

Guidelines for programming assignment #1

INFO-0010

2023-2024

Practical details

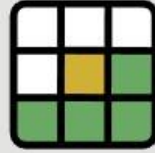
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Appointments at my office must have been **scheduled** beforehand

Remarks/clarifications of general interest will be published on ecampus

Context



Wordle

Get 6 chances to guess
a 5-letter word.

- You will develop a client/server application for Wordle.
- Java (1.8) Sockets.
- Console output (no fancy GUI).
- Imposed protocol.
- To be realized alone.
- **HARD deadline** : November 2nd, 2023

Protocol

Text-oriented protocol. Each request/response is ended with « \r\n » (CRLF)

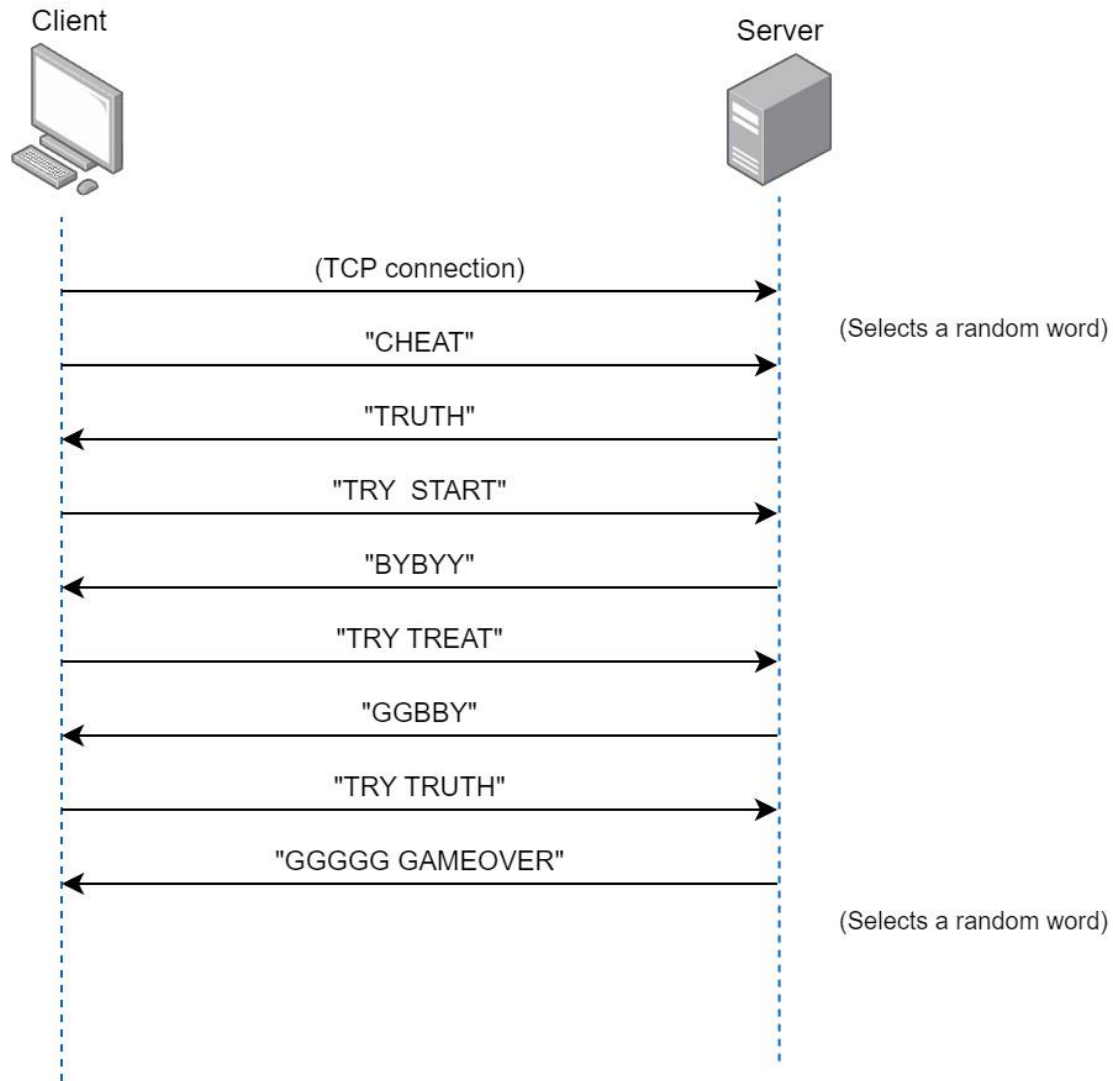
Client connects to server using provided information (e.g. localhost/ip on port 2123).

Client can send :

- «CHEAT» to which the server respond with the secret word (e.g. «SALAD»).
- «TRY x» where x is a 5-letter, to which the server respond with either
 - «NONEXISTENT» if x is not in the list of valid 5-letter words
 - A 5-letter combination of 'G', 'Y' and 'B' indicating respectively if a letter is well placed, misplaced, not present. (e.g. «TRY SEATS» request, «GBYBB» response)
 - Additionally, if the game is over (win or loss) « GAMEOVER» is appended to the last coloring (e.g. «GGGGG GAMEOVER»)

If the server receives anything else, it responds with « WRONG » but keeps the connection open.

Wordle Protocol (GP)



Repeated letters rule

- For a specific letter, the number of letters colored as 'G' and 'Y' must be at most equal to the number of occurrences
- The coloring must prioritize 'G' then 'Y' to the left most occurrence

- Examples:

- Secret word: CLOSE

C	H	E	E	R
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GBYBB

C	O	C	K	S
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GYBBY

- Secret word: ABBEY

B	A	B	E	S
---	---	---	---	---

YYGGB

K	E	E	P	S
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BYBBB

(Un)intentional malevolence

- What happens if I send «TRY\r\n», or «TRY TEST \r\n»?
 - Good behaviour : Send «WRONG».
 - Bad behaviour : Trigger exception.
 - Never expect, always check!
- What happens if I send «TRY»?
 - Server waits for the rest of the request, that never comes.
 - If single-threaded, cannot handle new connections.
 - One thread for new connections, then one thread per connection.
 - Use Socket time-outs ([setSoTimeout\(\)](#), will trigger an exception), close connection if too long.

Extra guidelines

- Port number : 2xxx, where xxx = last 3 digits of ULiege ID
- File named WordleWordSet.java must not be modified and must not be included in the archive
- Class named « WordleClient » and « WordleServer ».
- No "package" instruction, no shutdown hooks, limited libraries for import, no file manipulation.
- Fully operational on student machines (ms8**.montefiore.ulg.ac.be).
- Short report.
- Send submission to Montefiore Submission Platform (submit.run.montefiore.ulg.ac.be) before November, 2nd 2023!

Plagiarism/Fraud

- Definition of plagiarism:

"an act or instance of using or closely imitating the language and thoughts of another author without authorization and the representation of that author's work as one's own, as by not crediting the original author:"

(source : <http://dictionary.reference.com/browse/plagiarism>)

- For instance, copying (even parts of) the source code of another student's project or copying (even parts of) an external source without proper quoting is considered as plagiarism.
- Putting (even parts of) his/her source code at disposal of other students is considered as a fraud.
- Both fraud and plagiarism are sanctioned with a grade of 0/20 (and possibly other additional sanctions).

Plagiarism vs. cooperation



Copy without
quoting

Sharing its source
code

Discussing the
content of the source
code

Quote the source
code of another
student's project

Quote an
external source

Discussing the
behaviour of the
program

1. http://www.hsd.state.nm.us/LookingForAssistance/Report_Fraud.aspx
2. http://static.lexpress.fr/medias_8866/w_640,h_358,c_fill,g_center/v1393339369/cooperation-esprit-d-equipe_4539792.jpg
3. <http://stream1.gifsoup.com/view4/3468834/cat-playing-with-fire-o.gif>