

Configuration Manual

MSc Research Project
Programme Name

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Project Submission Sheet
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Student Name:	Cigdem Atazulal
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Programme:	Programme Name
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Module:	MSc Research Project
Supervisor:	Victor Del Rosal
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I hereby certify that the information contained in this (my submission) is information pertaining to research I conducted for this project. All information other than my own contribution will be fully referenced and listed in the relevant bibliography section at the rear of the project.

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Date:	9th December 2023

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You must ensure that you retain a HARD COPY of the project , both for your own reference and in case a project is lost or mislaid. It is not sufficient to keep a copy on computer.	☐

Assignments that are submitted to the Programme Coordinator office must be placed into the assignment box located outside the office.

Office Use Only	
Signature:	
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Configuration Manual

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1 Introduction

This manual provides the step-by-step instructions for a chatbot application that responds to user queries about contract documents by retrieving data from an excel file which is auto-filled with the help of an AI model through document processing of contract documents in pdf format.

2 System Architecture

Build up the overall system architecture. (Figure-1)

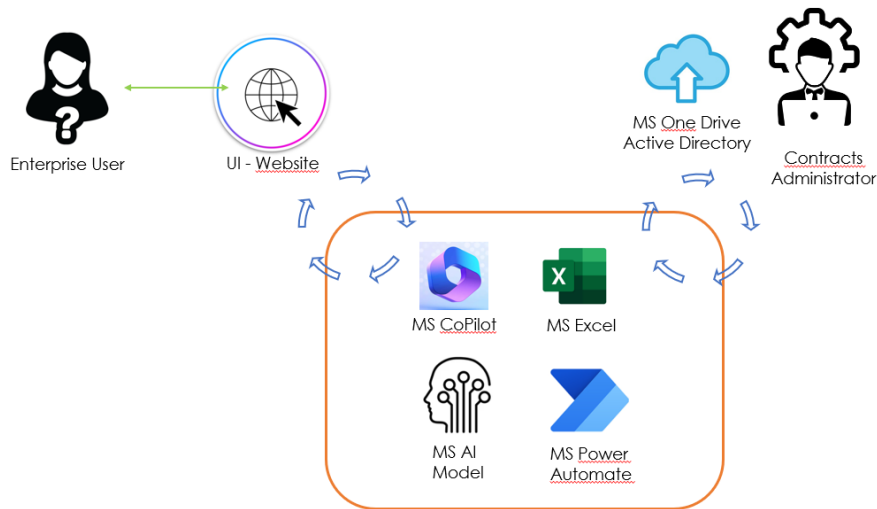


Figure 1: System Architecture

3 Data Set Preparation

Prepare a dataset of artificial contract documents in pdf format that represents different use cases for procurement contracts. (Figure-2)

This document is a fictive document and it does not contain real life data

Vendor Agreement

Parties

This Agreement (hereinafter referred to as the “Agreement”) by and between Beta Plc (hereinafter referred to as the “Client”) and Alfa 123 LTD (hereinafter referred to as the “Vendor”) shall commence on 1 January 2023 (hereinafter referred to as the “Effective Date”) will be considered agreed and valid upon signature by both parties.

In consideration of the mutual promises and covenants in this Agreement, the Parties further agree to the terms as follows:

Scope of Engagement

The Vendor hereby agrees to supply the following goods or services at the Client’s place of business, located at 105, Marilyn Street Dublin Ireland, in accordance with the terms of this Agreement:

- 50 sets of 1:1xScissors, 2xStaplers, 3xPencils, 2xNotebooks, 10xEnvelopes, 5xHighlighters

Pricing

The total price for the deliverables is £2500 to be invoiced upon the delivery of the goods.

Payment Terms

The Client will receive monthly invoices and, after verifying that the charges are accurate, issue payment within 30 days. All payment matters should be taken up with the Client's accounts payable department.

Delivery Date

Delivery date for the goods is 20 December 2023

Representation and Warranties

The Parties warrant and represent full capacity and qualifications to abide by the terms and conditions of the Agreement. The Agreement is subject to the laws of the [Ireland] and will apply to the Parties during its entire duration.

Liability and Indemnification

The Vendor will take responsibility and cover any losses or damages that the Client and its representatives may experience.

In addition, the Client agrees to protect the Vendor from any loss or damage, except in the case of extreme carelessness or recklessness by the Vendor or its representatives.

Figure 2: Sample Contract

4 AI Model

Build an AI model (Figure-3) with OCR capabilities to extract custom information from documents with Microsoft Power Automate (Power et al.; 2020). Upload your contract documents as training data into the AI model. Define the information to extract and label all the data fields on the documents you uploaded. Train your model and test it by uploading a sample document.

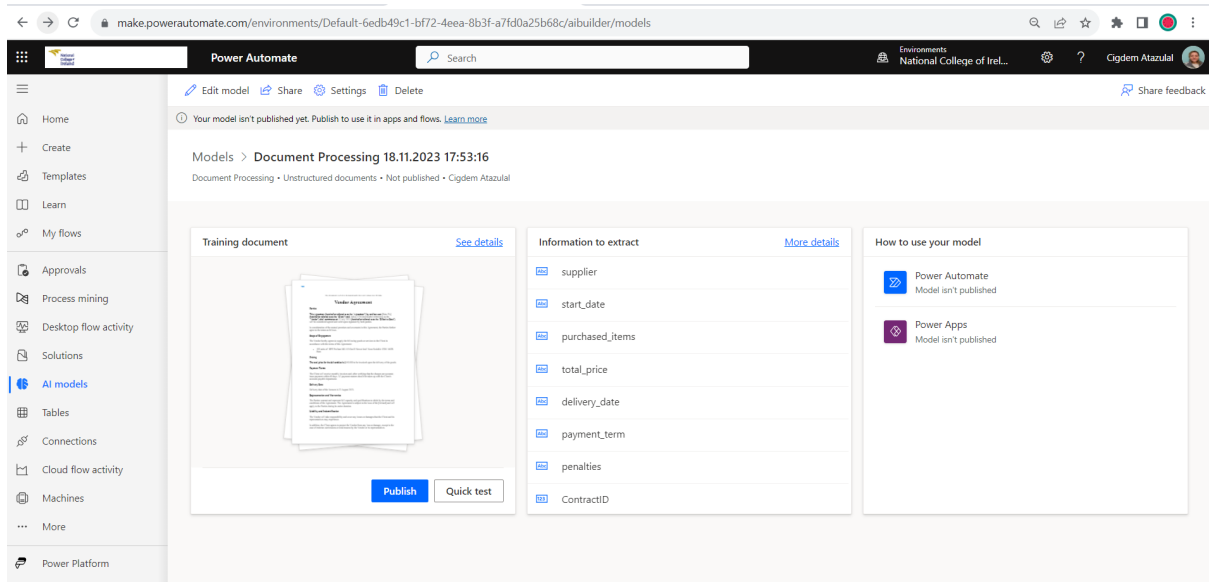


Figure 3: AI Model

5 Data Extraction

Define a workflow (Figure-4) on MS Power Automate that extracts data from the contract documents on MS One Drive and writes the data on an excel file once a new document is uploaded. (Wang; 2023) Upload a new document to test the flow.

Upload the contract documents (Figure 5) on MS One Drive. (Skendzic and Kovacic; 2012)

The excel (Figure-6) file will be filled automatically after uploading the contract documents.

6 Building the Chatbot

Build your chatbot topics by using MS Copilot(Figure-7).

In user response section of your chatbot for contract data, define an action to create a flow with MS Power Automate flow to retrieve data from the excel file and respond to the user(Figure-8).

7 User Interface

Build a user interface with Google sites and embed your chatbot into it(Figure-9).

Test your application(Figure-10).

References

Power, B., Apps, P. and Automate, P. (2020). Microsoft power platform.

Skendzic, A. and Kovacic, B. (2012). Microsoft office 365-cloud in business environment, *2012 Proceedings of the 35th International Convention MIPRO*, IEEE, pp. 1434–1439.

Wang, X. (2023). Enhancing business processes through dynamics solutions with microsoft power platform.

When a file is created

?

...

Specify the OneDrive folder where you will be adding documents in the input below. Once the flow is saved, it will run every time you add files to the folder you have specified.

* Folder

Show advanced options

Extract information from forms

?

...

Update a row

?

...

Figure 4: Power Automate Flow-1

studentncirl-my.sharepoint.com/personal/x22203605_student_ncirl_ie/_layouts/15/onedrive.aspx?id=%2Fpersonal%2F%22203605_student_ncirl_ie%2FDocuments%2Fupload_contracts...

OneDrive

My files > upload_contracts

Name	Modified	Modified By	File size	Sharing	Activity
100.pdf	November 18	Cigdem Atazulal	82.7 KB	Private	
101.pdf	November 18	Cigdem Atazulal	120 KB	Private	
102.pdf	November 18	Cigdem Atazulal	120 KB	Private	
103.pdf	November 18	Cigdem Atazulal	118 KB	Private	
104.pdf	November 18	Cigdem Atazulal	118 KB	Private	
105.pdf	November 18	Cigdem Atazulal	118 KB	Private	
106.pdf	November 18	Cigdem Atazulal	117 KB	Private	
107.pdf	November 18	Cigdem Atazulal	117 KB	Private	
108.pdf	November 18	Cigdem Atazulal	118 KB	Private	
109.pdf	November 18	Cigdem Atazulal	118 KB	Private	

Figure 5: Document Storage - One Drive

studentncirl-my.sharepoint.com/_x/r/personal/x22203605_student_ncirl_ie/_layouts/15/Doc.aspx?sourcedoc=%7BDD803F97-3BD9-49F3-982F-69E3BAAE77B5%7D&file=Contract_data.xlsx&...

Contract_data

Search for tools, help, and more (Alt + Q)

File Home Insert Draw Page Layout Formulas Data Review View Automate Help Table Design

Comments Catch up Edit

ContractID	supplier	start_date	payment	delivery_date	purchased_items	total_amount	penalties	supplier_signator
100	Alfa 123 LTD	1 January 2023	30 days	20 December 2023	50 sets of 1:1xScissors, 2xStaplers, 3xPencils, 2xNotebooks, 10xEnvelopes, 5xHig	£2500	2%	Adam Devos
101	Ashva LTD	22 August 2023	60 days	12 September 2023	50 units of HPE Proliant ML110 Gen10 Server Intel Xeon Scalable 4208/ 16GB Ra	£75.000	1%	David Copper
102	Ashva LTD	22 July 2023	60 days	22 August 2023	100 units of HPE Proliant ML110 Gen10 Server Intel Xeon Scalable 4208/ 16GB R	£150.000	1%	David Copper
103	Eleron LTD	28 January 2023	90 days	12 March 2023	Elendor Licences x 10 subscriptions Silver level support - 2 years		1%	Nick Mina
104	Hawaian Agency LTD	10 February 2023	90 days	10 February 2024	Advertising services on Google Ads - 12 months	£30.500	1%	Mathew Fox
105	Merano LTD	22 October 2023	60 days	12 December 2023	50 units of PC 42U Server Rack	£50.000	1%	Asish Abva
106	Mercurian LTD	10 February 2023	90 days	12 March 2023	Temparian Licences x 10 subscriptions Gold level support - 2 years	£22.500	1%	Robert Niro
107	Mondays Plc	15 September 2023	30 days	10 October 2023	1000 packs of Colombian coffee	£2.500	1%	Patrick Mustang
108	Shine and Bright LTD	01 January 2023	60 days	31 December 2023	Cleaning services - provided monthly on the first working day of each month	£20.500	1%	Tracey Shine
109	Vena LTD	10 February 2023	60 days	12 December 2023	50 units 100 units	£2500	1%	Melanie Stacey
110	Warrington Plc	28 May 2023	30 days	18 June 2023	War-O-XPL Licences x 10 subscriptions Silver level support - 2 years	£ 162.500	1%	Elena Trump

Figure 6: Excel File

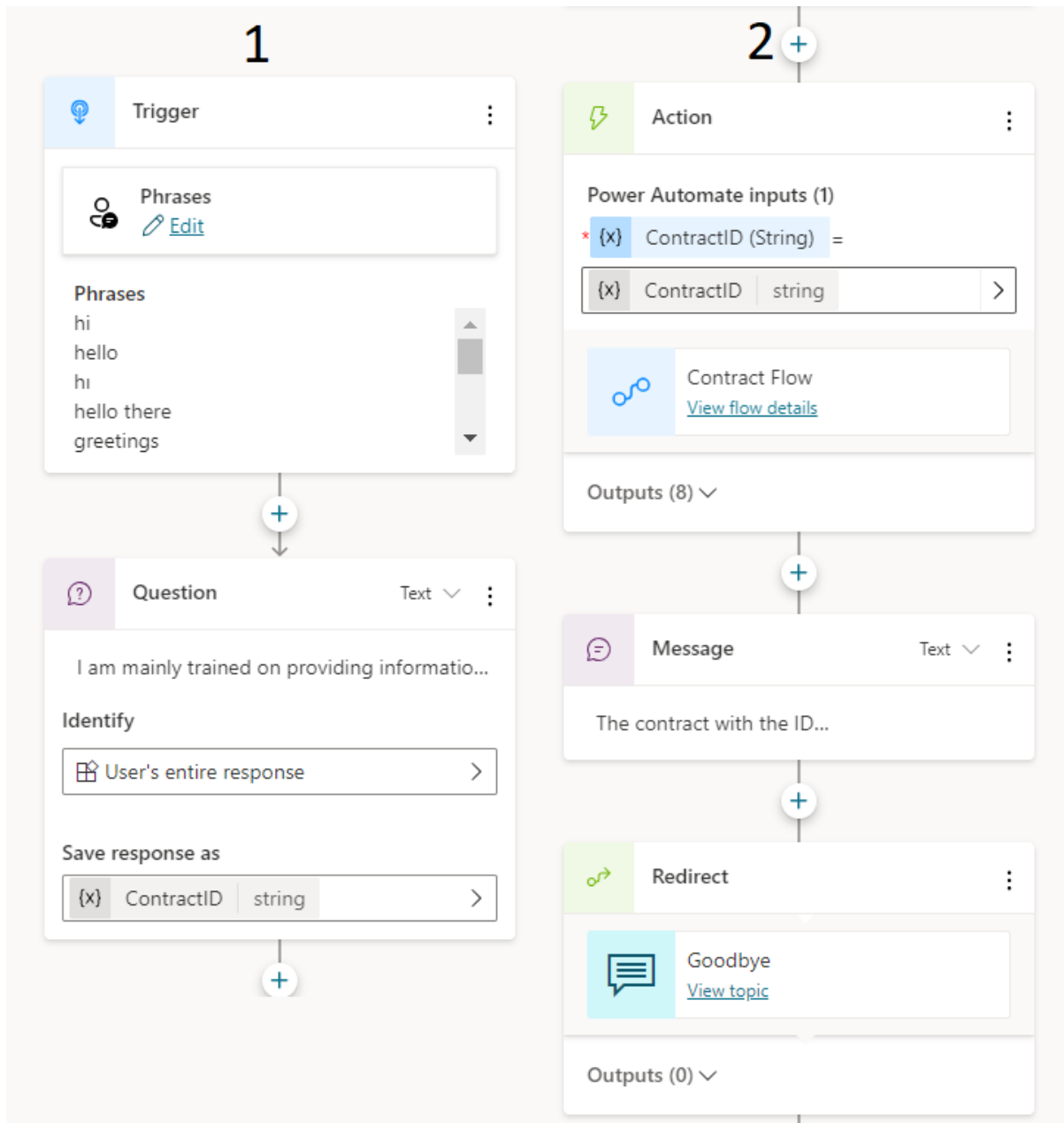


Figure 7: Copilot Core Topic

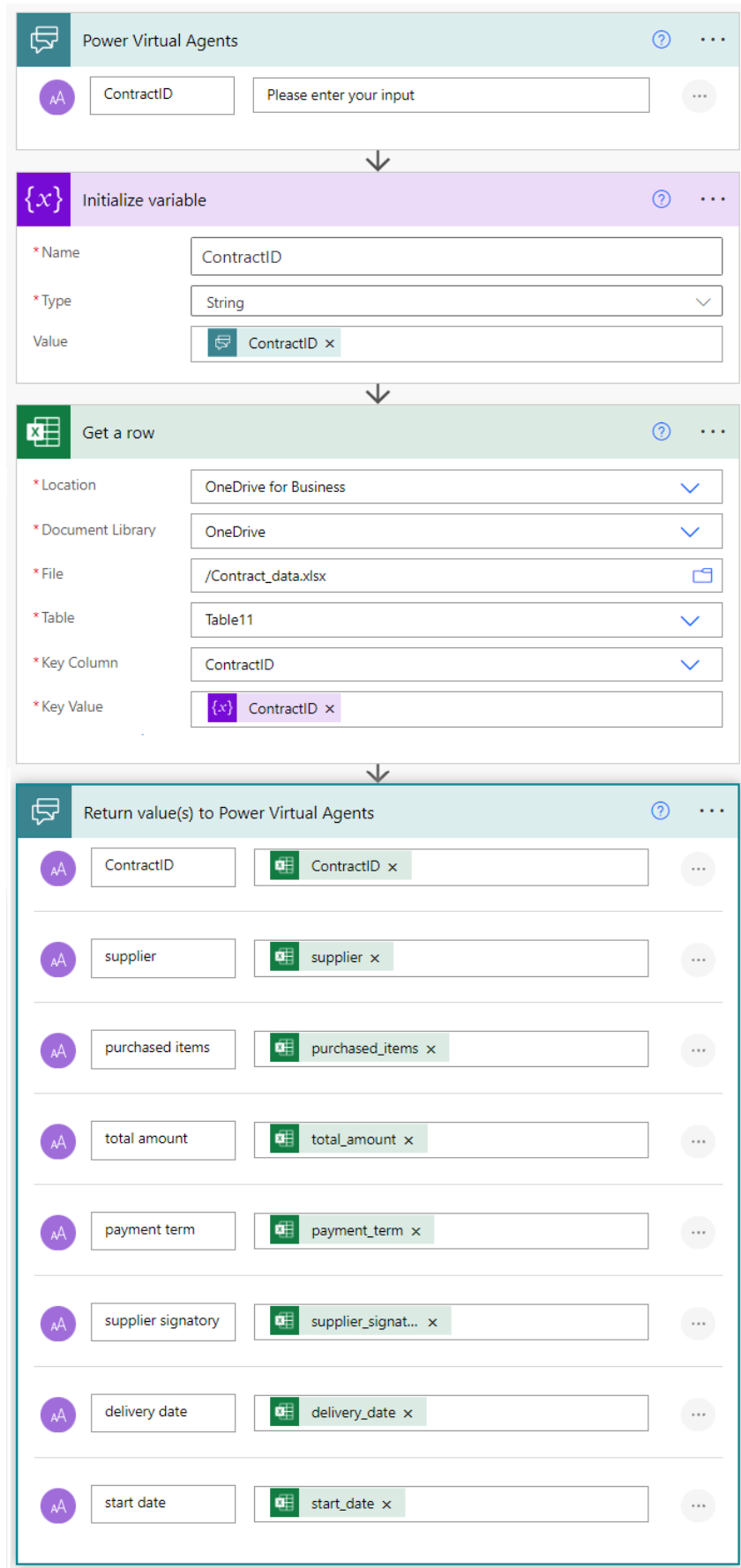


Figure 8: Power Automate Flow 2

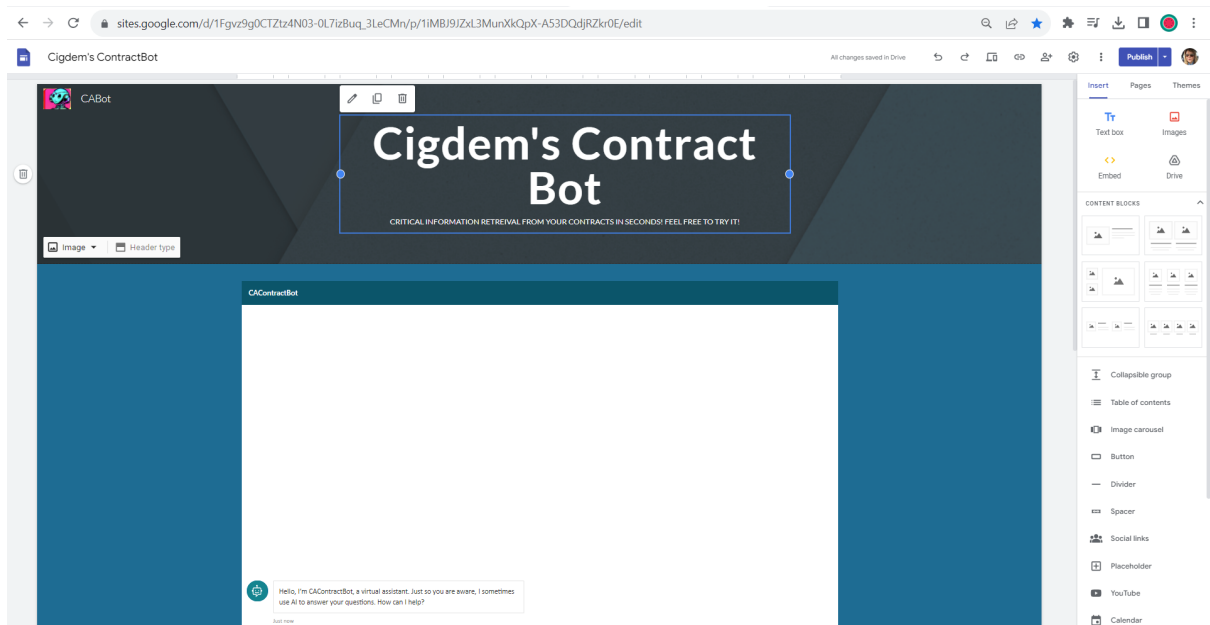


Figure 9: Website Design

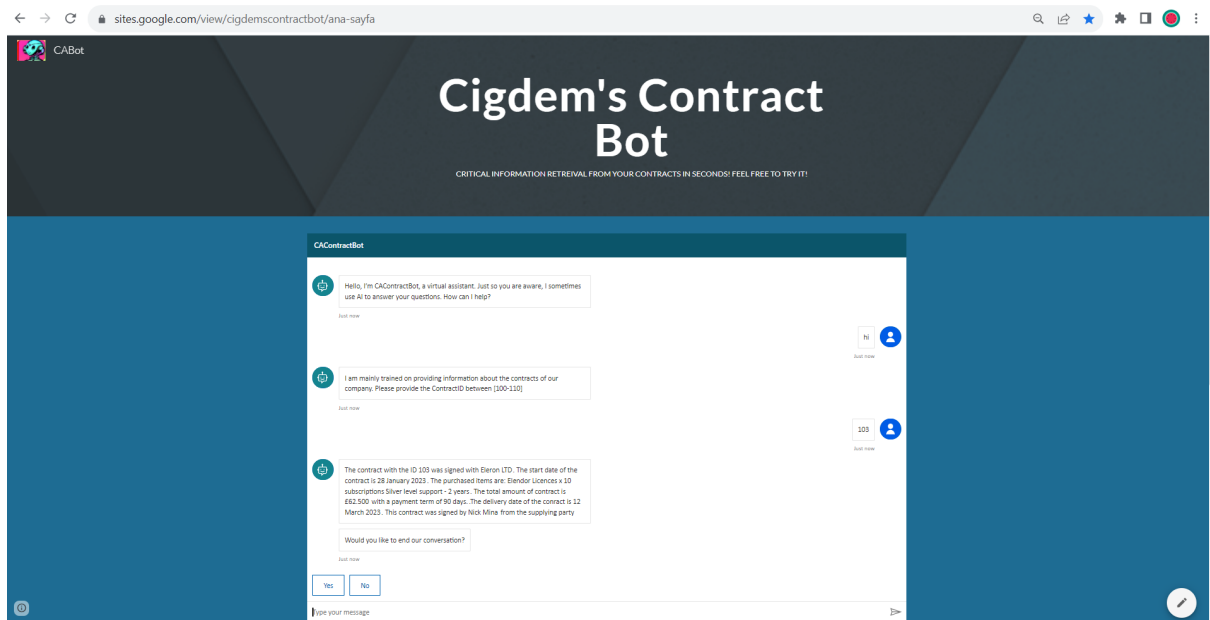


Figure 10: User Output