

Braeden Pope  
Algorithm Design  
Advanced Search Design

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PROMPT for file name
READ file at file name into list
PROMPT for word to search for in list

WHILE (word not found)

    IF (list_max < list_min)
        PUT failure message on the screen
        return

    index = (list_max + list_min) / 2
    check = list[index]

    IF (check != word)

        IF (check > word)
            list_max = index - 1
        ELIF (check < word)
            list_min = index + 1
    ELSE
        PUT word and index on the screen
        return
```