

Credijusto Code Challenge

We designed the coding challenge to gauge your technical skills and give insight into how you approach problem-solving.

Answer our email with your code attached once you have completed the challenge.

Please do not hesitate to get in touch if you have any questions.

Best of luck with the challenge!

The Googlon Language

Archaeologists found a scroll containing texts in the ancient and mysterious Googlon language.

After many years of study, linguists have learned some of the fundamental characteristics of this language:

Letter Classification

Googlon letters are classified in two groups: the letters **u, d, x, s, m, p, f** are called "**foo letters**" while the other letters are called "**bar letters**".

Prepositions

The linguists have discovered that in the Googlon language, the prepositions are the words of exactly 6 letters which end in a *foo letter* and do not contain the letter **u**.

Verbs

Another interesting fact discovered by linguists is that, in the Googlon language, verbs are words of 6 letters or more that end in a *bar letter*. Furthermore, if a verb starts in a *bar letter*, then the verb is inflected in its subjunctive form.

Lexicographical Order

In Googlon, like in our system, words are always ordered lexicographically, but the challenge is that the order of the letters in the Googlon alphabet is different from ours. Their alphabet, in order, is: **sxocqnmwfpfyheljrdgui**.

Numbers

Not that words aren't fun, but one could ask: how do Googlons represent the numbers? Well, in Googlon, words also represent numbers given in base 20, where each letter is a digit. The digits are ordered from the *least significant* to the *most significant*, which is the opposite of our system. That is, the leftmost digit is the unit, the second digit is worth 20, the third one is worth 400, and so on and so forth. The values of the letters are given by the order they appear in the Googlon alphabet (which, as we saw, is ordered differently from our alphabet). That is, the first letter of the Googlon alphabet represents the digit 0, the second letter represents the digit 1, and the last one represents the digit 19.

As an example, the Googlon word **gxjrc** represents the number **605637**.

Googlons consider a number to be pretty if it satisfies all of the following properties:

- it is greater than or equal to 81827
- it is divisible by 3

The Challenge

Write a program (in any language) that answers the following questions to a given Googlon text:

- 1) How many prepositions are there in the text?
- 2) How many verbs are there in the text?
- 3) How many of those verbs in the text are in the subjunctive form?
- 4) Generate a vocabulary list with distinct words ordered Googlon's alphabetical order.
- 5) How many distinct pretty numbers are in the text?

Use the test cases to validate your algorithm.

Test Cases

Text A

Input

shoce pq podciy nfw h phfer epgdc dgsloqe do rhfl qhmoixw cmfur qdrulxogji whc ermjdhsx py en yco ienqm wj uln dwuch qinhmjul m jxdqfrnl g iygsex qihmu grewyluhfs ucf us xclpedqmi yrx qinexwo qx r qw wxflpdn rsogxd cpqmxj lgchqdin fdw nwcrus coj nj qplfjnwidg fwdmslqn cwj hysucxdqm ms hdmwpe igxweo sqflo ycqlinro ghu hgecdfj mw xrpmyenq fgixsr fpwcnguieh fclgj ghepqyd jxhwe cejfugn ujxqh ihncrl mlceo udr fm ocxfsjdng sfoqmd pdoymnwxei spqinedf ql ncsepfl icmqsdj chwijlg yiq ifl syejrqd lwnepmcg xlmnfqry ghlyopuncw qx iw sionpux cop dmqpchuyf ojxfqhernm ignpeyf rseoyl emjocsild rfimdy mwd oewgjfr uo irmcunfgx ylduwpsnh xrdng gcxr ng prfmjicud srdueqhgiy nmodwsqijh dcnql

Expected Output

- 1) There are 3 prepositions in the text
- 2) There are 36 verbs in the text
- 3) There are 25 subjunctive verbs in the text
- 4) Vocabulary list: sqflo spqinedf sfoqmd syejrqd shoce srdueqhgiy sionpux xclpedqmi xlmnfqry xrpmyenq xrdng ocxfsjdng oewgjfr ojxfqhernm cop coj cmfur cwj cpqmxj chwijlg cejfugn qx qplfjnwidg qhmoixw ql qdrulxogji qinhmjul qinexwo qihmu ncsepfl nmodwsqijh nwcrus nfw h nj ng ms mw mwd mlceo m jxdqfrnl g wxflpdn whc wj uln podciy pq py phfer prfmjicud pdoymnwxei fclgj fm fwdmslqn fpwcnguieh fdw fgixsr yco ycqlinro ylduwpsnh yrx yiq hysucxdqm hdmwpe hgecdfj en emjocsild epgdc ermjdhsx lwnepmcg lgchqdin jxhwe rsogxd rseoyl r qw rfimdy rhfl do dcnql dmqpchuyf dwuch dgsloqe gcxr ghepqyd ghlyopuncw ghu grewyluhfs us uo ucf ujxqh udr icmqsdj iw ifl iygsex ihncrl ienqm irmcunfgx igxweo ignpeyf
- 5) There are 22 distinct pretty numbers in the text

Text B

Input

dufqwh ndis eqclrnguo ceqrugs meod eofxldr uqpwmni xrh m qgro hlwgimn fjnomcledi silru xh efwh uxfrpsnqd fyejhi fxdn swfruc eopq hcgeox lhimoynsr rwjxecpmfl gimqxwu yr eu jh rfs qncuyiel hwuiqlne umyldn uwflpqc gywlc oxmegsdi sqemywlg cnfimrgows hnxyfd exmdnos djpsogiy xyp myngercj yeujqcoih sgljco xy lruneodc frqog hqsgcy wmi hyfgqj iecusqjp ugnmqfypsd yp rxoew lqeshijndg umynehjsci rnc xhrjyocde mnefpj rcyihwxq oihjwru p gquscxhw ucrfdsoeq drg nqhodjsm snp cwoen ehyl dsnmf pmrs cghuwpfxly ifwpnx wqdgrl xocpjedsfm oegli url rylnsph ijucmxw jwispgefdo heixgmcy gm sdhfnoxg hc jqwpdo eo hmy pjfu xuedl nqpge cnyosu dnefl lf xcdupho wixmhcuynj poy ous jwroheqm xchm jnufdshiqe liyrexhmu cjlxoiuef fwqrijemcd csxpy eqxghfry fhnwomgyuq yj euhxmosc

Expected Output

- 1) There are 3 prepositions in the text
- 2) There are 46 verbs in the text
- 3) There are 26 subjunctive verbs in the text
- 4) Vocabulary list: sqemywlg snp swfruc sdhfnoxg sgljco silru xh xocpjedsfm xchm xcdupho xy xyp xhrjyocde xrh m xuedl oxmegsdi oegli ous oihjwru p csxpy cnfimrgows cnyosu cwoen ceqrugs cjlxoiuef cghuwpfxly qncuyiel qgro nqpge nqhodjsm ndis mnefpj myngercj meod wqdgrl wmi wixmhcuynj poy pmrs fxdn fwqrijemcd fyejhi fhnwomgyuq fjnomcledi frqog yp yeujqcoih yj hc hcgeox hqsgcy hnxyfd hmy pjfu hwuiqlne hyfgqj heixgmcy hlwgimn exmdnos eo eopq eofxldr eqxghfry eqclrnguo efwh ehyl dsnmf euhxmosc eu jh lqeshijndg lf lhimoynsr lruneodc liyrexhmu jqwpdo jnufdshiqe jwroheqm jwispgefdo rxoew rcyihwxq rnc rwjxecpmfl rfs rylnsph dnefl djpsogiy drg dufqwh gquscxhw gm gywlc gimqxwu yr uxfrpsnqd ucrfdsoeq uqpwmni umynehjsci umyldn uwflpqc url ugnmqfypsd ifwpnx iecusqjp ijucmxw
- 5) There are 21 distinct pretty numbers in the text

Text C

Input

xerni hej meofh nowmfjhgur qsixdwp rwgfe xigldpnw nl jgnmqpesy dwh wiergnlpfj unei lgxidjs lyq pde ju merwcxu xqgjeo iqfwyh rq xgdmopqhy qfderyjc lwrjsoynp miwlehxjcr xmry oncfipjg sgd dycjrflsn woyi lx ousryfgcqpx sxrhen gucfdpdx edyn xngjhweodm xfujp lqyuch mr ctywmpuqns dfcugqws piuerlxhm cjh rgeoj xucq impuhyec uhswgnpfj rl ngmwdeh ionxw uhisd dprhwqun yf gnepqwymuj wylruxcqg fmnpowxcjemsuf wsijx nriy usqioe coeslhu ce chdo ydqsgjlhfn rihluydngf fq yrmejs xqcjwsdi prydlnchxcl ngrxcumijs sunrdwm urflyq jmcсорwglx gelnif esc ymfswnqij ifdn rfegusyjf fw uinefd wsuxc lsjyndqgx leginjo jiqwsclgdiusxecqjoufqgmjhdunw eyscgxulwnxfjdiiyodi rfhdcldgo sngrmjwc rfd hfnjc yijf yjurqsompogmycfqnrhgmuxsijodqmyeugjlo

Expected Output

- 1) There are 2 prepositions in the text
- 2) There are 37 verbs in the text
- 3) There are 22 subjunctive verbs in the text
- 4) Vocabulary list: sxrhen sngrmj sgd sunrdwm xqcjwsdi xqgjeo xngjhweodm xmry xfjdiiy xfujp xerni xgdmopqhy xucq xigldpnw oncfipjg ogmycfqnrh ousryfgcqpx oufqgmjh coeslhu chdo ce ctywmpuqns cjh qsixdwp qfderyjc nowmfjhgur nl nriy ngmwdeh ngrxcumijs meofh merwcxu mr miwlehxjcr wsuxc wsijx wxcjemsuf woyi wc wylruxcqg wiergnlpfj prydlnch pde piuerlxhm fq fmnpowfw yodi ymfswnqij yf yjurqsomp yrmejs ydqsgjlhfn yijf hxcl hfnjc hej esc eyscgxulwn edyn lsjyndqgx lx lqyuch lwrjsoynp lyq leginjo lgxidjs jmcсорwglx jgnmqpesy ju jiqwsclgdiusxecqjoufqgmjhdunw eyscgxulwnxfjdiiyodi rfhdcldgo rfegusyjf rfd rl rgeoj rihluydngf dqmyeugjlo dwh dprhwqun dfcugqws dycjrflsn dunw gnepqwymuj gmuxsijogelnif gdiusxecqjoucfdpdx usqioe unei uhswgnpfj uhisd urflyq uinefd ionxw iqfwyh impuhyec ifdn
- 5) There are 27 distinct pretty numbers in the text

Text D

Input

fdmrsl lfro lxng cn jywenuqr mdgr pirfd puisec muf oupmifrn dr xyigmqwp cnomj unowmxiecd odprxwqge dyuhwxc ihpslwgoqm gwucos jcoer oelyg hmssp qenfdjrhcucsj fd ow jsuh oghqepxjlc jui yupjenqmf jndfyqm qsdmjlf yghuecdj fhsogp hiwn neiwlogrsy ysw lcyehfi qd us oshnxrfdp ohx njdy yqwxn osxjdaqd qd somhefcix ofhledm ulrosdm gh dowueprmc pxryc smoxlwfnr pnciyr l us xjomhfe qlw jcfye fcqlpoiuxeohlq mrsylhxwqf mxdlpruge yumrfio cnyxdm xchidjpe fn cjupdxnefm ig icwgux qcfopnme ryshjxdc yricqxhfeopdlfnhu rcpdlo oclmyr hpjfnlqy lnsdioe ojirm nfcmxjwgl wqphu eunyd eopi feru hgwcms fudmgxjholu ls owupc iw nxgupwhl udjnylie uewdymsl sypmcelu sup qdlhjmeno nrxu csiex fuqrlid hmiexfgs nsjopuw

Expected Output

- 1) There are 3 prepositions in the text
- 2) There are 31 verbs in the text
- 3) There are 19 subjunctive verbs in the text
- 4) Vocabulary list: somhefcix smoxlwfnr sypmcelu sup xchidjpe xyigmqwp xeohlq xjomhfe osxjdaqd oshnxrfdp oclmyr ow owupc opdlfnhu ofhledm ohx oelyg ojirm odprxwqge oghqepxjlc oupmifrn csj csiex cn cnomj cnyxdm cjupdxnefm qsdmjlf qcfopnme qenfdjrhcucqlw qd qdlhjmeno nsjopuw nxgupwhl nfcmxjwgl neiwlogrsy njdy nrxu mxdlpruge mrsylhxwqf mdgr muf wqphu pxryc pnciyr l puisec pirfd ffgs fcqlpoiufn fhsogp feru fd fdmrsl fu fuqrlid ysw yqwxn yricqxhfeoyghuecdjyumrfioyupjenqmfhmssp hmiex hpjfnlqy hgwcms hiwn eopi eunyd ls lxng lcyehfi lnsdioe lfro jsuh jcoer jcfye jndfyqm jywenuqr jui rcpdlo ryshjxdc dowueprmc dmgxjholu dyuhwxc dr gwucos gh us unowmxiecd uewdymsl ulrosdm udjnylie icwgux iw ihpslwgoqm ig
- 5) There are 27 distinct pretty numbers in the text

Text E

Input

mexfjsi yinjs ocmhp ms iyuq pqf qehcmrjpwu eorq gn mgnoqdhj odi nqeduhc cpgyx cjxdl uspxjgdlei jnqul
hpngdocxw wisly ndepfswml oux umrocxw dje exsij sxwc icy wydix eq sinprhlwmd hwmjp cndlxuqhfg
dimxwofheq phlyf qhiwfyudsp ey xwqmucp ec epqdonschm ipoufr syjqfr isxl mqgwclf ciex pysfieucx
oylfmierg hygu ch orl rjoh peqfw ljsf nqc hwsqc yrshie mwrpcg pxiomfqwrdr xsfecil goi ylnxequr jrcdiye
ojgelhisc fwerpnxogs gnl up yjgq hsfywx rnpjw lx qljs hjwsqel srhm mfginrqulc wpxgyh qugre mjrliogucs
iupdjfnhm muoplcrfi wxmyhipou umwrc hdroml irplxiofsm emnd ncjysiwdh cgr qrj qpngufxjli ufidryq
nsdohjim yqmgihus jimlxfsygc phdgqir yedhpws fqexsi xwule hgcmqix edmpwfnsuh fsxcerumow rijpsfgm
pmldxecqf ypwocmxni ywcr

Expected Output

- 1) There are 1 prepositions in the text
- 2) There are 32 verbs in the text
- 3) There are 19 subjunctive verbs in the text
- 4) Vocabulary list: sxwc syjqfr srhm sinprhlwmd xwqmucp xwule ocmhp oyolfmierg ojgelhisc orl odi oux
cndlxuqhfg cpgyx ch cjxdl cgr ciex qpngufxjli qhiwfyudsp qehcmrjpwu qljs qrj qugre nsdohjim ncjysiwdh
nqc nqeduhc ndepfswml ms mqgwclf mwrpcg mfginrqulc mexfjsi mjrliogucs mgnoqdhj muoplcrfi
wxmyhipou wpxgyh wydix wisly pxiomfqwrdr pqf pmldxecqf pysfieucx phlyf phdgqir peqfw fsxcerumow
fqexsi fwerpnxogs yqmgihus ywcr ypwocmxni yedhpws ylnxequr yjgq yrshie yinjs hsfywx hwsqc hwmjp
hpngdocxw hygu hjwsqel hdroml hgcmqix exsij eorq ec eq emnd epqdonschm ey edmpwfnsuh lx ljsf jnqul
jrcdiye jimlxfsygc xsfecil rnpjw rjoh rijpsfgm dje dimxwofheq goi gn gnl uspxjgdlei umwrc umrocxw up
ufidryq isxl icy ipoufr iyuq irplxiofsm iupdjfnhm
- 5) There are 26 distinct pretty numbers in the text