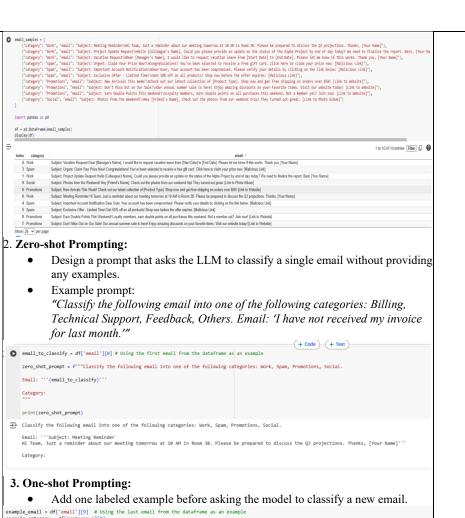
SCHOOL OF COMPUTER SCIENCE AND ARTIF			DEPARTMENT OF C	COMPUTER SCIENCE ENGINEERING	
Program Name: B. Tech		Assignment Type: Lab		AcademicYear:2025-2026	
Course Coordinator Name		Venkataramana Veeramsetty			
Instructor(s)Name		<ol> <li>Dr. Mohammed Ali Shaik</li> <li>Dr. T Sampath Kumar</li> <li>Mr. S Naresh Kumar</li> <li>Dr. V. Rajesh</li> <li>Dr. Brij Kishore</li> <li>Dr Pramoda Patro</li> <li>Dr. Venkataramana</li> <li>Dr. Ravi Chander</li> <li>Dr. Jagjeeth Singh</li> </ol>			
Course Code	24CS002PC215	Course Title	AI Assisted Codi	ng	
Year/Sem	II/I	Regulation	R24		
Date and Day of Assignment	06-08-2025	Time(s)			
Duration	2 Hours	Applicable to Batches			

AssignmentNumber: 4.5 (Present assignment number)/24 (Total number of assignments)

Q. No.	Question	ExpectedTime to complete
	Lab 4: Advanced Prompt Engineering: Zero-shot, one-shot, and few-shot techniques	
	<b>Objective:</b> To explore and compare Zero-shot, One-shot, and Few-shot prompting techniques for classifying emails into predefined categories using a large language model (LLM).	
1	Suppose that you work for a company that receives hundreds of customer emails daily. Management wants to automatically classify emails into categories like "Billing", "Technical Support", "Feedback", and "Others" before assigning them to appropriate departments. Instead of training a new model, your task is to use prompt engineering techniques with an existing LLM to handle the classification.	08.08.2025 EOD
	Tasks to be completed are as below	
	1. Prepare Sample Data:	
	<ul> <li>Create or collect 10 short email samples, each belonging to one of the 4 categories.</li> </ul>	



```
example_email = df['email'][0] # Using the last email from the dataframe as an example_category = df['category'][0]

email_to_classify_oneshot = df['email'][0] # Using the first email from the dataframe as the one to classify

one_shot_prompt = f^****Classify the following email into one of the following categories: Work, Spam, Promotions, Social.

Email: ''(example_email)''
Category: (example_category)

Email: ''(email_to_classify_oneshot)''
Category:

print(one_shot_prompt)

Classify the following email into one of the following categories: Work, Spam, Promotions, Social.

Email: ''Subject: Photos from the Weekend! Hey [Friend's Name, Check out the photos from our weekend trip! They turned out great. [Link to Photo Album]''
Category: Social

Email: ''Subject: Neeting Reminder
HI Team, Just a reminder about our meeting tomorrow at 10 AM in Room 38. Please be prepared to discuss the Q3 projections. Thanks, [Your Name]'''
Category:
```

## 4. Few-shot Prompting:

 Use 3-5 labeled examples in your prompt before asking the model to classify a new email.

```
# Using 3 examples from the dataframe for few-shot prompting example_email_1 = df['email'][0]
example_category_1 = df['category'][0]
example_email_2 = df['email'][3]
example_category_2 = df['category'][3]
example_email_3 = df['email'][6]
example_category_3 = df['category'][6]
email_to_classify_fewshot = df['email'][9] # Using a different email to classify
few_shot_prompt = f"""Classify the following email into one of the following categories: Work, Spam, Promotions, Social.
Email: '''{example_email_1}'''
Category: {example_category_1}
Email: '''{example_email_2}'''
Category: {example_category_2}
Email: '''{example_email_3}'''
Category: {example_category_3}
Email: '''{email_to_classify_fewshot}'''
Category:
print(few_shot_prompt)
 Classify the following email into one of the following categories: Work, Spam, Promotions, Social.
 Email: ''Subject: Meeting Reminder
Hi Team, Just a reminder about our meeting tomorrow at 10 AM in Room 3B. Please be prepared to discuss the Q3 projections. Thanks, [Your Name]''
Category: More
 Email: ```Subject: Urgent: Claim Your Prize Now!
Congratulations! You've been selected to receive a free gift card. Click here to claim your prize now: [Malicious Link]```
Category: Span
  Email: '''Subject: New Arrivals This Week!
Check out our latest collection of [Product Type]. Shop now and get free shipping on orders over $50! [Link to Website]'''
Category: Promotions
  Email: '''Subject: Photos from the Weekend!
Hey [Friend's Name], Check out the photos from our weekend trip! They turned out great. [Link to Photo Album]'''
Category:
```

## 5. Evaluation:

- Run all three techniques on the same set of 5 test emails.
- Compare and document the accuracy and clarity of responses.

```
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# 1. Setts to Econify
Contagon? "Similar, "small? "Subject was sently still is ready-there betalled-only shaped to the state of the stilling forces of the stilling
```



## **Requirements:**

 VS Code with Github Copilot or Cursor IDE and/or Google Colab with Gemini

## **Deliverables:**

- A .txt or .md file showing prompts and model responses.
- A comparison table showing classification accuracy for each technique.
- A short reflection on which method was most effective and why

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