**Spam Email Detection**

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**Program Description:** Prompts user to enter email and uses a list of 30 common spam words to detect matched words, gives a spam score and rates likelihood of an email being spam.

**Functions used in the Program (list in order as they are called):**

1. **Function Name:** search\_for\_keywords

**Description:** returns the 30 spam keywords for future use

**Returns:** tickets\_question: The number of tickets user is purchasing. Tickets\_left: number of tickets after each purchase

**Logical Steps:** define list of spam words and returns them.

2. **Function Name:** spam\_score\_finder

**Description:** Scans email for spam keywords, assigns spam score, and stores the written keywords

**Parameters**:

email\_message (string): Email being tested  
spam\_keywords (list): List of spam keywords

**Variables:**

spam\_score (integer): keeps track of number of spam words  
found\_keywords (list): Stores detected words  
email\_text\_lower(string): lowercase version of entered email.

**Logical Steps:**

1. create spam score and set it to zero, create keyword storage  
2. convert email to lowercase  
3. Loop through spam keywords, if keyword is in email, increase spam\_score and found\_keywords

**Returns:**

Spam\_score and found\_keywords

3. **Function Name:** rate\_spam\_likelihood

**Description:** Rates spam likelihood based on number of spam words

**Parameters:**

Spam\_score (integer)  
Total\_keywords(integer): Total number of spam keywords in reference list

**Logical Steps:**

1. If no words from spam list are entered then “Not spam”  
2. If ≤ 20% of the words from the list “Unlikely to be spam”  
3. ≤ 50% “Possible to be spam”  
4. < 50% “Likely spam”

**Returns:**

Indicates likelihood of spam

4. **Function Name:** main

**Description:** Gathers input, analyzes, then displays results

**Variables:**  
spam\_keywords (list): List of spam keywords from search\_for\_keywords()  
email\_message (string): Email input  
spam\_score (integer): The number of detected spam keywords in the email  
found\_keywords (list): The list of detected spam keyword  
spam\_likelihood (string): rates likelihood of spam

**Logical Steps:**

1. Retrieve spam keywords

2. Prompt for email input

3. Analyze using spam\_score\_finder()

4. Use rate\_spam\_likelihood()

5. Display results