Exercise 1

Identify how many of Dyalog's Facebook posts contain the word 'share'.

From APL,

```
data←⊃⎕NGET 'c:\tmp\Exercise1.txt'
```

(adjust filename appropriately; don't miss out the ⊃).

Then write a function such that you can do the following:

```
      'share' fn data
5
```

(Note: facebook is dynamic; that may not be the correct answer today.)

Hints

The JSON in `data` looks like this:

```
{
  "feed": {
    "data": [
      {
        "created_time": "2017-08-18T13:01:05+0000",
        "id": "181156115334190_1410483235734799",
        "message": "Register for #Dyalog17 before 24th August 2017 to make sure you get
        accommodation at the venue https://www.dyalog.com/user-meetings/dyalog17.htm"
      },
      {
        "created_time": "2017-08-18T11:00:11+0000",
        "id": "181156115334190_1410404359076020",
        "message": "Dyalog Version 16.0 is now available for Apple macOS
        https://www.dyalog.com/dyalog/dyalog-versions/160.htm"
      },
      {
        "created_time": "2017-08-16T13:26:18+0000",
        "id": "181156115334190_1408615602588229",
        "message": "Webinar 4 \"The Summer Intern Show\" with APL, interns, robots & Python
        bridges ... join us tomorrow to find out more.\n\nhttps://dyalog.tv/Webinar"
      },
      {
        "created_time": "2017-08-16T13:07:24+0000",
        "id": "181156115334190_1408597655923357",
        "story": "Dyalog Ltd. updated their profile picture."
      },
...
    ],
    "paging": {
      "cursors": {
        "after": "Q2c4U1pXNTBYM0Y…",
        "before": "Q2c4U1pXNTBYM0…"
      }
    }
  },
  "id": "181156115334190"
}
```

You are interested in the "message" items. The outermost object contains an object "feed", and that contains "data" which is an array of objects. Some, but not all, of those objects contain a "message" item.

To parse the JSON:

Either: create the data described by the JSON:

```
      fb1←⎕JSON data
      15.0: fb1←(7159⍳) data
```

Thence:

```
      fb1.feed.data[1].message
Register for #Dyalog17 before 24th August 2017 …

      fb1.feed.data[4].message
VALUE ERROR
```

Or: create a matrix representation of the data:

```
      fb2←(⎕JSON⍠'M') data
      15.0: fb2←1 (7159⍳) data
```

Thence:

```
fb2
```

0			1
1	feed		1
2	data		2
3			1
4	created_time	2017-08-18T13:01:05+0000	4
4	message	Register for #Dyalog17 before 24th August 2017…	4
4	id	181156115334190_1410483235734799	4
3			1
		…	
4	created_time	2017-08-16T13:07:24+0000	4
4	story	Dyalog Ltd. updated their profile picture.	4
4	id	181156115334190_1408597655923357	4
		…	