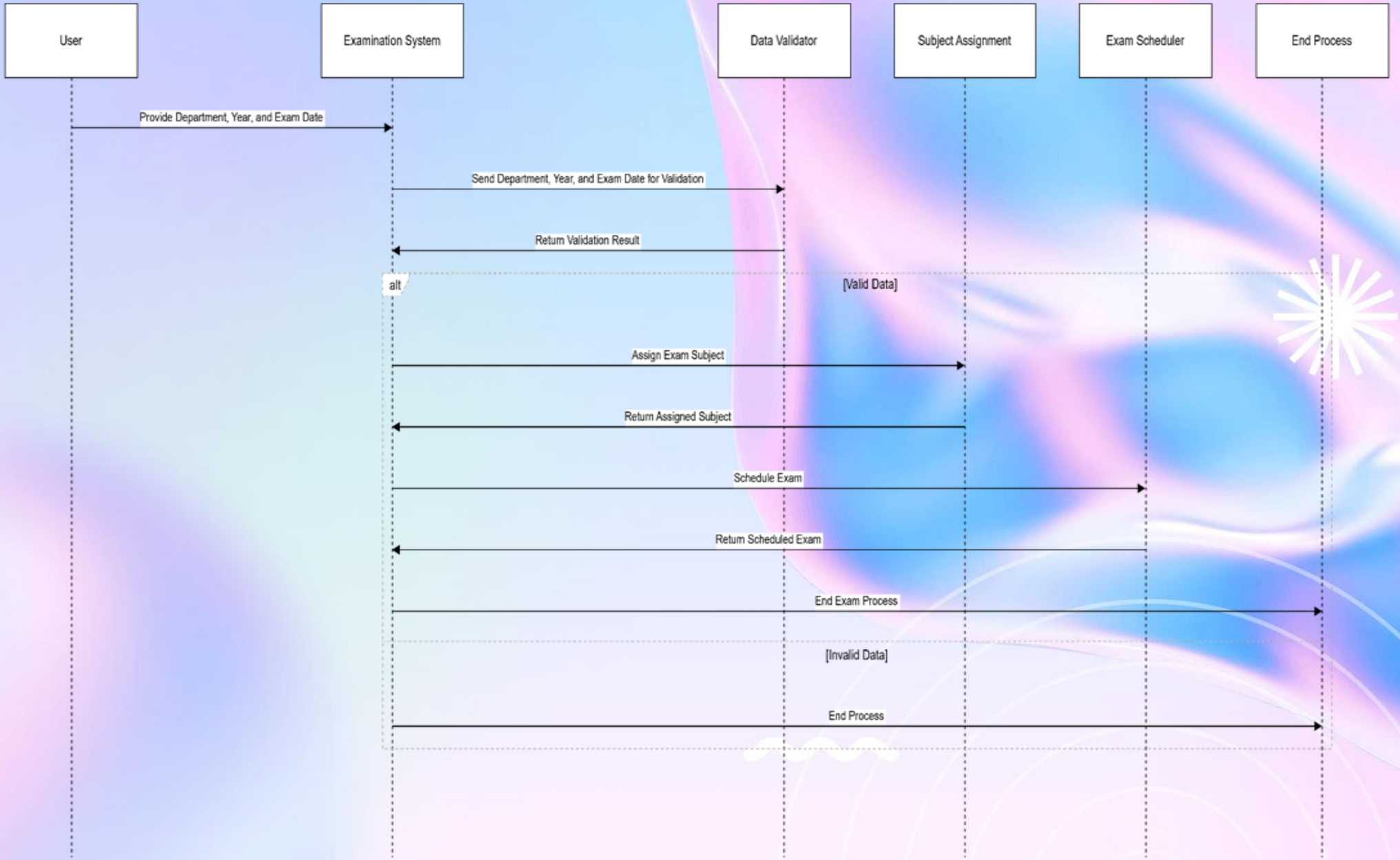
**Step 5: Finalization**

- Lock the schedule after review.
- Generate a finalized schedule in a structured format (e.g., a table or calendar).

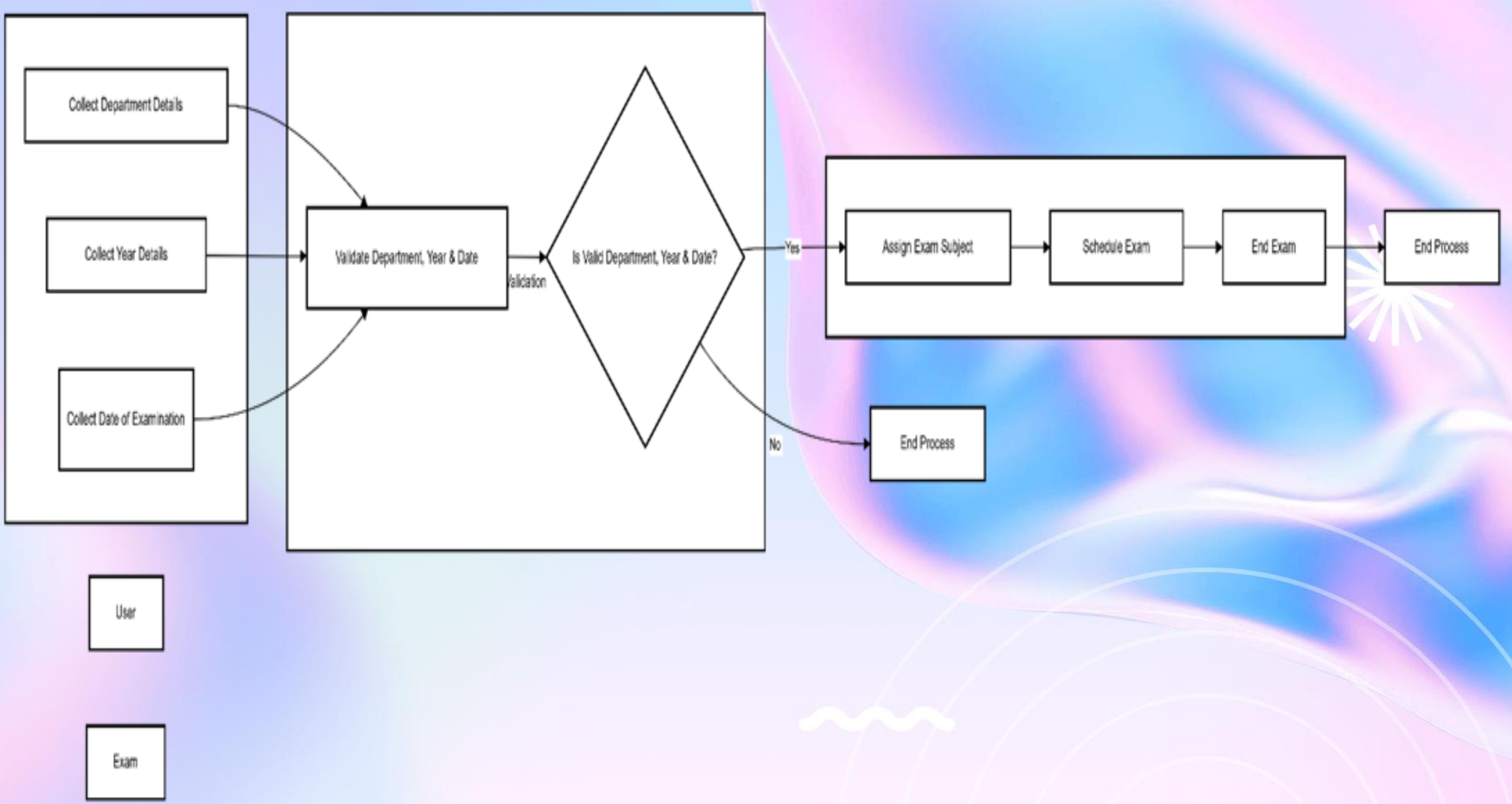
# FLOW CHART:


Start
Collect Department Details
Collect Year Details
Collect Date of Examination
Validate Department, Year & Date
Is Valid Department, Year & Date?
Yes
No
Assign Exam Subject
End
Schedule Exam
End Exam
End

# SEQUENCE DIAGRAM:



# ARCHITECTURE DIAGRAM:



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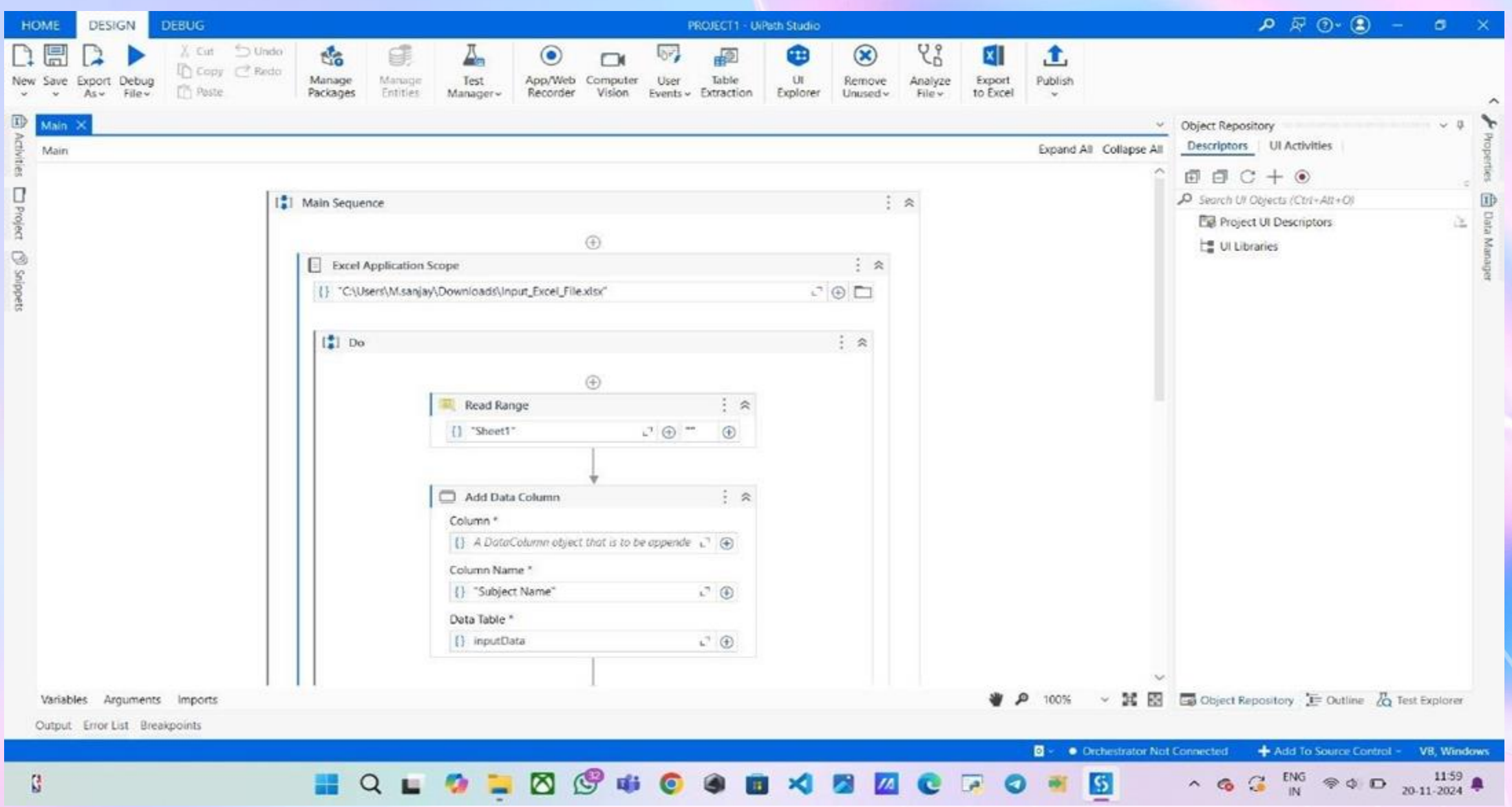
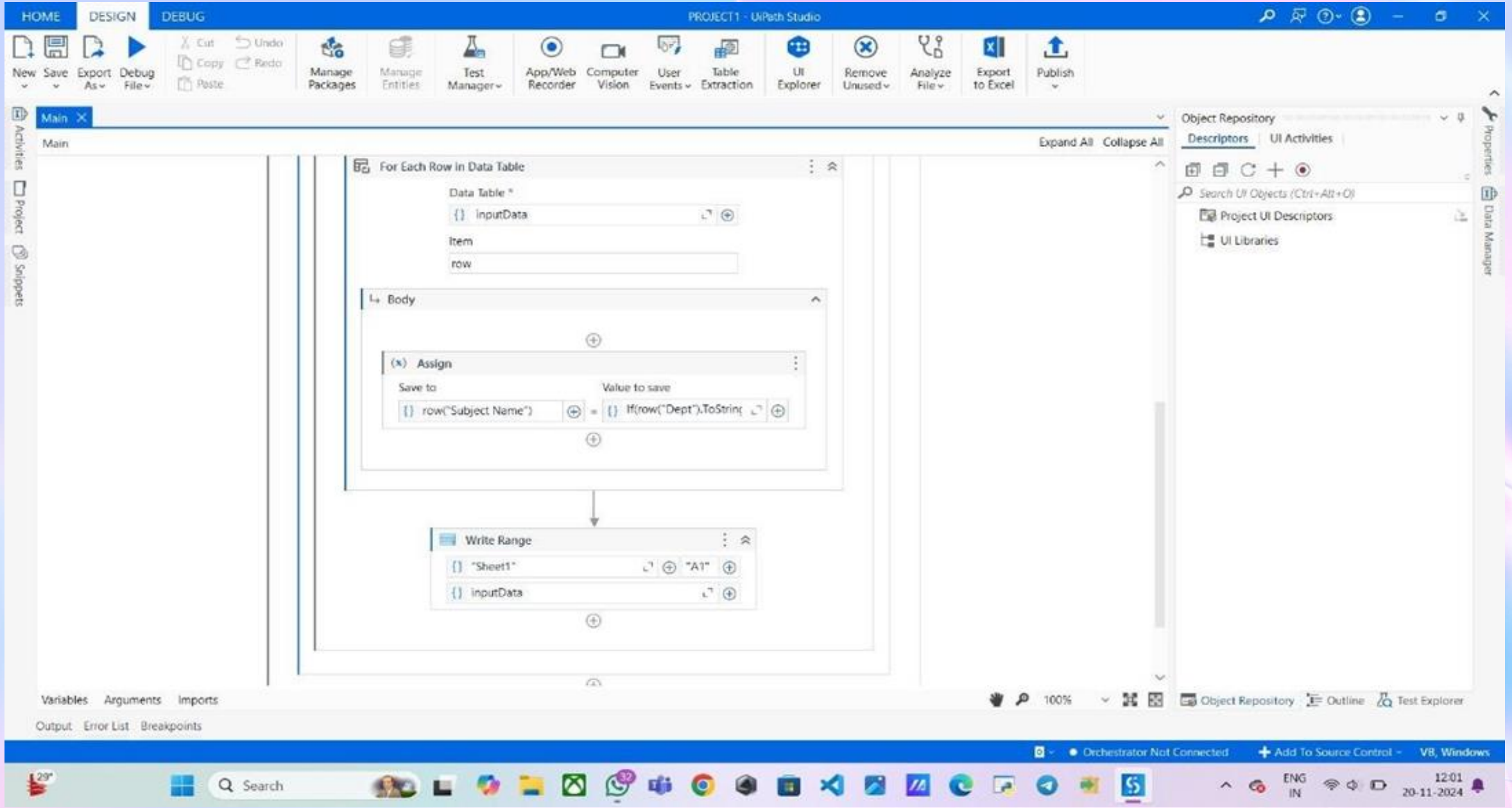
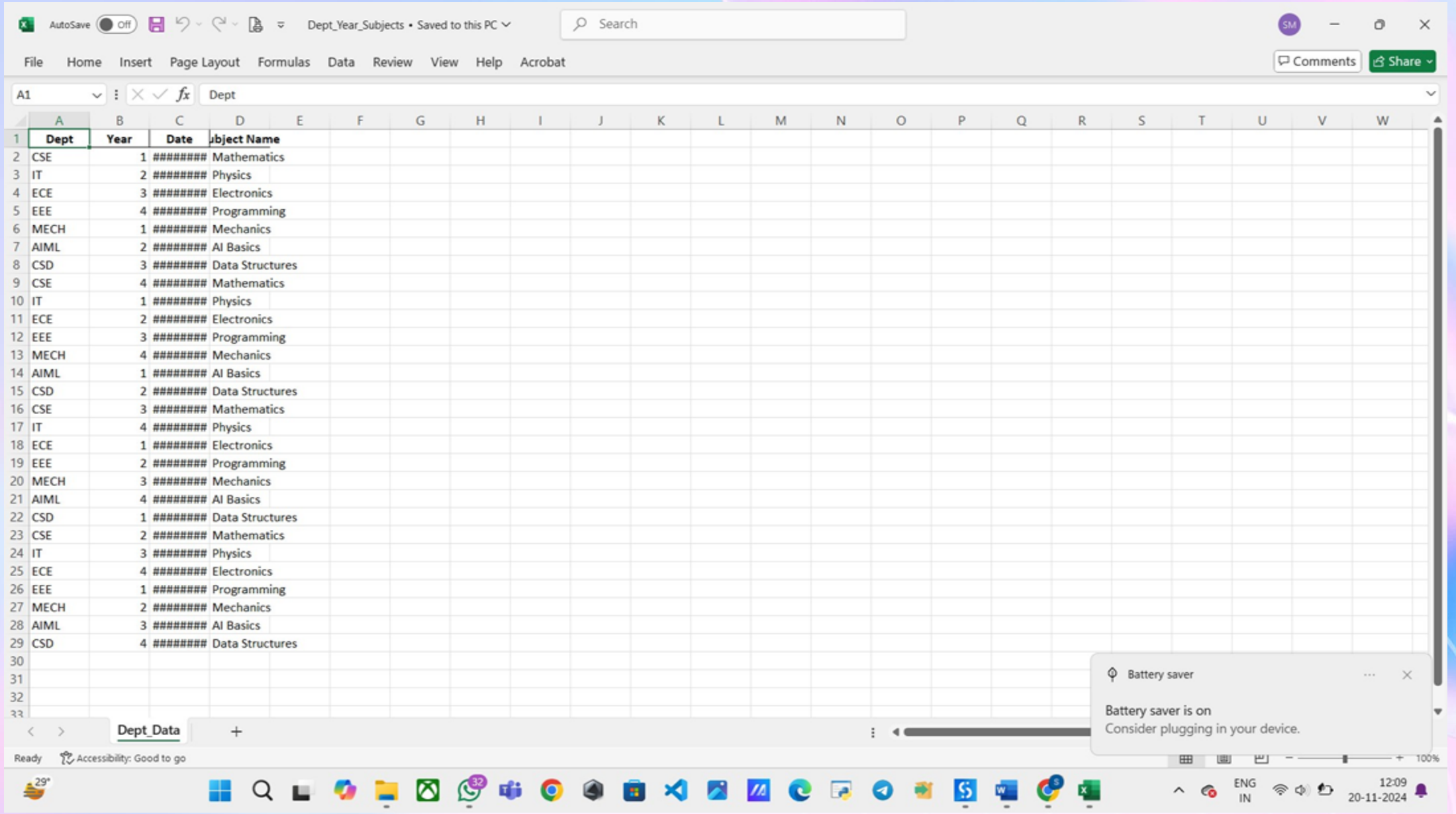



HOME
DESIGN
DEBUG
PROJECT1 - UiPath Studio
New
Save
Export As
Debug File
Cut
Copy
Paste
Undo
Redo
Manage Packages
Manage Entities
Test Manager
App/Web Recorder
Computer Vision
User Events
Table Extraction
UI Explorer
Remove Unused
Analyze File
Export to Excel
Publish
Activities
Project
Snippets
Main
Main
Expand All
Collapse All
For Each Row in Data Table
Data Table *
inputData
Item
row
Body
Assign
Save to
Value to save
row("Subject Name")
If(row("Dept").ToStrin
Write Range
"Sheet1"
"A1"
inputData
Object Repository
Descriptors
UI Activities
Search UI Objects (Ctrl+Alt+O)
Project UI Descriptors
UI Libraries
Properties
Data Manager
Variables
Arguments
Imports
100%
Object Repository
Outline
Test Explorer
Output
Error List
Breakpoints
Orchestrator Not Connected
Add To Source Control
VB, Windows
Search
ENG
IN
12:01
20-11-2024

# OUTPUT:




| Dept | Year | Date | Subject Name |
|---|---|---|---|
| CSE | 1 | ######## | Mathematics |
| IT | 2 | ######## | Physics |
| ECE | 3 | ######## | Electronics |
| EEE | 4 | ######## | Programming |
| MECH | 1 | ######## | Mechanics |
| AIML | 2 | ######## | AI Basics |
| CSD | 3 | ######## | Data Structures |
| CSE | 4 | ######## | Mathematics |
| IT | 1 | ######## | Physics |
| ECE | 2 | ######## | Electronics |
| EEE | 3 | ######## | Programming |
| MECH | 4 | ######## | Mechanics |
| AIML | 1 | ######## | AI Basics |
| CSD | 2 | ######## | Data Structures |
| CSE | 3 | ######## | Mathematics |
| IT | 4 | ######## | Physics |
| ECE | 1 | ######## | Electronics |
| EEE | 2 | ######## | Programming |
| MECH | 3 | ######## | Mechanics |
| AIML | 4 | ######## | AI Basics |
| CSD | 1 | ######## | Data Structures |
| CSE | 2 | ######## | Mathematics |
| IT | 3 | ######## | Physics |
| ECE | 4 | ######## | Electronics |
| EEE | 1 | ######## | Programming |
| MECH | 2 | ######## | Mechanics |
| AIML | 3 | ######## | AI Basics |
| CSD | 4 | ######## | Data Structures |

# THANK YOU