



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
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MS EXCEL AUTOMATION

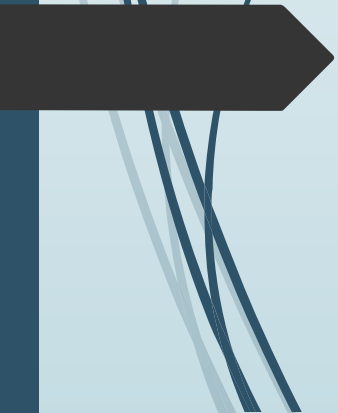
USING ROBOTIC PROCESS AUTOMATION (RPA)

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COURSE CERTIFICATE



INTRODUCTION

- In this project, we will build a process to Grade Calculation Excel Automation that works over Microsoft Excel 2013 using Blue prism
- Robotic Process Automation (RPA) is a type of automation technology currently transforming the way businesses operate.
- Excel automation streamlines your use of the application by automatically performing tasks.
- Generally in order to calculate grades we use manual formulas in excel. We also need to enter the marks manually each time. Our goal through this project is to automate this whole process with the help of RPA technology and blueprism We can avoid doing the rote and recurring task of calculating grade for each student based on their marks repeatedly and save time with the help of this project.



- In almost every organization, the responsibility of performing various strategic tasks such as management of the recruitment process, termination process, payroll management etc. lies within the Human resource department.

Some of it may include Employee_ monitoring at different levels, payroll management, Employee_ benefits, training, and development, etc. In-order to make this work a lot easier, organizations across the world are investing in HR automation in-order to find out and perform the best human capital decision.

However, every organization are now looking for more advanced methods of automation, which may help them to manage various complex processes such as, Data storage, Data control and modifications, Effective communication process enhancement, better connectivity with all departments easily and swiftly which would also be useful for the long-term goals of the organization.

Information Technology has now considered as a potential tool that managers use, both generally, and in human resource functions, to increase the capabilities of the organization.



OBJECTIVES

- Gain insights into building blocks of Blue Prism automation.
- Importing MS Excel VBO (Visual Basic for Applications) in Blue Prism.
- Tuning Process Studio with specific needs.
- Working with different stages in the Process studio.
- Build a Grade calculation using MS Excel Automation that works over Microsoft excel.

PURPOSE

- Manage Employee Information Efficiently.
- Define the emoluments, deductions, leave etc.
- In order to overcome the problem mentioned above, we will use RPA technology to automate the process of grade calculation. With the help of Digital Workers in Blueprism software our whole process of calculating
- Manage your own Security.



REQUIREMENTS

Pre-requirements for Blue Prism

- Creates and supports a digital workforce of industrial strength and enterprise scale.
- Does not require IT skills to implement
- Can be implemented in sprints of 4 to 8 weeks (Start to finish)
- Is very low cost compared to the TCO of alternative solutions
- Provides tremendous payback with self-funding returns and an ROI that has been as high as 80%
- Can be managed within IT infrastructure and processes



Installation of Blue Prism

The following are the installation requirements for Blue Prism –

- Windows 10 (Preferred) OS, 64 bit
- Blue prism installation Software, 64 bit
- Blue Prism License File
- SQL Server Express Edition, 64



Software Requirements

- Operating system: Windows XP/Vista or any main stream OS
- Installation and Setup Guide for Blue Prism
- Installation and Setup Guide for MS Excel
- Blue prism Version: 6.10.1
- Blue prism License File
- Blue prism installation Software 64 bit
- MS Excel
- Windows 7/8/10



Hardware Requirements

- Internet connection to download and activate
- Administration access to install and run Blue Prism
- Minimum 10GB free disk space
- Windows 8.1 or 10.
- Minimum System Requirements to run Office Excel 2013, your computer needs to meet the following minimum hardware requirements:
 - * 500 megahertz (MHz)
 - * 256 megabytes (MB) RAM
 - * 1.5 gigabytes (GB) available space
 - * 1024x768 or higher resolution monitor



Project Flow

- Importing Blue Prism MS Excel VBO (Visual Basic for Applications)
- Binding Process Studio with MS Excel VBO.
- Opening MS Excel Workbook.
- Specifying Blue Prism Stages to work on MS Excel Workbook in Blue Prism.
- Tuning Process Flow with Blue Prism Actions.
- Closing MS Excel Workbook.

FLOW AND IMPLEMENTATION

Idea:

Need to find a new one --“Generally, in the industries monitoring the machine status continuously and maintaining the records of the entire data plays a very important role as that helps the officials to analyze the production factors. This also helps in resolving some of the problems like machine failures, production delays, etc.





ACTIVITIES

Milestone 1: Configure the Process Studio

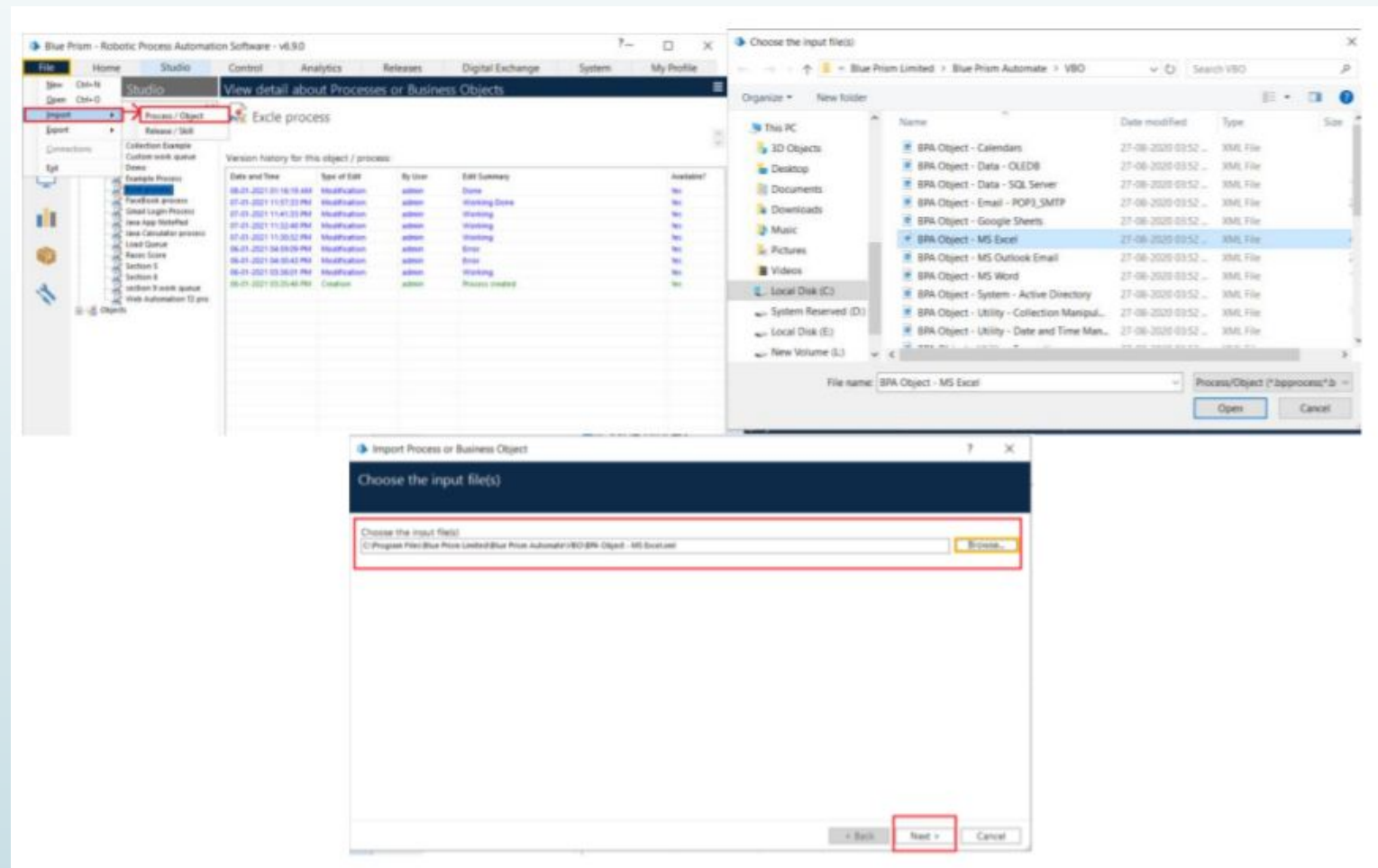
Let us create the Process Object bind with MS Excel VBO.

Object studio is mainly used to develop the objects. Inside the object, we have different types of actions as follows:

1. Application Modular to Spy the Elements
2. Initialize page and clean up page.

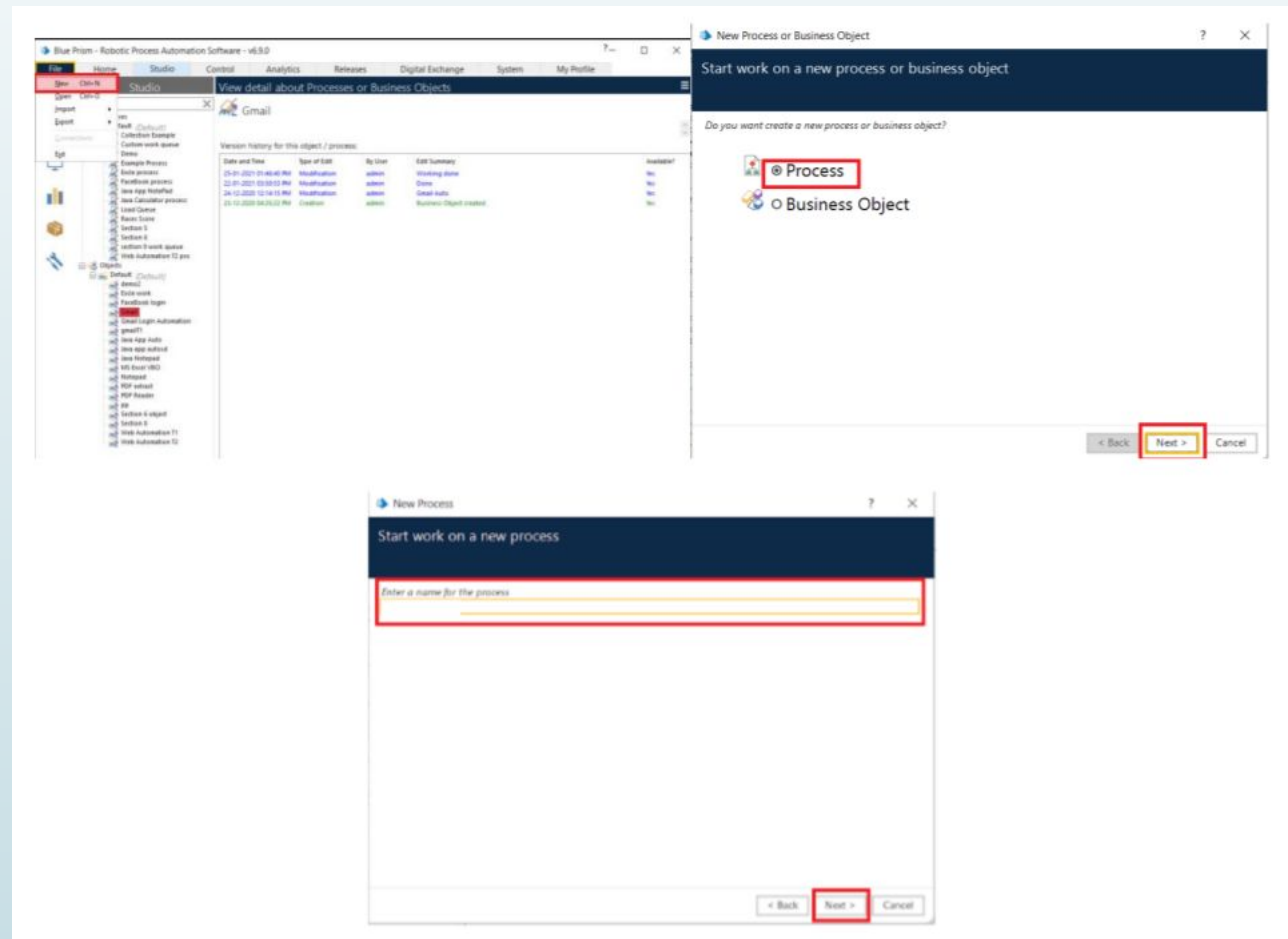
Activity 1: MS Excel VBO (Import VBO file)

File -> Import -> Browse -> (C:\Program Files\Blue Prism Limited\Blue Prism Automate\VBO\BPA Object-MS Excel). Click Finish.



Activity 2: Creating the Process Object from Object Studio

Process studio has only the Main page. We can call from the process studio. We use the Process studio for developing and testing.



Open Created Process Model (Gmail Log In Process)

The screenshot displays the Blue Prism Studio v6.9.0 interface. The 'Studio' tab is active, showing a list of processes on the left and a detailed view of the selected 'Excise process' on the right. The 'Excise process' is highlighted in the 'Processes' list. The right pane shows the 'Version history for this object / process:' section, which is currently empty. The status bar at the bottom indicates the user is 'admin' and connected to 'SQL Server 2017'.

Blue Prism - Robotic Process Automation Software - v6.9.0

File Home Studio Control Analytics Releases Digital Exchange System My Profile

Studio View detail about Processes or Business Objects

Processes

- Default (Default)
- Collection Example
- Custom work queue
- Demo
- Example Process
- Excise process**
- Facebook process
- Gmail Login Process
- Java App NotePad
- Java Calculator process
- Load Queue
- Races Score
- Section 5
- Section 6
- section 9 work queue
- Web Automation T2 pro

Objects

Excise process

Version history for this object / process:

Date and Time	Type of Edit	By User	Edit Summary	Available?
---------------	--------------	---------	--------------	------------

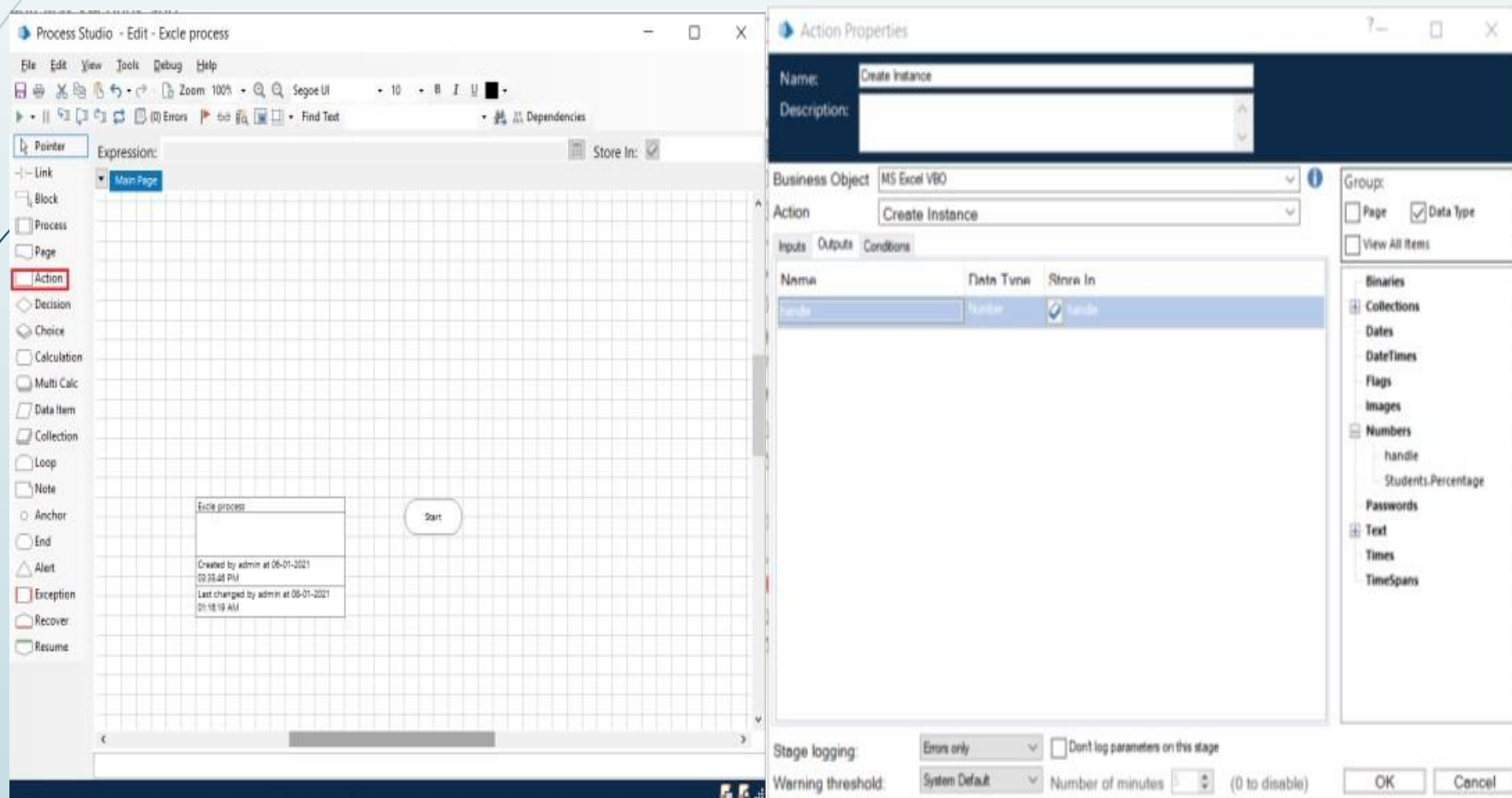
Sign Out Previous: 25-01-2021 11:18 AM, Current: 27-01-2021 03:57 PM, User: 'admin', Connection: 'LocalDB Connection', Connected To: 'SQL Server 2017'

1. Create Action Stage as “Create Instance” (Business Object = MS Excel VBO; Action = Create Instance).

a. Click on the Outputs tab

I. Create Data Item, type = number, name = “handle”. Drag it into the store in column.

II. Click on ok.

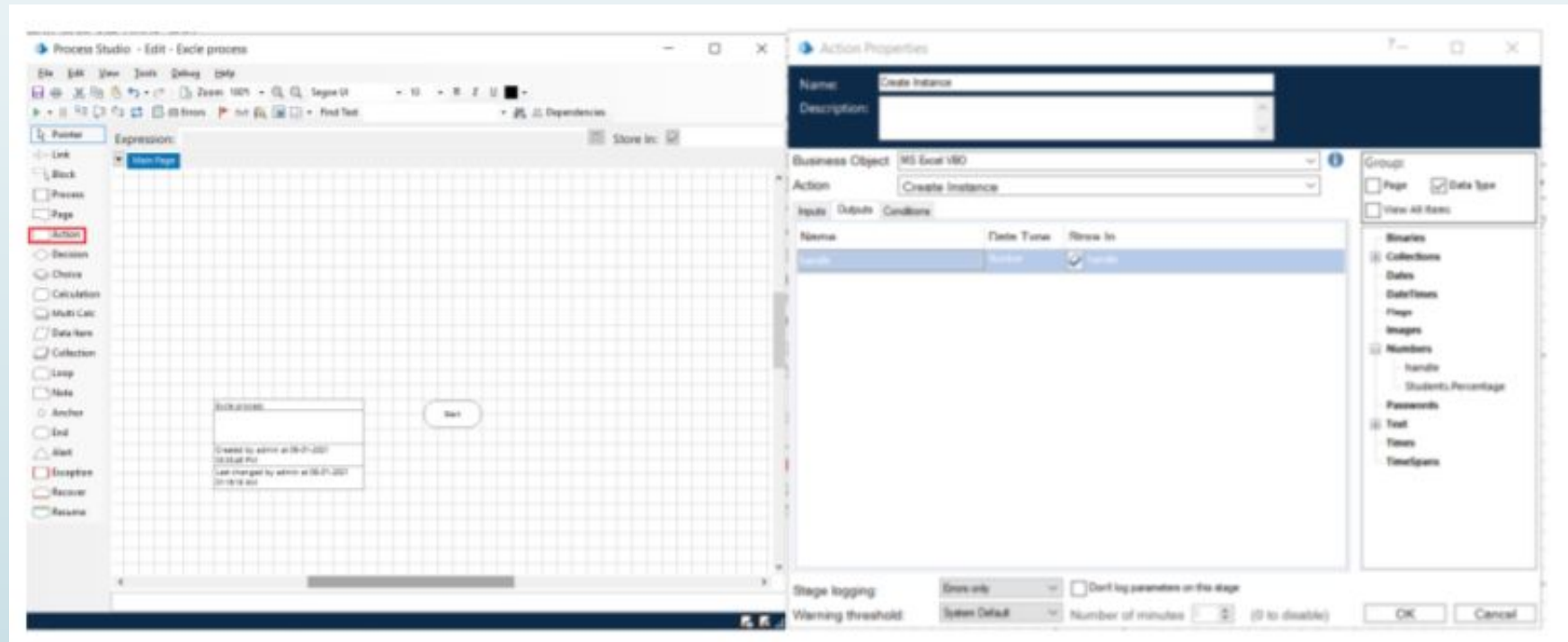


2. Create Action Stage as “Open Excel file” (Business Object = MS Excel VBO; Action = Open Workbook).

a. Click on the Inputs tab

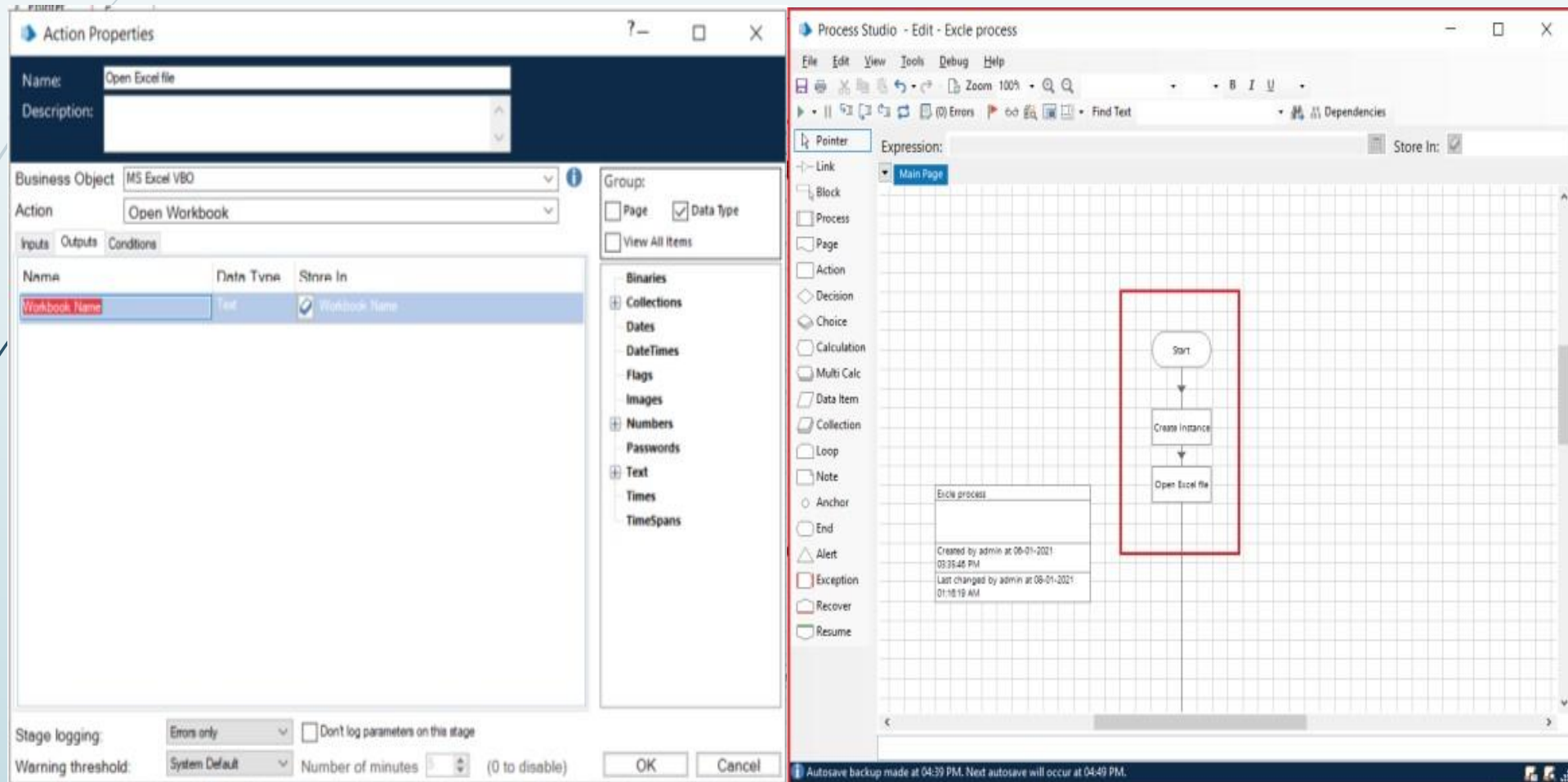
i. Drag “handle” data item into handle Value column.

ii. Set file path of excel file in File Name Value column



2(2) Click on the Outputs tab

- i. Create Data Item, type = Text, name = "Work Book Name". Drag it into the Store In column. Click on OK.



3. Create Action as “Get to collection” (Business Object = MS Excel VBO; Action = Get Workbook As Collection).

a. Click on the Inputs tab

- i. Drag “handle” data item into handle Value column.
- ii. Drage “Workbook Name” data item into the Workbook Name Value column.
- iii. Write Worksheet Name name as “Sheet1”.

Action Properties

Name: Get to collection

Description:

Business Object: MS Excel VBO

Action: Get Worksheet As Collection

Inputs Outputs Conditions

Name	Data Type	Value
handle	Number	[handle]
Workbook Name	Text	[Workbook Name]
Worksheet Name	Text	"Sheet1"

Group:

☐ Page ☒ Data type

☐ View All Items

Binaries

☒ Collections

Dates

DateTimes

Flags

Images

☒ Numbers

Passwords

☒ Text

NewFile

Students.Grade

Students.Name

Updatednew file

Workbook Name

Times

TimeSpans

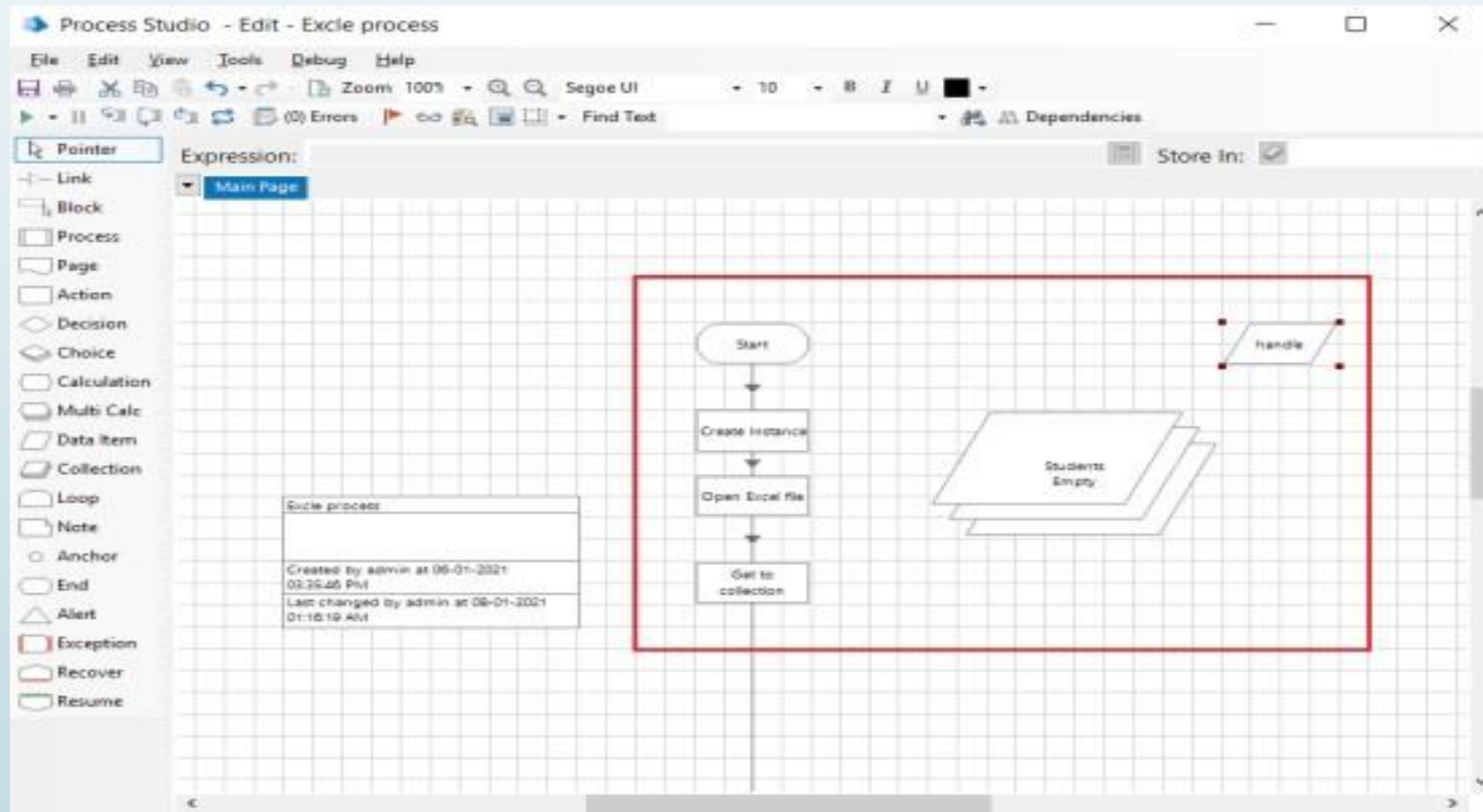
Stage logging: Errors only ☐ Don't log parameters on this stage

Warning threshold: System Default Number of minutes: 0 (0 to disable)

OK Cancel

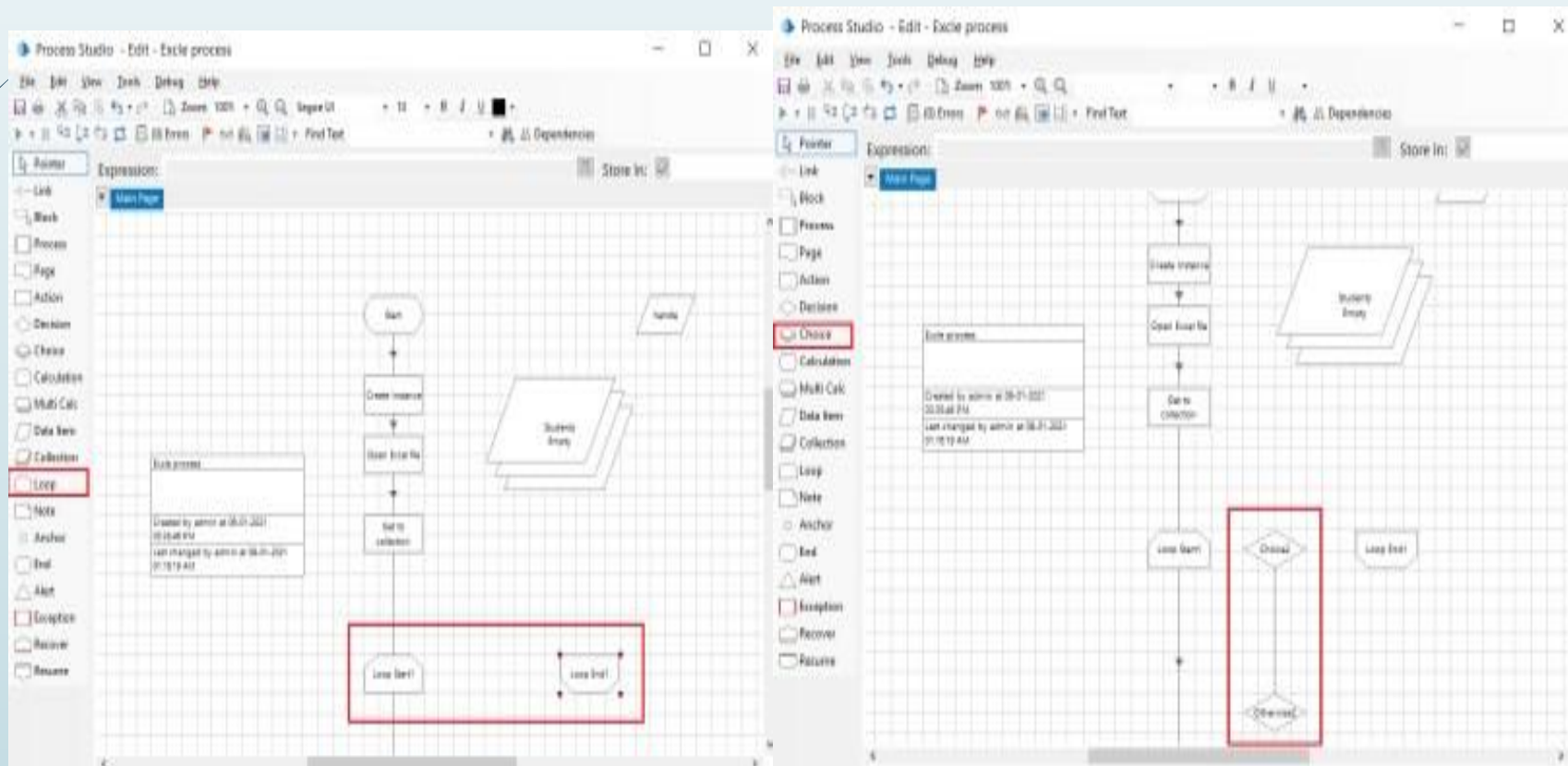
3(b). Click on the Outputs tab

- i. Create Collection as “Students”, with the following fields.
- ii. Use Add Button to add fields in collection.



4. Drage Loop module, drage Choice module. Connect loop start with choice start. Open Choice Properties and create the following fields.

- a. `[students.percentage]>=70 AND [students.percentage]<=79`
- b. `[students.percentage]>=80 AND [students.percentage]<=89`
- c. `[students.percentage]>=90 AND [students.percentage]<=100`



Choice Properties

Name: Student Grades

Description:

Choice Name	Choice Criteria
Grade A	[Students.Percentage]>=90 AND [Students.Percentage]<100
Grade B	[Students.Percentage]>=80 AND [Students.Percentage]<90
Grade C	[Students.Percentage]>=70 AND [Students.Percentage]<80

Group: ☐ Page ☒ Data Type

☐ View All Items

Move Up: Move Down

Add Remove

Stage logging: Enabled

Warning threshold: System Default Number of minutes: (0 to disable)

OK Cancel

Expression Chooser

Create an expression using drag drop operations

Expression: [Students.Percentage]>=90 AND [Students.Percentage]<=100

Validate Evaluate Express

Functions

- Conversion
- Data
- Date
- Environment
- Exceptions
- File
- Logic
- Number
- Text

Function Detail

Expression Function Builder

Use this area to compose a function statement and paste it into the expression.

Select a function from the list on the left. The function details and the required parameters will be shown here.

Complete the details either by entering values or by dragging in data

Data Items

Group: ☐ Page ☒ Data Type

☐ View All Items

- Binaries
- Collections
- Dates
- DateTimes
- Flags
- Images
- Numbers
- Passwords
- Text
- Times
- TimeSpans

OK Cancel

Expression Chooser

Create an expression using drag drop operations

Expression: [Students.Percentage]>=80 AND [Students.Percentage]<=89

Validate Evaluate Express

Functions

- Conversion
- Data
- Date
- Environment
- Exceptions
- File
- Logic
- Number
- Text

Function Detail

Expression Function Builder

Use this area to compose a function statement and paste it into the expression.

Select a function from the list on the left. The function details and the required parameters will be shown here.

Complete the details either by entering values or by dragging in data

Data Items

Group: ☐ Page ☒ Data Type

☐ View All Items

- Binaries
- Collections
- Dates
- DateTimes
- Flags
- Images
- Numbers
- Passwords
- Text
- Times
- TimeSpans

OK Cancel

Expression Chooser

Create an expression using drag drop operations

Expression: [Students.Percentage]>=70 AND [Students.Percentage]<=79

Validate Evaluate Express

Functions

- Conversion
- Data
- Date
- Environment
- Exceptions
- File
- Logic
- Number
- Text

Function Detail

Expression Function Builder

Use this area to compose a function statement and paste it into the expression.

Select a function from the list on the left. The function details and the required parameters will be shown here.

Complete the details either by entering values or by dragging in data

Data Items

Group: ☐ Page ☒ Data Type

☐ View All Items

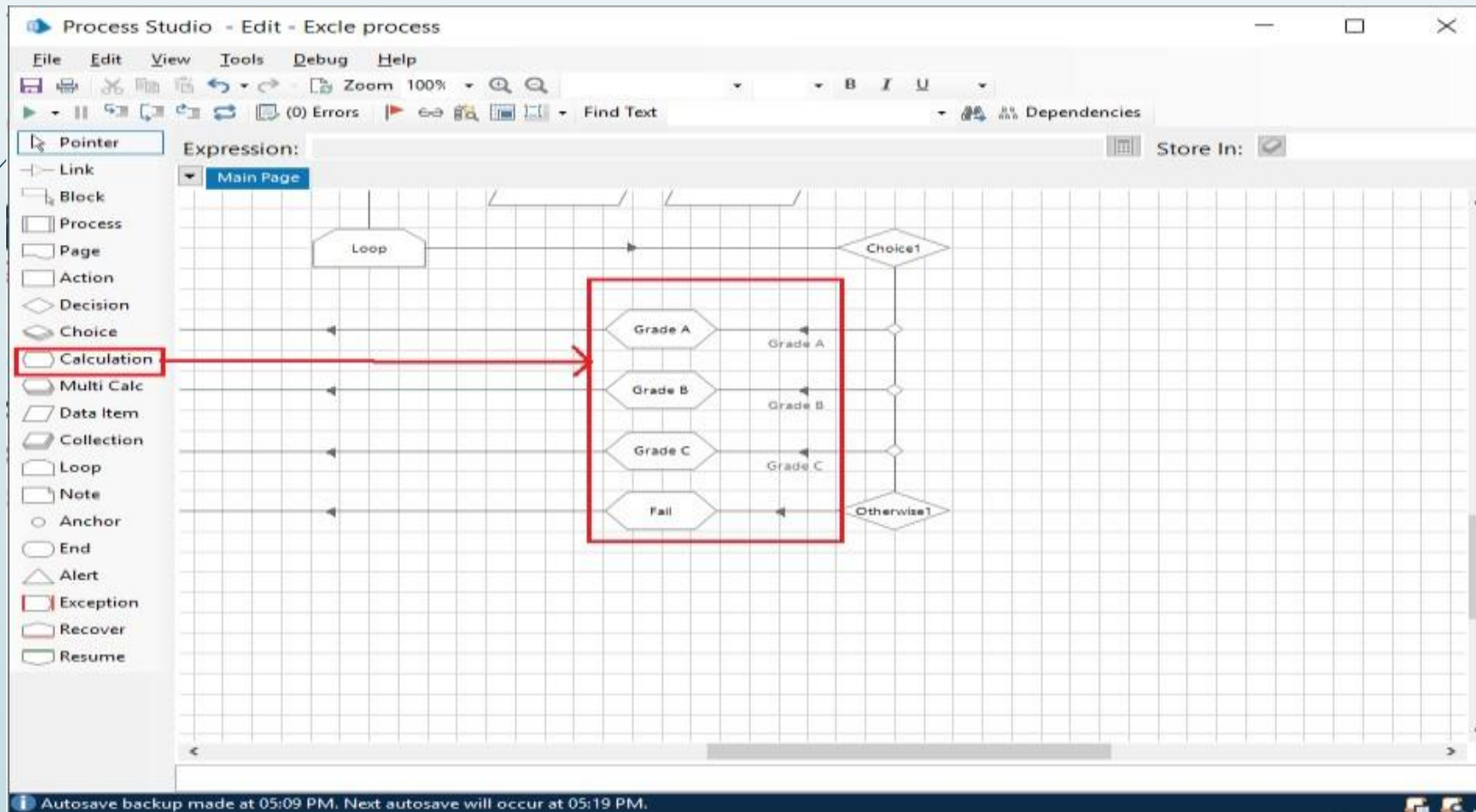
- Binaries
- Collections
- Dates
- DateTimes
- Flags
- Images
- Numbers
- Passwords
- Text
- Times
- TimeSpans

OK Cancel

3.

5. Create 4 Calculation modules.

- 1st Calculation module name as “Grade A”. Write an expression as “Grade A”. Stores result in Students. Grade (Collection data item)
- Repeat for rest “Grade B”, “Grade C” and “Fail”.
 - Do proper connection as below.



Calculation Properties

Name:

Description:

Expression
"Grade A"

Data Items
Group:
☐ Page ☒ Data Type
☐ View All Items

Functions
+ Conversion
+ Data
+ Date
+ Environment
+ Exceptions
+ File
+ Logic
+ Number
+ Text

Function Detail
Expression Function Builder
Use this area to compose a function statement and paste it into the expression.

Select a function from the list on the left. The function details and the required parameters will be shown here.

Complete the details either by entering values or by dragging in data

Binaries
+ Collections
Dates
DateTimes
Flags
Images
Numbers
Passwords
Text
Times
TimeSpans

Validate Evaluate Express **Store Result** In ☒ Students.Grade

Stage logging: Errors only
Warning threshold: System Default Number of minutes 5 (0 to disable)

OK Cancel

Calculation Properties

Name:

Description:

Expression
"Grade B"

Data Items
Group:
☐ Page ☒ Data Type
☐ View All Items

Functions
+ Conversion
+ Data
+ Date
+ Environment
+ Exceptions
+ File
+ Logic
+ Number
+ Text

Function Detail
Expression Function Builder
Use this area to compose a function statement and paste it into the expression.

Select a function from the list on the left. The function details and the required parameters will be shown here.

Complete the details either by entering values or by dragging in data

Binaries
+ Collections
Dates
DateTimes
Flags
Images
Numbers
Passwords
Text
Times
TimeSpans

Validate Evaluate Express **Store Result** In ☒ Students.Grade

Stage logging: Errors only
Warning threshold: System Default Number of minutes 5 (0 to disable)


OK Cancel

Calculation Properties

Name:

Description:

Expression
"Grade C"

Validate Evaluate Expression Store Result In  Students.Grade

Functions

- + Conversion
- + Data
- + Date
- + Environment
- + Exceptions
- + File
- + Logic
- + Number
- + Text

Function Detail
Expression Function Builder
Use this area to compose a function statement and paste it into the expression.

Select a function from the list on the left. The function details and the required parameters will be shown here.

Complete the details either by entering values or by dragging in data

Data Items
Group:
☐ Page ☒ Data Type
☐ View All Items

- Binaries
- + Collections
- Dates
- DateTimes
- Flags
- Images
- + Numbers
- Passwords
- + Text
- Times
- TimeSpans

Stage logging:

Warning threshold: Number of minutes (0 to disable)


OK Cancel

Calculation Properties

Name:

Description:

Expression
"Fail"

Validate Evaluate Expression Store Result In  Students.Grade

Functions

- + Conversion
- + Data
- + Date
- + Environment
- + Exceptions
- + File
- + Logic
- + Number
- + Text

Function Detail
Expression Function Builder
Use this area to compose a function statement and paste it into the expression.

Select a function from the list on the left. The function details and the required parameters will be shown here.

Complete the details either by entering values or by dragging in data

Data Items
Group:
☐ Page ☒ Data Type
☐ View All Items

- Binaries
- + Collections
- Dates
- DateTimes
- Flags
- Images
- + Numbers
- Passwords
- + Text
- Times
- TimeSpans

Stage logging:

Warning threshold: Number of minutes (0 to disable)

OK Cancel

6. Create Action Stage as “Close Student excel file (Business Object = MS Excel VBO; Action = Close Workbook).

a. Click on the Inputs tab

1. Drag “handle” data item into handle Value column.

2. Drag “Workbook Name” data item into the Workbook Name Value column.

3. Save Data as “False”.

The screenshot displays the Process Studio interface with the 'Action Properties' dialog open. The dialog is configured for the 'Close Student excel file' action, using the 'MS Excel VBO' Business Object and the 'Close Workbook' Action. The 'Inputs' tab is active, showing a table with three rows: 'handle' (Number, [handle]), 'Workbook Name' (Text, [Workbook Name]), and 'Save Data' (Flag, False). The 'Save Data' row is highlighted. The background shows a process flow diagram with a loop and decision stages. The 'Action' tab in the dialog is also visible, showing the 'Close Workbook' action.

Name	Data Type	Value
handle	Number	[handle]
Workbook Name	Text	[Workbook Name]
Save Data	Flag	False

7. Create Action as “Create Output excel file” (Business Object = MS Excel VBO; Action = Create Workbook).

a. Click on the Inputs tab.

i. Drag “handle” data item into handle Value column.

The screenshot shows the Process Studio interface for editing an 'Excle process'. The main workspace displays a flowchart with various blocks including 'Loop', 'Choice', 'Grade A', 'Grade B', 'Grade C', 'Fail', 'Otherwise', 'Add excel file', 'Write collection', 'Save Excle file', 'Close work book', and 'End'. A red box highlights a 'Close Student excel file' block. The left sidebar contains a 'Pointer' section with a 'Link' button highlighted in red. The 'Action Properties' dialog is open on the right, showing the 'Inputs' tab. The 'Name' field is 'Create Output excel file', the 'Description' is empty, the 'Business Object' is 'MS Excel VBO', and the 'Action' is 'Create Workbook'. The 'Inputs' table has one row with 'Name' 'handle', 'Data Type' 'Number', and 'Value' '[handle]'. The 'Group' section on the right has 'Page' unchecked and 'Data Type' checked. The 'Binaries' section lists 'Collections', 'Dates', 'DateTimes', 'Flags', 'Images', 'Numbers', 'Passwords', 'Text', 'Times', and 'TimeSpans'. The 'Text' section lists 'NewFile', 'Students.Grade', 'Students.Name', 'Updatednew file', and 'Workbook Name'. The 'Stage logging' section has 'Errors only' selected and 'Don't log parameters on this stage' unchecked. The 'Warning threshold' section has 'System Default' selected and 'Number of minutes' set to 5. The 'Activate Windows' watermark is visible at the bottom right.

Process Studio - Edit - Excle process

File Edit View Tools Debug Help

Zoom 100% Find Text Dependencies

Pointer

Link

Block

Process

Page

Action

Decision

Choice

Calculation

Multi Calc

Data Item

Collection

Loop

Note

Anchor

End

Alert

Exception

Recover

Resume

Expression:

Main Page

Store In:

Loop

Choice

Grade A

Grade B

Grade C

Fail

Otherwise

Add excel file

Write collection

Save Excle file

Close work book

End

Close Student excel file

Action Properties

Name: Create Output excel file

Description:

Business Object: MS Excel VBO

Action: Create Workbook

Inputs Outputs Conditions

Name	Data Type	Value
handle	Number	[handle]

Group:

☐ Page ☒ Data Type

☐ View All Items

Binaries

- Collections
- Dates
- DateTimes
- Flags
- Images
- Numbers
- Passwords
- Text
 - NewFile
 - Students.Grade
 - Students.Name
 - Updatednew file
 - Workbook Name
- Times
- TimeSpans

Stage logging: Errors only ☐ Don't log parameters on this stage

Warning threshold: System Default Number of minutes 5 (0 to disable)

Activate Windows

OK Cancel

7b. Click on the Outputs tab

- Create Data Item, type = Text, name = "NewFile".
 - Drag it into the Workbook Name Store In column.
- Click on ok

The image shows two windows from the Process Studio application. The left window is the 'Action Properties' dialog, and the right window is the 'Process Studio - Edit - Excle process' main editor.

Action Properties Dialog:

- Name:** Create Output excle file
- Description:**
- Business Object:** MS Excel VBO
- Action:** Create Workbook
- Inputs:** (Empty)
- Outputs:** (Contains one item: Workbook Name, Data Type: Text, Store In: NewFile)
- Conditions:** (Empty)
- Group:** ☐ Page, ☒ Data Type, ☐ View All Items
- Binaries:** (Empty)
- Collections:** (Empty)
- Dates:** (Empty)
- DateTimes:** (Empty)
- Flags:** (Empty)
- Images:** (Empty)
- Numbers:** (Empty)
- Passwords:** (Empty)
- Text:** (Contains: NewFile, Students.Grade, Students.Name, Updatednew file, Workbook Name)
- Times:** (Empty)
- TimeSpans:** (Empty)
- Stage logging:** Errors only, ☐ Don't log parameters on this stage
- Warning threshold:** System Default, Number of minutes: 5 (0 to disable)
- Buttons:** OK, Cancel

Process Studio - Edit - Excle process:

- File Edit View Tools Debug Help**
- Zoom 100%**
- Find Text**
- Dependencies**
- Pointer:** Link
- Expression:** Main Page
- Store In:** ☒
- Diagram:** A flowchart showing a process flow. A red box highlights a 'Close Student excle file' action, which is followed by a 'Create Output excle file' action. The flowchart includes a 'Loop' block, a 'Choice' block, and several 'Grade' blocks (Grade A, Grade B, Grade C, Grade D, Grade E, Grade F, Grade G, Grade H, Grade I, Grade J, Grade K, Grade L, Grade M, Grade N, Grade O, Grade P, Grade Q, Grade R, Grade S, Grade T, Grade U, Grade V, Grade W, Grade X, Grade Y, Grade Z). The flowchart ends with an 'End' block.

8. Create Action as “Add Excel file” (Business Object = MS Excel VBO; Action = Create Worksheet).

a. Click on the Inputs tab

i. Drag “handle” data item into handle Value column.

ii. Drage “NewFile” data item into the Workbook Name Value column.

ii. iii. Write Worksheet Name name as “OutPut”.

The screenshot displays the Process Studio interface with the 'Add Excel file' action configured. The main canvas shows a process flow with a loop and a choice block. The 'Action Properties' dialog is open, showing the 'Inputs' tab. The 'Business Object' is set to 'MS Excel VBO' and the 'Action' is 'Create Worksheet'. The 'Inputs' table is as follows:

Name	Data Type	Value
handle	Number	[handle]
Workbook Name	Text	[NewFile]
Worksheet Name	Text	"OutPut"

The 'Stage logging' section at the bottom shows 'Errors only' selected for logging and a warning threshold of 5 minutes.

9. Create Action Stage as “Write collection” (Business Object = MS Excel VBO; Action = Write Collection).

- a. Create Data Item as “NewFile”, with type = Text.

The screenshot displays the Process Studio interface for editing an 'Excel process'. The left sidebar contains a palette of process elements, with 'Action' and 'Data Item' highlighted by red boxes. Red arrows point from these elements to a process diagram on the right. The diagram shows a flow starting with 'Close Student excel file', followed by a 'Loop' containing 'Create Output excel file' and 'Add excel file'. The flow then branches into 'Grade A', 'Grade B', 'Grade C', and 'Fail' paths, each leading to a 'Choice' diamond. The 'Data Properties' dialog is open on the right, showing the 'Name' field set to 'Newfile' and the 'Data Type' set to 'Text'. The 'OK' button is highlighted with a red box.

Process Studio - Edit - Excel process

File Edit View Tools Debug Help

Zoom 100% Segoe UI 10 B I U

Find Text Dependencies

Pointer

Expression: Store In: ☒

Main Page

Link

Block

Process

Page

Action

Decision

Choice

Calculation

Multi Calc

Data Item

Collection

Loop

Note

Anchor

End

Alert

Exception

Recover

Resume

End

Loop

Choice

Grade A

Grade B

Grade C

Fail

Otherwise1

Close Student excel file

Create Output excel file

Add excel file

Data Properties

Name: Newfile

Description:

Data Type: Text

Initial Value:

Exposure: None

Current Value:

Visibility: ☒ Hide from other pages in the process

Initialisation: ☒ Reset to Initial Value whenever this page runs

Text

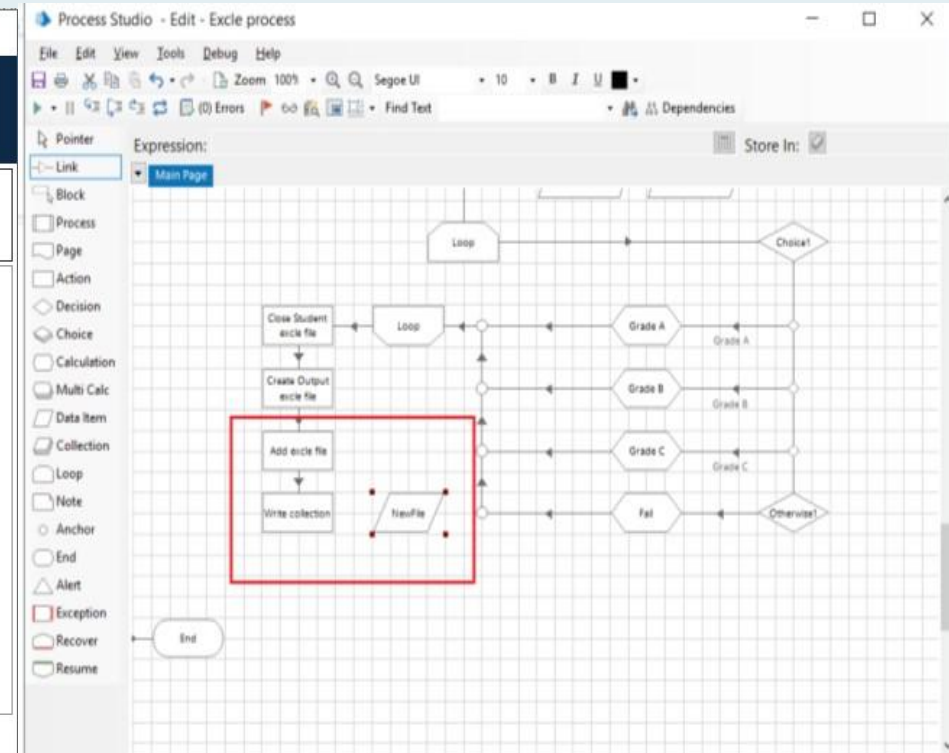
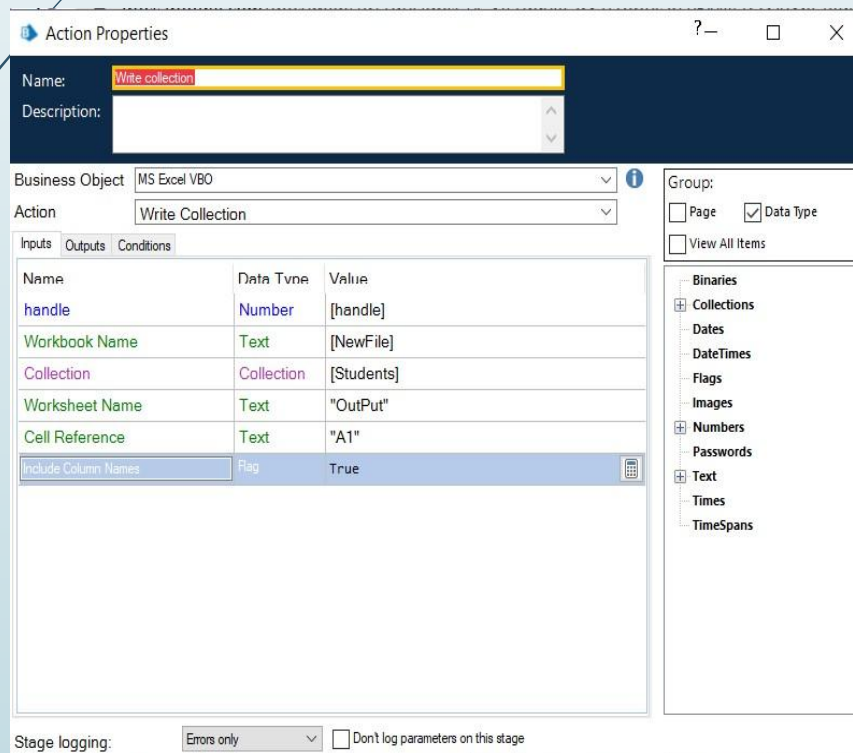
Text items are used to store alphanumeric data.

This information may be names, addresses, telephone numbers, etc.

OK Cancel

9(b)Click on the Inputs tab

- i. Drag “handle” data item into handle Value column.
- ii. Drage “NewFile” data item into the Workbook Name Value column.
- iii. Drage “Student” Collection into the Collection Value column
- iv. Write Worksheet Name name as “OutPut”.
- v. Write Cell Reference as “A1”.
- vi. Set Include Column Names as True.



10. Create Action Stage as “Save Excel file” (Business Object = MS Excel VBO; Action = Save Workbook As).

a. Click on the Inputs tab.

i. Drag “handle” data item into handle Value column.

ii. Drag “NewFile” data item into the Workbook Name Value column.

iii. Write Filename as the path where files want to store

The screenshot displays the Process Studio interface with the 'Action Properties' dialog box open. The 'Inputs' tab is selected, showing a table with three input items: 'handle' (Number), 'Workbook Name' (Text), and 'Filename' (Text). The 'Filename' input is highlighted, and its value is set to 'L:\RPA WORK\Book12.xlsx'. The 'Business Object' is set to 'MS Excel VBO' and the 'Action' is 'Save Workbook As'. The 'Group' section shows 'Page' and 'Data Type' checkboxes, with 'Data Type' checked. The 'Text' category in the right sidebar is expanded, showing a list of data items including 'NewFile', 'Students.Grade', 'Students.Name', 'Updatednew file', and 'Workbook Name'. The main workspace shows a process flow diagram with a loop and a choice block.

Process Studio - Edit - Excle process

File Edit View Tools Debug Help

Zoom 100%

Find Text

Dependencies

Pointer

Link

Block

Process

Page

Action

Decision

Choice

Calculation

Multi Calc

Data Item

Collection

Loop

Note

Anchor

End

Alert

Exception

Recover

Resume

Expression:

Main Page

Store In:

Loop

Choice1

Grade A

Grade B

Grade C

Fail

Otherwise1

Close Student excel file

Create Output excel file

Add excel file

Write collect

Action: Add excel file
Object: MS Excel VBO
Method: Create Worksheet

End

Action Properties

Name: Save Excle file

Description:

Business Object: MS Excel VBO

Action: Save Workbook As

Inputs Outputs Conditions

Name	Data Type	Value
handle	Number	[handle]
Workbook Name	Text	[NewFile]
Filename	Text	"L:\RPA WORK\Book12.xlsx"

Group:

☐ Page ☒ Data Type

☐ View All Items

Binaries

Collections

Dates

DateTimes

Flags

Images

Numbers

Passwords

Text

- NewFile
- Students.Grade
- Students.Name
- Updatednew file
- Workbook Name

Times

TimeSpans

Stage logging: Errors only ☐ Don't log parameters on this stage

Warning threshold: System Default Number of minutes 5 (0 to disable)

OK Cancel

10b. Click on the Output tab

- i. Create Data Item, type = Text, name ="Updated New file".
- ii. ii.Drag it into the New Workbook Name Store In column.
- iii. Click on ok.

The screenshot displays the Process Studio interface with a workflow diagram on the left and the Action Properties dialog on the right.

Process Studio - Edit - Excle process

The workflow diagram shows a sequence of actions: "Close Student excle file", "Create Output excle file", "Add excle file", and "Write colled". A loop is present around the "Add excle file" action. The "Add excle file" action is highlighted with a red box. The "Write colled" action is also highlighted with a red box. The "Add excle file" action is configured with the following properties:

- Object: MS Excel VBO
- Method: Create Worksheet

Action Properties

The Action Properties dialog is open, showing the configuration for the "Save Excel file" action.

Name: Save Excel file

Description:

Business Object: MS Excel VBO

Action: Save Workbook As

Inputs:

Name	Data Type	Store In
New Workbook Name	Text	Updatednew file

Outputs:

Conditions:

Group:

- ☐ Page
- ☒ Data Type
- ☐ View All Items

Binaries:

- ☒ Collections
- ☐ Dates
- ☐ DateTimes
- ☐ Flags
- ☐ Images
- ☒ Numbers
- ☐ Passwords
- ☐ Text
- ☐ Times
- ☐ TimeSpans

Stage logging: Errors only ☐ Don't log parameters on this stage

Warning threshold: System Default ☐ Number of minutes 5 (0 to disable)

OK **Cancel**

11. Create Action Stage as “Close workbook” (Business Object = MS Excel VBO; Action = Close Current Workbook).

- a. Click on the Inputs tab
- b. Drag “handle” data item into handle Value column

The screenshot displays the Process Studio interface with two windows open: 'Process Studio - Edit - Excle process' and 'Action Properties'.

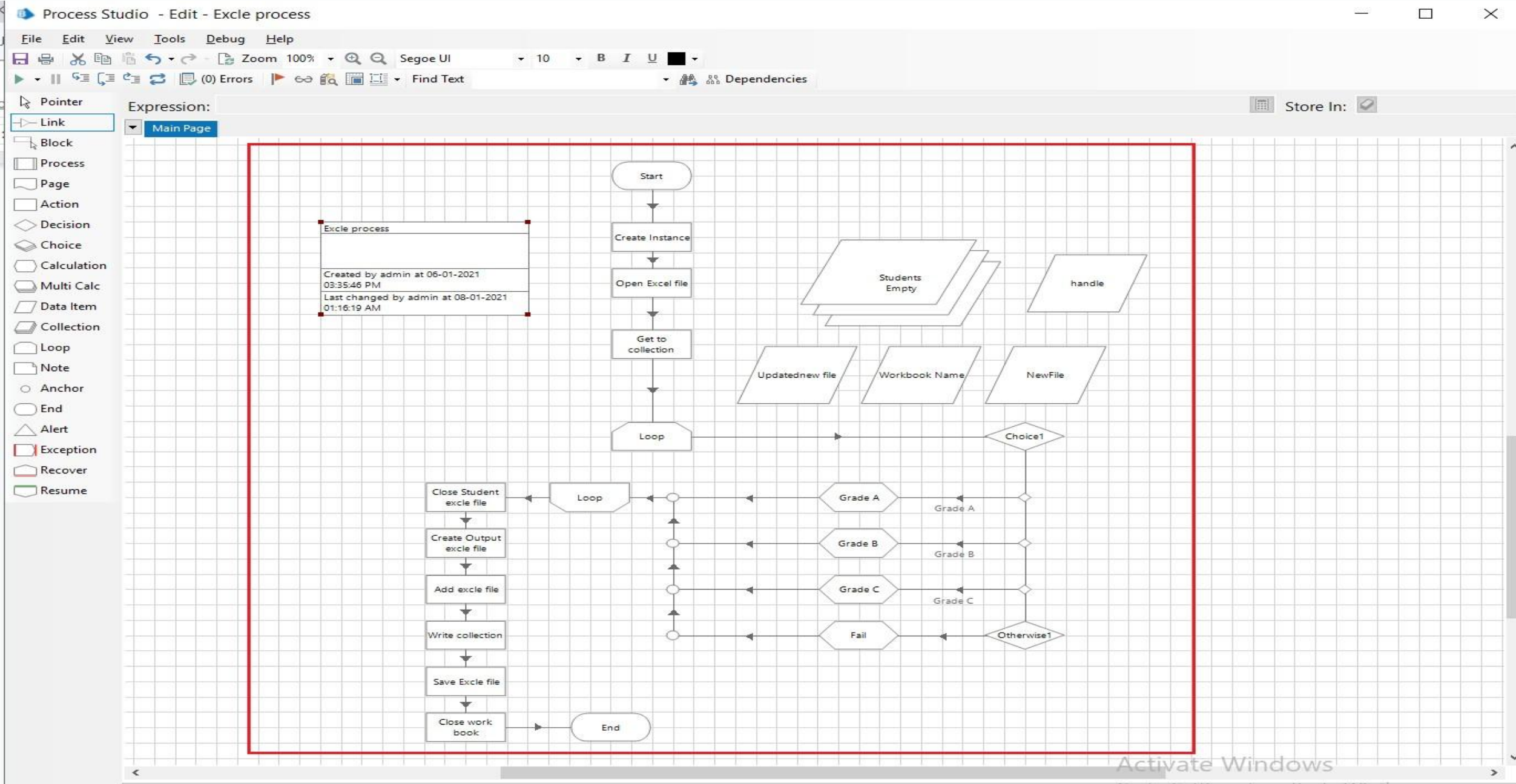
In the 'Process Studio' window, the 'Action' icon in the left-hand palette is highlighted with a red box. The main canvas shows a process flow diagram with various stages like 'Loop', 'Choice', 'Grade A', 'Grade B', 'Grade C', 'Fail', 'Close Student excel file', 'Create Output excel file', 'Add excel file', 'Write collection', 'NewFile', 'Save Excle file', and 'End'. A red rectangle is drawn on the canvas near the 'Save Excle file' stage, indicating where a new action stage will be added.

The 'Action Properties' window is open on the right. The 'Name' field is set to 'Close work book'. The 'Business Object' is set to 'MS Excel VBO'. The 'Action' is set to 'Close Current Workbook'. The 'Inputs' tab is selected, showing a table with the following data:

Name	Data Type	Value
handle	Number	[handle]

The 'Stage logging' section at the bottom shows 'Errors only' selected for logging, and 'System Default' for the warning threshold. The 'Number of minutes' is set to 0 (to disable).

c.connections Do as follows



d.Input Excel file data.

The screenshot displays the Microsoft Excel application window. The title bar indicates the file is 'Sheet1 - Excel' and the user is 'Amarnath'. The ribbon is set to 'Home', showing various formatting and editing options. The spreadsheet contains the following data:

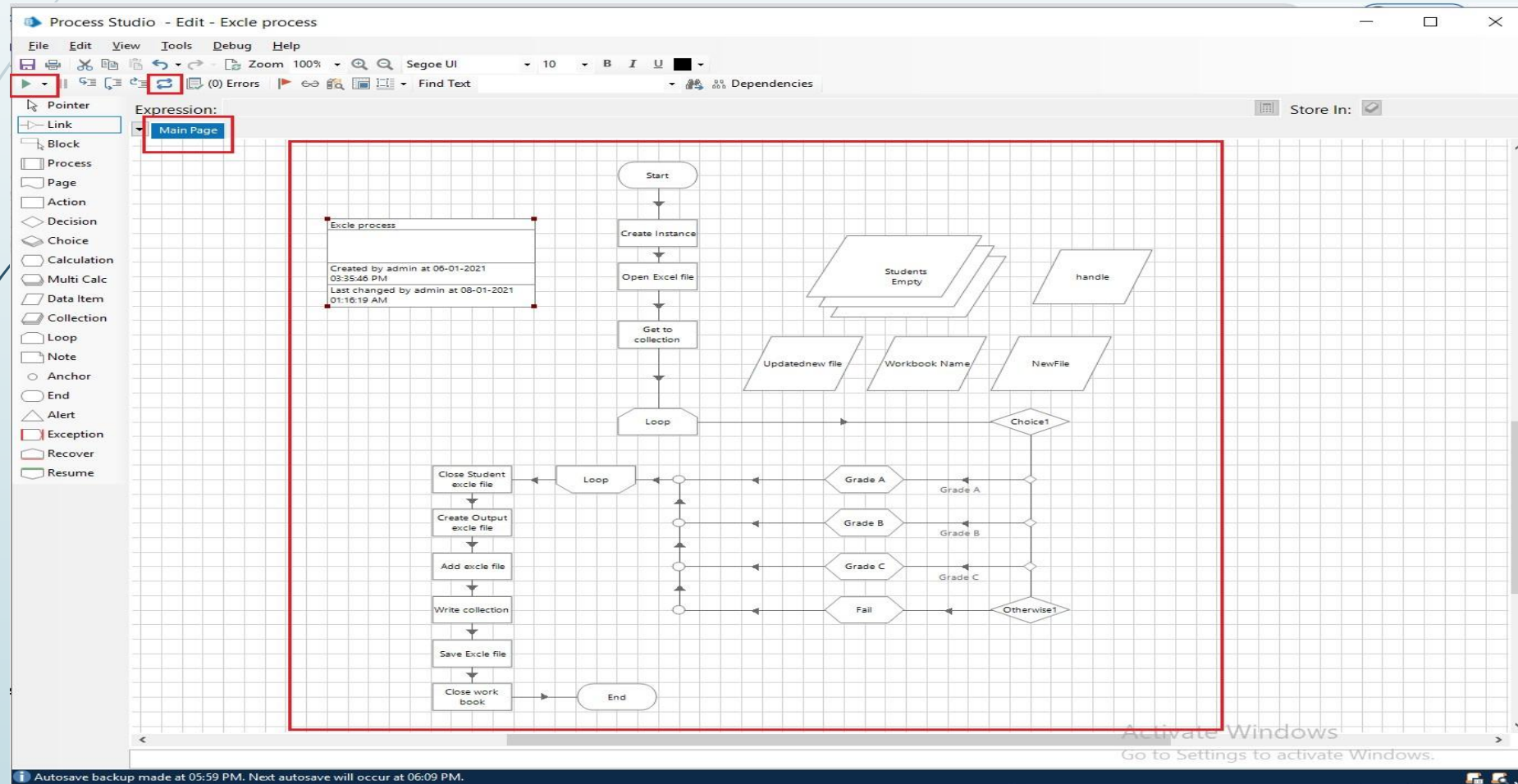
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	Name	Percentage	Grade																				
2	Laxman	91																					
3	Ravan	57																					
4	Ram	85																					
5																							
6																							
7																							
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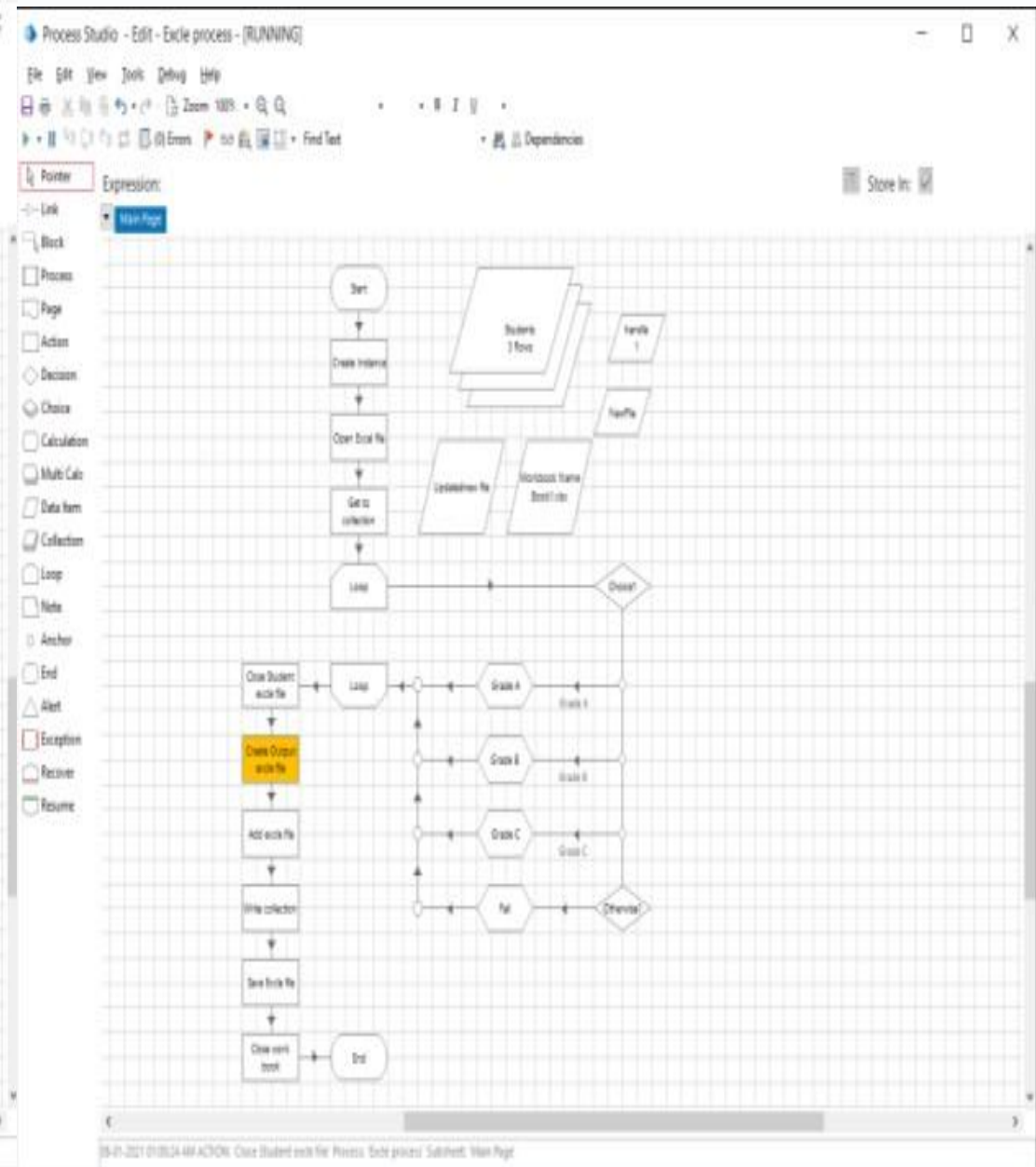
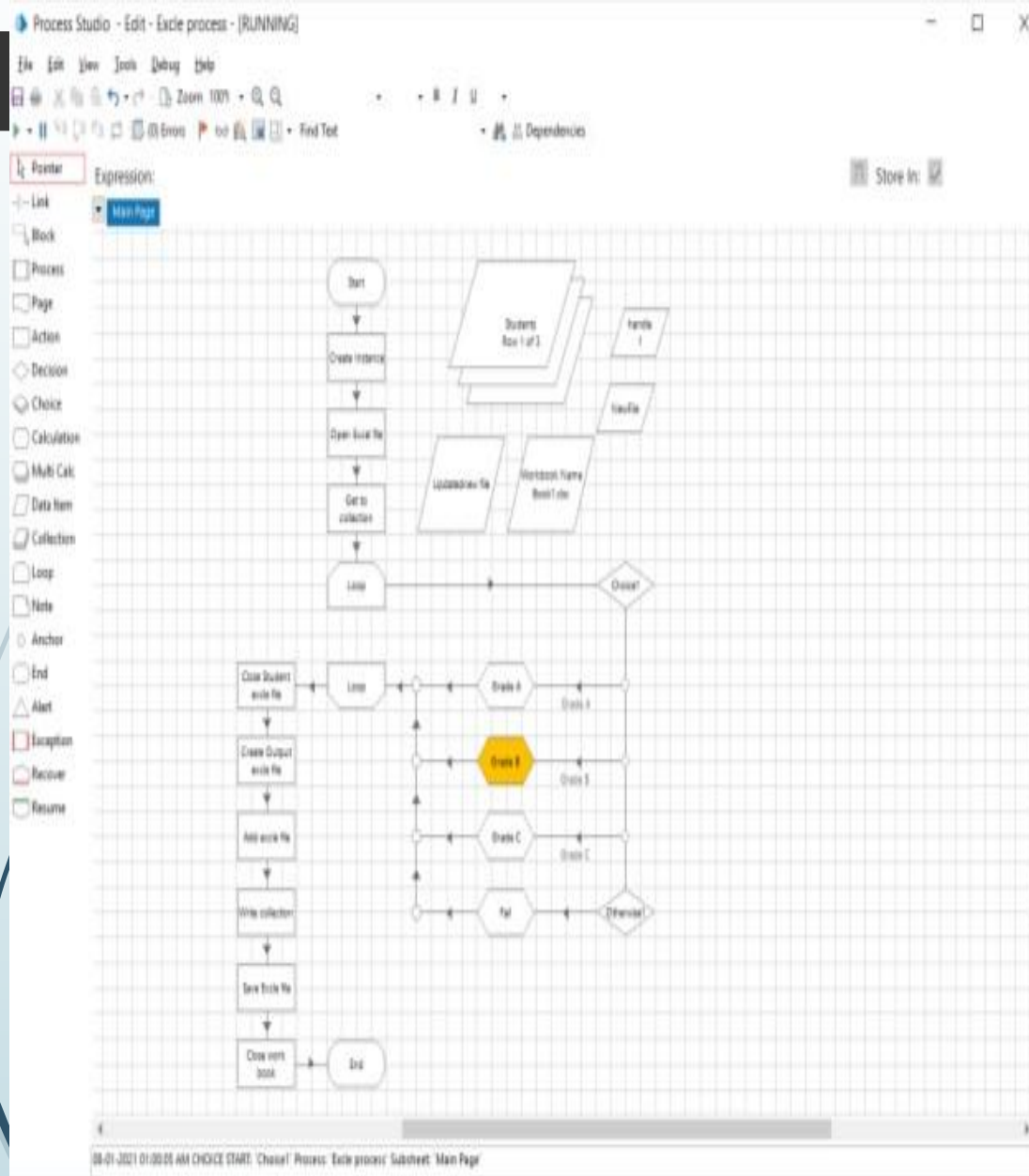
The status bar at the bottom shows 'Ready' and 'Opening: Sheet1.xlsx'. The taskbar at the very bottom includes icons for Windows, search, and various applications, along with the system clock showing 20:30 on 09-11-2021.

Activity 3: Testing the Process Object from Object Studio

Click on the Main Page, click on the Green play button to run the 'Excel Process' Process object. It shows **COMPLETED** when there is no error or no failure in the object.

Click on the Main Page, click on the Reset button to reset the cache for rerun the process object as fresh.





OutPut Excel file.

Rpa - Excel

Amarnath

File Home Insert Page Layout Formulas Data Review View Help Tell me what you want to do

Clipboard Font Alignment Number Styles Cells Editing

Calibri 11

Wrap Text

General

Conditional Formatting Format as Table Cell Styles

Insert Delete Format

AutoSum Fill Clear Sort & Filter Find & Select

D8

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	Name	Percentage	Grade																				
2	Ram	98	Grade A																				
3	Ravan	58	Fail																				
4	Laxman	85	Grade B																				
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OUTPUT Sheet1

Ready





CONCLUSION

Thus, due to the various benefits of RPA, its utilization is gradually increasing in the market worldwide. Most of the organization are already implementing the RPA technology, as it optimizes the cost and fress the others resources. It is a cost-effective technique and also has nonfinancial benefits such as it consists of more accurate and consistent processes, which are less prone to errors.

Nowadays, most of the organizations are using RPA for testing the particular application and eliminating the old testing tools due to its limitations.



FUTURE ENHANCEMENTS

The technology is advancing rapidly in almost all the fields, not in a minute but in every second. With this quick development in technology, tremendous growth has been observed in the global automation industry. The usage of automation techniques is in continuous growth and it is anticipated for the predictable future. The robotic process automation is one of the revolutions in the automation industry, and its expected to increase higher potential terms of utilization and staff implementation in the upcoming year.

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