In [2]:
```
pip install --upgrade Jinja2
```

Requirement already satisfied: Jinja2 in c:\users\sumanth\anaconda3\lib\site-packages (2.11.3)Note: you may need to restart the kernel to use updated packages.

ERROR: pip's dependency resolver does not currently take into account all the packages that are installed. This behaviour is the source of the following dependency conflicts.
promptify 2.0.3 requires jinja2==2.11.3, but you have jinja2 3.1.3 which is incompatible.

Collecting Jinja2
  Obtaining dependency information for Jinja2 from https://files.pythonhosted.org/packages/30/6d/6de6be2d02603ab56e72997708809e8a5b0fbfee080735109b40a3564843/Jinja2-3.1.3-py3-none-any.whl.metadata (https://files.pythonhosted.org/packages/30/6d/6de6be2d02603ab56e72997708809e8a5b0fbfee080735109b40a3564843/Jinja2-3.1.3-py3-none-any.whl.metadata)
  Downloading Jinja2-3.1.3-py3-none-any.whl.metadata (3.3 kB)
Requirement already satisfied: MarkupSafe>=2.0 in c:\users\sumanth\anaconda3\lib\site-packages (from Jinja2) (2.0.1)
Downloading Jinja2-3.1.3-py3-none-any.whl (133 kB)
   -- 0.0/133.2 kB ? eta -:--:--
   -- 0.0/133.2 kB ? eta -:--:--
   --- ------------------------------------ 10.2/133.2 kB ? eta -:--:--
   --- ------------------------------------ 10.2/133.2 kB ? eta -:--:--
   -------- ------------------------------- 30.7/133.2 kB 220.2 kB/s eta 0:00:01
   --------------- -------------------- 61.4/133.2 kB 299.4 kB/s eta 0:00:01
   --------------------------------- 133.1/133.2 kB 605.3 kB/s eta 0:00:01
   ----------------------------------- 133.2/133.2 kB 564.2 kB/s eta 0:00:00
Installing collected packages: Jinja2
  Attempting uninstall: Jinja2
    Found existing installation: Jinja2 2.11.3
    Uninstalling Jinja2-2.11.3:
      Successfully uninstalled Jinja2-2.11.3
Successfully installed Jinja2-3.1.3

In [3]:
```
pip install jinja2==2.11.3
```

```
Collecting jinja2==2.11.3
  Using cached Jinja2-2.11.3-py2.py3-none-any.whl (125 kB)
Requirement already satisfied: MarkupSafe>=0.23 in c:\users\sumanth\anaconda3
\lib\site-packages (from jinja2==2.11.3) (2.0.1)
Installing collected packages: jinja2
  Attempting uninstall: jinja2
    Found existing installation: Jinja2 3.1.3
    Uninstalling Jinja2-3.1.3:
      Successfully uninstalled Jinja2-3.1.3
Successfully installed jinja2-2.11.3
Note: you may need to restart the kernel to use updated packages.

ERROR: pip's dependency resolver does not currently take into account all the
packages that are installed. This behaviour is the source of the following de
pendency conflicts.
flask 2.2.2 requires Jinja2>=3.0, but you have jinja2 2.11.3 which is incompa
tible.
jupyterlab-server 2.22.0 requires jinja2>=3.0.3, but you have jinja2 2.11.3 w
hich is incompatible.
nbconvert 6.5.4 requires jinja2>=3.0, but you have jinja2 2.11.3 which is inc
ompatible.
```

In [7]: `pip install huggingface-hub==0.15.1`

```
Collecting huggingface-hub==0.15.1
  Downloading huggingface_hub-0.15.1-py3-none-any.whl.metadata (8.0 kB)
Requirement already satisfied: filelock in c:\users\sumanth\anaconda3\lib\sit
e-packages (from huggingface-hub==0.15.1) (3.9.0)
Requirement already satisfied: fsspec in c:\users\sumanth\anaconda3\lib\site-
packages (from huggingface-hub==0.15.1) (2024.2.0)
Requirement already satisfied: requests in c:\users\sumanth\anaconda3\lib\sit
e-packages (from huggingface-hub==0.15.1) (2.31.0)
Requirement already satisfied: tqdm>=4.42.1 in c:\users\sumanth\anaconda3\lib
\site-packages (from huggingface-hub==0.15.1) (4.65.0)
Requirement already satisfied: pyyaml>=5.1 in c:\users\sumanth\anaconda3\lib
\site-packages (from huggingface-hub==0.15.1) (6.0)
Requirement already satisfied: typing-extensions>=3.7.4.3 in c:\users\sumanth
\anaconda3\lib\site-packages (from huggingface-hub==0.15.1) (4.7.1)
Requirement already satisfied: packaging>=20.9 in c:\users\sumanth\anaconda3
\lib\site-packages (from huggingface-hub==0.15.1) (23.1)
Requirement already satisfied: colorama in c:\users\sumanth\anaconda3\lib\sit
e-packages (from tqdm>=4.42.1->huggingface-hub==0.15.1) (0.4.6)
Requirement already satisfied: charset-normalizer<4,>=2 in c:\users\sumanth\a
naconda3\lib\site-packages (from requests->huggingface-hub==0.15.1) (2.0.4)
Requirement already satisfied: idna<4,>=2.5 in c:\users\sumanth\anaconda3\lib
\site-packages (from requests->huggingface-hub==0.15.1) (3.4)
Requirement already satisfied: urllib3<3,>=1.21.1 in c:\users\sumanth\anacond
a3\lib\site-packages (from requests->huggingface-hub==0.15.1) (1.26.16)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\sumanth\anacond
a3\lib\site-packages (from requests->huggingface-hub==0.15.1) (2023.7.22)
Downloading huggingface_hub-0.15.1-py3-none-any.whl (236 kB)
   ---------------------------------------- 0.0/236.8 kB ? eta -:--:--
   ---------------------------------------- 0.0/236.8 kB ? eta -:--:--
   - -------------------------------------- 10.2/236.8 kB ? eta -:--:--
   - -------------------------------------- 10.2/236.8 kB ? eta -:--:--
   ---------- ----------------------------- 61.4/236.8 kB 409.6 kB/s eta 0:00:
01
   ------------ --------------------------- 71.7/236.8 kB 357.2 kB/s eta 0:00:
01
   --------------- ------------------------ 102.4/236.8 kB 454.0 kB/s eta 0:00:
01
   ---------------------- ----------------- 153.6/236.8 kB 541.0 kB/s eta 0:00:
01
   ------------------------ --------------- 174.1/236.8 kB 551.6 kB/s eta 0:00:
01
   -------------------------------- - 225.3/236.8 kB 599.0 kB/s eta 0:00:
01
   ---------------------------------- 236.8/236.8 kB 581.0 kB/s eta 0:00:
00
Installing collected packages: huggingface-hub
  Attempting uninstall: huggingface-hub
    Found existing installation: huggingface-hub 0.12.0
    Uninstalling huggingface-hub-0.12.0:
      Successfully uninstalled huggingface-hub-0.12.0
Successfully installed huggingface-hub-0.15.1
Note: you may need to restart the kernel to use updated packages.
```

```
ERROR: pip's dependency resolver does not currently take into account all the
packages that are installed. This behaviour is the source of the following de
pendency conflicts.
promptify 2.0.3 requires huggingface-hub==0.12, but you have huggingface-hub
0.15.1 which is incompatible.
```

```
In [6]: pip install promptify
```

```
Requirement already satisfied: promptify in c:\users\sumanth\anaconda3\lib\si
te-packages (2.0.3)
Requirement already satisfied: openai==0.27.0 in c:\users\sumanth\anaconda3\l
ib\site-packages (from promptify) (0.27.0)
Requirement already satisfied: cohere==4.13.1 in c:\users\sumanth\anaconda3\l
ib\site-packages (from promptify) (4.13.1)
Requirement already satisfied: anthropic==0.3.4 in c:\users\sumanth\anaconda3
\lib\site-packages (from promptify) (0.3.4)
Requirement already satisfied: regex==2022.10.31 in c:\users\sumanth\anaconda
3\lib\site-packages (from promptify) (2022.10.31)
Requirement already satisfied: appdirs==1.4.4 in c:\users\sumanth\anaconda3\l
ib\site-packages (from promptify) (1.4.4)
Requirement already satisfied: jinja2==2.11.3 in c:\users\sumanth\anaconda3\l
ib\site-packages (from promptify) (2.11.3)
Requirement already satisfied: markupsafe==2.0.1 in c:\users\sumanth\anaconda
3\lib\site-packages (from promptify) (2.0.1)
Collecting huggingface-hub==0.12 (from promptify)
  Downloading huggingface_hub-0.12.0-py3-none-any.whl.metadata (7.8 kB)
Requirement already satisfied: pytest==7.2.2 in c:\users\sumanth\anaconda3\li
b\site-packages (from promptify) (7.2.2)
Requirement already satisfied: tenacity==8.2.2 in c:\users\sumanth\anaconda3
\lib\site-packages (from promptify) (8.2.2)
Requirement already satisfied: tiktoken==0.4.0 in c:\users\sumanth\anaconda3
\lib\site-packages (from promptify) (0.4.0)
Requirement already satisfied: tqdm==4.65.0 in c:\users\sumanth\anaconda3\lib
\site-packages (from promptify) (4.65.0)
Requirement already satisfied: anyio<4,>=3.5.0 in c:\users\sumanth\anaconda3
\lib\site-packages (from anthropic==0.3.4->promptify) (3.5.0)
Requirement already satisfied: distro<2,>=1.7.0 in c:\users\sumanth\anaconda3
\lib\site-packages (from anthropic==0.3.4->promptify) (1.9.0)
Requirement already satisfied: httpx<1,>=0.23.0 in c:\users\sumanth\anaconda3
\lib\site-packages (from anthropic==0.3.4->promptify) (0.27.0)
Requirement already satisfied: pydantic<2.0.0,>=1.9.0 in c:\users\sumanth\ana
conda3\lib\site-packages (from anthropic==0.3.4->promptify) (1.10.8)
Requirement already satisfied: tokenizers>=0.13.0 in c:\users\sumanth\anacond
a3\lib\site-packages (from anthropic==0.3.4->promptify) (0.13.2)
Requirement already satisfied: typing-extensions<5,>=4.1.1 in c:\users\sumant
h\anaconda3\lib\site-packages (from anthropic==0.3.4->promptify) (4.7.1)
Requirement already satisfied: aiohttp<4.0,>=3.0 in c:\users\sumanth\anaconda
3\lib\site-packages (from cohere==4.13.1->promptify) (3.8.5)
Requirement already satisfied: backoff<3.0,>=2.0 in c:\users\sumanth\anaconda
3\lib\site-packages (from cohere==4.13.1->promptify) (2.2.1)
Requirement already satisfied: importlib_metadata<7.0,>=6.0 in c:\users\suman
th\anaconda3\lib\site-packages (from cohere==4.13.1->promptify) (6.0.0)
Requirement already satisfied: requests<3.0.0,>=2.25.0 in c:\users\sumanth\an
aconda3\lib\site-packages (from cohere==4.13.1->promptify) (2.31.0)
Requirement already satisfied: urllib3<3,>=1.26 in c:\users\sumanth\anaconda3
\lib\site-packages (from cohere==4.13.1->promptify) (1.26.16)
Requirement already satisfied: filelock in c:\users\sumanth\anaconda3\lib\sit
e-packages (from huggingface-hub==0.12->promptify) (3.9.0)
Requirement already satisfied: pyyaml>=5.1 in c:\users\sumanth\anaconda3\lib
\site-packages (from huggingface-hub==0.12->promptify) (6.0)
Requirement already satisfied: packaging>=20.9 in c:\users\sumanth\anaconda3
\lib\site-packages (from huggingface-hub==0.12->promptify) (23.1)
Requirement already satisfied: attrs>=19.2.0 in c:\users\sumanth\anaconda3\li
b\site-packages (from pytest==7.2.2->promptify) (22.1.0)
Requirement already satisfied: iniconfig in c:\users\sumanth\anaconda3\lib\si
```

```
te-packages (from pytest==7.2.2->promptify) (1.1.1)
Requirement already satisfied: pluggy<2.0,>=0.12 in c:\users\sumanth\anaconda
3\lib\site-packages (from pytest==7.2.2->promptify) (1.0.0)
Requirement already satisfied: colorama in c:\users\sumanth\anaconda3\lib\sit
e-packages (from pytest==7.2.2->promptify) (0.4.6)
Requirement already satisfied: charset-normalizer<4.0,>=2.0 in c:\users\suman
th\anaconda3\lib\site-packages (from aiohttp<4.0,>=3.0->cohere==4.13.1->promp
tify) (2.0.4)
Requirement already satisfied: multidict<7.0,>=4.5 in c:\users\sumanth\anacon
da3\lib\site-packages (from aiohttp<4.0,>=3.0->cohere==4.13.1->promptify) (6.
0.2)
Requirement already satisfied: async-timeout<5.0,>=4.0.0a3 in c:\users\sumant
h\anaconda3\lib\site-packages (from aiohttp<4.0,>=3.0->cohere==4.13.1->prompt
ify) (4.0.2)
Requirement already satisfied: yarl<2.0,>=1.0 in c:\users\sumanth\anaconda3\l
ib\site-packages (from aiohttp<4.0,>=3.0->cohere==4.13.1->promptify) (1.8.1)
Requirement already satisfied: frozenlist>=1.1.1 in c:\users\sumanth\anaconda
3\lib\site-packages (from aiohttp<4.0,>=3.0->cohere==4.13.1->promptify) (1.3.
3)
Requirement already satisfied: aiosignal>=1.1.2 in c:\users\sumanth\anaconda3
\lib\site-packages (from aiohttp<4.0,>=3.0->cohere==4.13.1->promptify) (1.2.
0)
Requirement already satisfied: idna>=2.8 in c:\users\sumanth\anaconda3\lib\si
te-packages (from anyio<4,>=3.5.0->anthropic==0.3.4->promptify) (3.4)
Requirement already satisfied: sniffio>=1.1 in c:\users\sumanth\anaconda3\lib
\site-packages (from anyio<4,>=3.5.0->anthropic==0.3.4->promptify) (1.2.0)
Requirement already satisfied: certifi in c:\users\sumanth\anaconda3\lib\site
-packages (from httpx<1,>=0.23.0->anthropic==0.3.4->promptify) (2023.7.22)
Requirement already satisfied: httpcore==1.* in c:\users\sumanth\anaconda3\li
b\site-packages (from httpx<1,>=0.23.0->anthropic==0.3.4->promptify) (1.0.4)
Requirement already satisfied: h11<0.15,>=0.13 in c:\users\sumanth\anaconda3
\lib\site-packages (from httpcore==1.*->httpx<1,>=0.23.0->anthropic==0.3.4->p
romptify) (0.14.0)
Requirement already satisfied: zipp>=0.5 in c:\users\sumanth\anaconda3\lib\si
te-packages (from importlib_metadata<7.0,>=6.0->cohere==4.13.1->promptify)
(3.11.0)
Using cached huggingface_hub-0.12.0-py3-none-any.whl (190 kB)
Installing collected packages: huggingface-hub
  Attempting uninstall: huggingface-hub
    Found existing installation: huggingface-hub 0.20.3
    Uninstalling huggingface-hub-0.20.3:
      Successfully uninstalled huggingface-hub-0.20.3
Successfully installed huggingface-hub-0.12.0
Note: you may need to restart the kernel to use updated packages.

ERROR: pip's dependency resolver does not currently take into account all the
packages that are installed. This behaviour is the source of the following de
pendency conflicts.
transformers 4.32.1 requires huggingface-hub<1.0,>=0.15.1, but you have huggi
ngface-hub 0.12.0 which is incompatible.
```

In [8]:
```python
from promptify import Prompter,OpenAI, Pipeline

model           = OpenAI('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')
prompter        = Prompter('multiclass_classification.jinja')
pipe            = Pipeline(prompter , model)
from pprint import pprint

labels = ['surprise', 'neutral', 'hate', 'joy', 'worry', 'sadness']

result = pipe.fit(
                labels=labels,
                text_input=input("Enter a text : "),
                )


pprint(result)
```

```
Enter a text : hi hpw are you

100%|████████████| 1/1 [00:01<00:00,  1.75s/it]

[{'parsed': {'data': {'completion': [{'C': 'neutral'}], 'suggestions': []},
            'object_type': <class 'list'>,
            'status': 'completed'},
  'text': "[{'C': 'neutral'}]",
  'usage': {'completion_tokens': 8, 'prompt_tokens': 104, 'total_tokens': 11
2}}]
```

In [149]:
```python
labels = ['surprise', 'neutral', 'hate', 'joy', 'worry', 'sadness']

result = pipe.fit(
                labels=labels,
                text_input=input("Enter a text : "),
                )


pprint(result)
```

```
Enter a text : wow!

100%|████████████| 1/1 [00:01<00:00,  1.11s/it]

[{'parsed': {'data': {'completion': [{'C': 'surprise'}], 'suggestions': []},
            'object_type': <class 'list'>,
            'status': 'completed'},
  'text': "[{'C': 'surprise'}]",
  'usage': {'completion_tokens': 9, 'prompt_tokens': 101, 'total_tokens': 11
0}}]
```

In [162]:
```python
test=result[0]['parsed']['data']['completion'][0]['C']
tem=[]
tem.append(test)
print(tem)
```

```
['joy']
```

In [163]:
```python
pred=['surprise']

# Calculate the F1 score for the 'joy' class
f1 = f1_score(tem,pred,average='macro')
print(f"F1 score for 'joy' class: {f1}")
```

```
F1 score for 'joy' class: 0.0
```

In [157]:
```python
from sklearn.metrics import confusion_matrix
conf = confusion_matrix(tem,pred)
print(conf)
```

```
[[0 0 0]
 [1 0 0]
 [0 0 1]]
```

In [158]:
```python
tp = conf[1]
fp = conf[0,1]
fn = conf[1,0]
pre = tp/(tp+fp)
rec = tp/(tp+fn)
```

```
C:\Users\SUMANTH\AppData\Local\Temp\ipykernel_11628\1040739599.py:4: RuntimeW
arning: invalid value encountered in divide
  pre = tp/(tp+fp)
```

In [5]:
```python
import sys
!{sys.executable} -m pip list
```

```
Package                        Version
------------------------------ ---------------
aiobotocore                    2.5.0
aiofiles                       22.1.0
aiohttp                        3.8.5
aioitertools                   0.7.1
aiosignal                      1.2.0
aiosqlite                      0.18.0
alabaster                      0.7.12
anaconda-anon-usage            0.4.2
anaconda-catalogs              0.2.0
anaconda-client                1.12.1
anaconda-cloud-auth            0.1.3
anaconda-navigator             2.5.0
anaconda-project               0.11.1
anthropic                      0.3.4
anyio                          3.5.0
appdirs                        1.4.4
argon2-cffi                    21.3.0
```

In [ ]: