**Mukesh Patel School of Technology Management & Engineering  
Department of Mechatronics Engineering  
AR-VR Lab  
Subject- Robotic Process Automation  
EXPERIMENT NO. 2A**

**Objective:**

This lab manual aims to reinforce your understanding of Power Automate Desktop, emphasizing variables for data manipulation and conditional actions for dynamic decision-making. Ultimately, this will enable you to construct more flexible and efficient automation flows.

**Prerequisites:**

* Power Automate Desktop installed on your computer.
* Basic understanding of Power Automate Desktop interface.

**Challenge Overview:**

In this experiment, you will create 3 flows that:

1. Take input for marks of three subjects.
2. Calculate the average of these marks.
3. Check if the average is above the passing threshold.
4. Assign grades based on the average score.

**Important Actions:**

1. **Input Dialog:**
   * Use the "Input Dialog" action to prompt the user to enter marks for three subjects.
   * Configure the input dialog to request numerical input for each subject.
2. **Calculate Average:**
   * Use the 'Set Variable' action to sum the three subject marks obtained from the user.
   * Divide the sum by 3 to calculate the average.
   * *Hint: Enclose the calculation in %% for evaluation.*
3. **Decision:**
   * Insert a 'Decision' action to evaluate whether the average is above the passing threshold.
   * Configure the decision to have two branches: one for passing and one for failing.
   * You may use either an If-Else or Switch-Case action here.
4. **Assign Grades:**
   * In the passing branch, assign the appropriate grade based on the calculated average.
   * In the failing branch, assign an 'F' grade.
   * You may use an If-Else ladder or Switch-Case action here.
5. **Display Results:**
   * Use the "Message Box" action to display the calculated average and the assigned grade to the user.

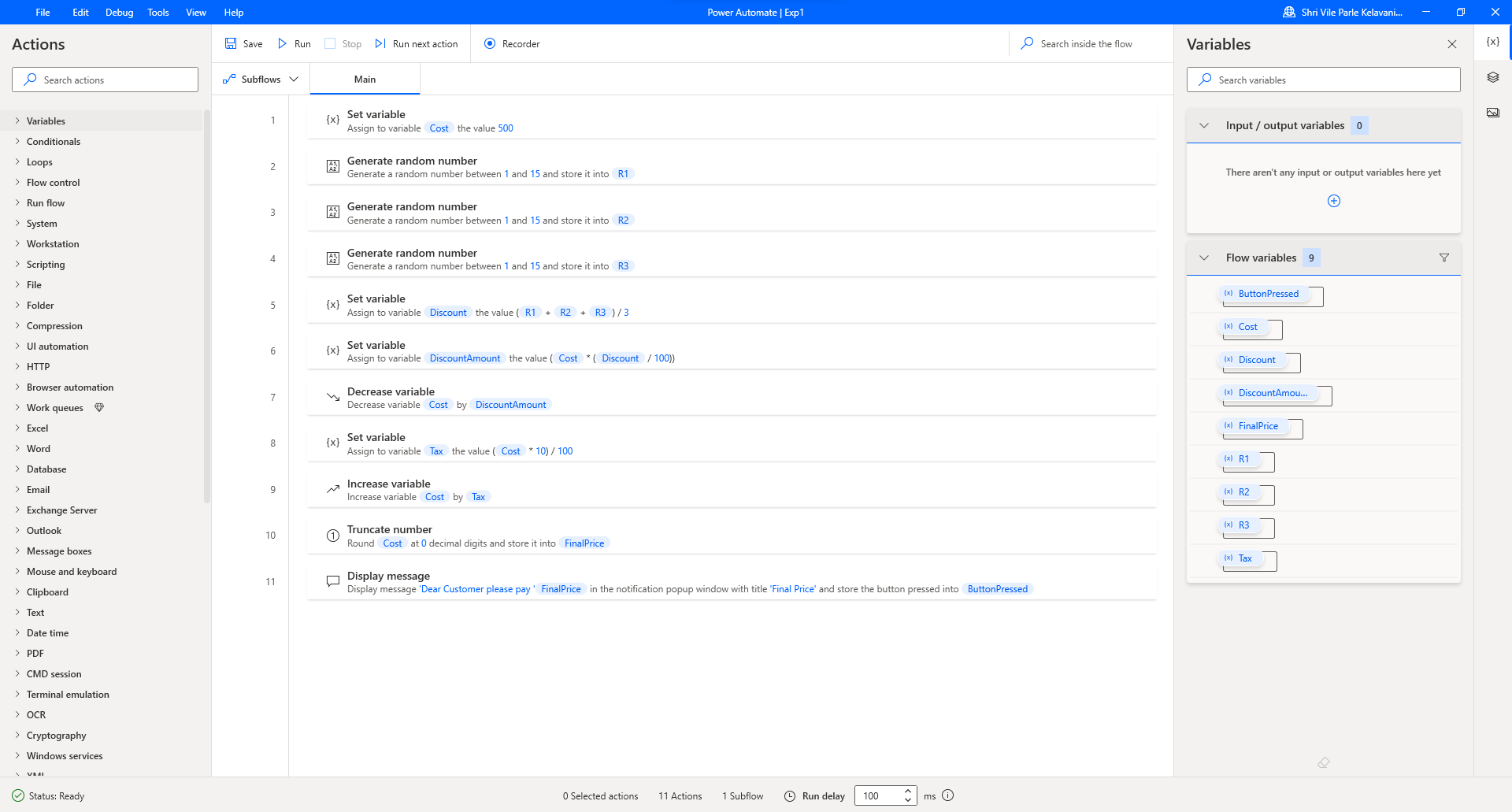
**Tasks:**

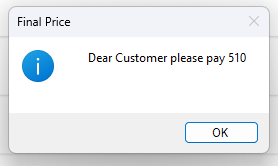
1. Create a Power Automate Desktop flow that incorporates the described actions.
2. Test the flow by providing different sets of marks to ensure accurate calculation and grade assignment.
3. Debug and troubleshoot any errors that may arise during the execution of the flow. Aim to simplify the flow for efficiency, considering factors such as readability and maintainability.

**Flow Screenshots:**

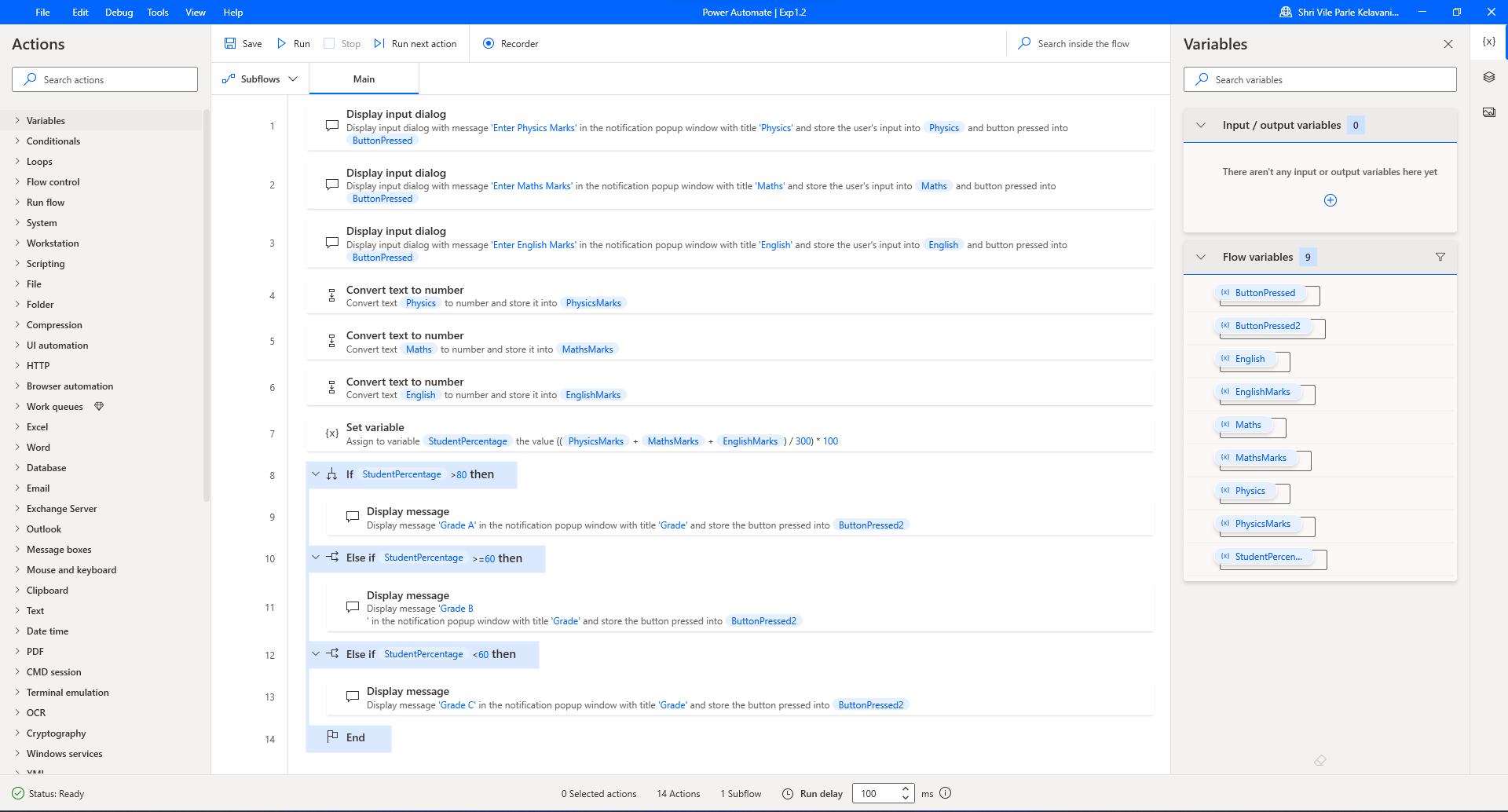
* **Input Screenshot:**

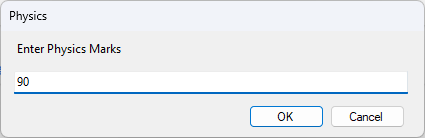
**Item Price Flow:**

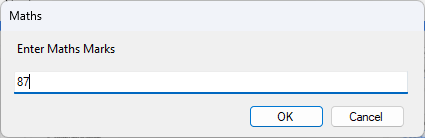


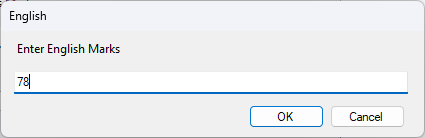


Marks Grading System:

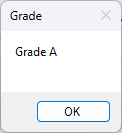








Output



Conclusion:

In this experiment with Power Automate Desktop has provided a hands-on experience in creating automated workflows for calculating and assigning grades based on user input. By utilizing actions such as Input Dialog, Set Variable, Decision, and Message Box, you have learned to build flexible and efficient automation processes. This exercise has enhanced your ability to work with variables and conditional logic, essential skills for creating dynamic automations that can adapt to various scenarios.

**SVKM’S NMIMS**

**Mukesh Patel School of Technology Management & Engineering**

Department of Mechatronics Engineering

**AR-VR Lab**

Subject- Robotic Process Automation

**EXPERIMENT NO. 2B**

**Objective:**

This lab is designed to deepen your understanding of loops in Power Automate Desktop. The objective is to learn how to utilize loops for repetitive tasks, enabling you to create more efficient and dynamic automation flows.

**Prerequisites:**

1. Power Automate Desktop installed on your computer.

2. Basic understanding of Power Automate Desktop interface.

**Challenge Overview:**

In this experiment, you will create 3 flows

1.Create a flow that checks whether a given input is a palindrome or not. A palindrome is a sequence that reads the same forwards and backward.

3.Build a flow that generates the multiplication table for a given number.

**Important Actions:**

1. **Input Dialog:**
   * **Purpose:** Captures user input during the flow execution.
   * **Usage:** Request information, such as text or numerical values, from the user.
2. **Message Box:**
   * **Purpose:** Displays messages, alerts, or results during the flow execution.
   * **Usage:** Communicate information to the user or provide feedback on the flow's progress.
3. **Set Variable:**
   * **Purpose:** Assigns a value to a variable.
   * **Usage:** Store and manipulate data within the flow.
4. **Decision:**
   * **Purpose:** Branches the flow based on a specified condition.
   * **Usage:** Enables dynamic decision-making within the flow.
5. **Loop (e.g., For Each, While, Do Until):**
   * **Purpose:** Repeats a set of actions multiple times based on a specified condition.
   * **Usage:** Efficiently handle repetitive tasks and iterate through collections of data.
6. **Log Message:**
   * **Purpose:** Records messages in the log for debugging and troubleshooting.
   * **Usage:** Assists in diagnosing issues and understanding the flow's behavior.

**Tasks:**

1. Create a Power Automate Desktop flow that incorporates the described actions.

2. Test the flow by providing different sets of Test cases

3. Debug and troubleshoot any errors that may arise during the execution of the flow.

4. Optimize the flow for efficiency, considering factors such as readability and simplicity.

**Output Screenshot:**

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

Multiplication table:

A screenshot of a computer error

Description automatically generated

A screenshot of a math test

Description automatically generated

A screenshot of a computer

Description automatically generated

Armstrong validator:

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

For each loop

A screenshot of a computer

Description automatically generated

Conclusion:

I understood loops-if,else,switch,for,for-each using Palindrome, Armstrong number, multiplication table. Hence, We successfully performed the experiment.