

```
user_file <- GET file containing a list of names
READ user_file as json_user_file
words  <- load(json_user_file)

search_word <- GET word
start_index <- 0
end_index <- words.length()

WHILE start_index is not = end_index
  middle_index <- (start_index + end_index) / 2
  IF search_word < middle_index
    end_index <- middle_index - 1
  ELSE
    start_index <- middle_index + 1

IF search_word = words[middle_index]
  PUT word found
ELSE
  PUT word not found
```