## **QUENCE - INSTRUCTIONS**

(2025 Feb 11 version)

Quence is a password generator that makes strong, short, memorable passwords. You only need this document (the INSTRUCTIONS, FIRST 3 table, and LAST 3 table), and a six-sided die. Having two or four six-sided dice might make it easier.

Quence makes fake words like 'apetol', 'shults', 'phabid'... Each word is made from two half-words: ape, tol, shu, lts, pha, bid... Each of the tables is a 6x6 grid of blocks. Each block is a 6x6 grid of half-words.

1. Look at the "FIRST 3" table.

Choose a random block by rolling the die for the row, then rolling the die for the column. Example: rolling 1 and then 2 leads to row 1 and column 2: the block with 'abo' and 'cal'.

2. Look at that block.

Roll the die twice more to choose a random half-word from that block, in the same way. Example: rolling 3 and then 4 leads to row 3 and column 4: the half-word 'ape'.

3. Look at the "LAST 3" table.

Repeat the same steps, rolling four more times to choose a random half-word from the table. Example: rolling 6, 1, 2, 4 leads to the half-word 'tol'.

4. Put these half-words together to make a word.

Example: 'apetol'

If the word isn't good (like 'oatnto'), you can throw out that word and start again.

5. Repeat steps 1-4 to make as many words as you want.

Example: rolling 5 5 5 2 4 3 1 3 creates 'shults', and 5 2 1 1 1 5 4 1 creates 'phabid'.

6. Connect the words together to make a password.

Example: capitalize and put periods between them: Apetol.Shults.Phabid or just put them together: apetolshultsphabid

How many words for a strong password?

Three words (Example: apetol.shults.phabid) is a reasonably strong password for most applications. Four words (Example: apetol.shults.phabid.feaser) is a very strong password for any application. More than that is probably more than necessary for any practical application.

(If you want precise numbers: each 6-letter word contributes 20 bits of entropy. So three words is a 60-bit password, which is considered moderately strong, and four words is an 80-bit password, which is considered very strong. Five words is a 100-bit password, which is extremely strong, and probably unnecessary for most uses. A page explaining the details, and explaining "bits of entropy," is coming soon.)

An automatic digital version of Quence, and related files, are available at github.com/krysdam/quence

spu squ sta ste sti sto tap tar tas tau tax tay tok tol tom ton too top unm unn unp unr uns unt vib vic vid vie vig vil wes wet wha whe whi who	pen peo pep per pes pet pou pov pow pra pre pri reb rec red ree ref reg rol rom roo ros rot rou sci sco scr scu sea sec six siz ske ski sky sla	lay lea lec led lee lef lor los lot lou lov low mel mem men mer mes met nai nam nan nap nar nas nuc num nur nut oak oat org ori orn ort osc ost	fiv fix fla fle fli flo gaz gea gen geo ger ges gun guy hab had hai hal hoo hop hor hos hot hou int inv ion iow ira ire jun jur jus kan kar kat	cla cle cli clo clu coa cyc cyl dad dai dal dam din dio dip dir dis div dut dwe dyn eac eag ear enf eng enh enj enl eno eye fab fac fai fal fam	aba abb abd abe abi abl agg agi ago agr ahe aid ang ani ann ano ans ant aug aus aut ava ave avi bia bib bid big bil bin bud buf bui bul bun bur
str stu sty sub suc sud tea tec tee tel tem ten tor tot tou tow tox tra unu unw upo upp ups upw vin vio vir vis vit viv why wic wid wif wil win	pha phe phi pho phr phy pro pru psy pub pul pum reh rei rej rel rem ren row roy rub rud rui rul sed see seg sei sel sem sle sli slo slu sma sme	leg lei len leo les let loy luc lum lun lut lyi mex mic mid mig mil min nat nav nea nec nee neg obe obj obl obs obt obv oth ott oug our out ove	flu fly foc fol fon foo get gif gil gir giv gla ham han hap har has hat how hug hum hun hur hus iri iro irr isa isl iso kee kel ken kep ker key	coc cod coe cof cog coh dan dar das dat dau dav doc doe dog doi dol dom eas eat ech eco edg edi enr ens ent env enz epi fan far fas fat fau fav	abo abr abs abu aca acc aim air ala alb alc ale anx any apa ape apo app avo awa axi bab bac bad bio bir bis bit bla ble bus but buy cab cad cal
suf sug sui sul sum sun ter tes tex tha the thi tre tri tro tru try tub urb urg uri usa use usi voc voi vol von vot vul wir wis wit wol wom won	pia pic pie pig pil pin pun pup pur pus put pyr reo rep req res ret rev rum run rur rus rut sab sen sep seq ser ses set smi smo sna sno soa soc	lev lew lia lib lic lie lym mac mad mag mah mai mir mix mob mod nei nel neo ner nes net occ oce oct odd off oft owe owi own oxf oxi oxy	for fos fou fra fre fri gle gli glo glu goa god hau hav haw hay haz hea hyd hyp ice ide ign ill isr iss ita ite its jac kid kil kin kis kit kne	coi col com con coo cop day dea deb dec ded dee don doo dor dos dot dou edu edw eff egg egy eig equ era ere eri ero err fax fea feb fed fee fel	ace ach aci ack acq acr alf alg ali alk all alm apr aqu ara arb arc are bag bai bak bal ban bap bli blo blu boa bob bod cam can cap car cas cat
sup sur sus swa swe swi tho thr thu thy tic tid tum tun tur twe twi two usu uti utt vac val van wag wai wak wal wan war woo wor wou wra wre wri	pio pip pis pit pla ple qua que qui quo rab rac rew rhe rho rhy rib ric sac sad saf sag sai sak sev sew sha she shi sho sod sof soi sol som son	lif lig lik lil lim lin maj mak mal mam man map moi mol mom mon moo mor neu nev new nex nic nin ohi oil old oli omi onc pac pad pag pai pal pan	fro fru fue ful fun fur goe goi gol gon goo gor hei hel hem hen her hes ima imm imp ina inc ind jam jan jea jef jen jer kni kno kon kor lab lac	cor cos cot cou cov cow def deg del dem den dep dow doz dra dre dri dro eit ela eld ele eli ell esc esp ess est ete eth fem fen fer fes fet fev	act acu ada add ade adh alo alp alr als alt alu arg ari arm aro arr art bar bas bat bay bea bec boi bol bom bon boo bor cau cav cea cel cem cen
swo sym syn syr sys tab tie tig til tim tin tip typ ult una unb unc und var vas vec veg veh vei was wat wav way wea web wro yar yea yel yes yet	plo plu poc poe poi pol rad rag rai ral ram ran rid rig rin rip ris rit sal sam san sar sat sau shr shu sic sid sie sig soo sop sor sou sov spa	lip liq lis lit liv loa mar mas mat mau max may mos mot mou mov muc mul nit nob nod noi nom non one onl ont ope opi opp pap par pas pat pau pav	fus fut gai gal gam gan gos got gov gra gre gri het hid hig hil him hin ine inf ing inh ini inj jes jim job joh joi jon lad lag lai lak lam lan	cra cre cri cro cru cry der des det dev dia dic dru dry dub duc due duk elo els ema emb eme emi eur eva eve evi evo exa few fib fic fid fie fif	adj adm ado adu adv aer alw ama amb ame ami amm asc ash asi ask asp ast bed bee bef beg beh bei bos bot bou bow box boy cer cha che chi chl cho
tac tai tak tal tam tan tir tis tit tob tod tog une unf unh uni unk unl vel ven ver ves vet via wed wee wei wel wen wer yie yor you zea zer zon	pon poo pop por pos pot rap rar rat raw ray rea riv roa rob roc rod rog sav saw say sca sce sch sil sim sin sir sis sit spe sph spi spl spo spr	lob loc lod log lon loo mcc mcg mea mec med mee mun mur mus mut mys myt nor nos not nou nov now opt ora orb orc ord ore pay pea pec ped pee pel	gap gar gas gat gau gav gro gru gua gue gui gul hir his hit hol hom hon inl inn ino inp inq ins jos jou joy jud jul jum lap lar las lat lau law	cub cul cup cur cus cut did die dif dig dil dim dul dum dun dup dur dus emo emp ena enc end ene exc exe exh exi exp ext fig fil fin fir fis fit	aff afo afr aft aga age amo amp ana anc and ane ath atl atm ato att aud bel ben ber bes bet bey bra bre bri bro bru buc chr chu cin cir cit civ

gun tis nus sfy ריון ПВJ pet ona 0em nct men باەر ife get fan erd ein eap ÇKY Mod abs alf spn гst hty xed MPL SMP lor lea jan des dex Гар vet 팃 udy Lim pha ond oes ncy jet iff hay ggs еге eir box aya 카 ali xes SUS гsу Sou meг led SOL hua far еаг aby Sol / ace ach ack . l alk all alm . vey via Sun ued tly rin rio phs ota one not nda mes Ju ghs fat eit eks ela dge dia dic xic xis she гtа rar ras rat ift erg eri erk eas eat eau СОР ays tah oet off jίm hea boy bra lot iot ipe nde unt met uel tol tal rte shi ote ong MOU Mol job ify hed ght gia fax Col aze arm leg hus hut hyl phy pia ۷۲ sia ۲į oth oni ofs nry ndi mia ige hee fed COM Ьге XON Jon uer tom joe jps azy tan гth lel loy χţ igh gic eld ebt ۷id Гis MBJ pic SUO nse obn Mic ipt hel eгm bad агр alo sdn ton sic Гto oto oft lem fee did CON bts act ues tar цþ jor mid gid bag als ont nst sbn iac xts vie vil vin upt upy uet uff too tas sie гts ίt ray rbs rby rce pid pig pil pin ots ott oud ogs ogy ohn Sd hem fer ern ero ers ele elf eli ell elm eby ece ech eck ect die din dio dis dit MOO bus but buy cal can arr ars art acy ada joy ign igs ike len ira ird ire nta min ony lгy kay bal alt aly xty yal yan гtу гix гke gie gin gle few top tat Sil ndy nea leo iah ial hen сох сге сго BJN mis uge tor xet รนา гtz pood nte lse ked her ffs ban add ler vis ΓKS ila , Lam ama Juo oic oof nth ned mit irl irm fic ert ery bar ary ade ugh tos tay Sir ГUе hes lsh les .; oid kel gly ٧įt гch pit ۳i× asa ybe uгe sis Гl OUN nti nee het ian ild fig сгу bat ame sgn tra tch гug lso let ado mly ۷įz υid ГСУ ple dno باره esa elp eda cap urg tre гls 001 nto nel ile iar gma χί bay ase yce tcy ПП lst fin cta sit ken hew ami ads lew рlу gne els yde ٧on בי. u: xıs rds ەزە nts nen MMa ίļ ese ede dle cts Car bby ash amp tro ΓU гlу 00M irs sei hey fit ady tea lta keΓ lex esh บเร hia gns ASP yed ۲٥۲ ПLЛ Ska SNJ гdу pon por nty ner ۲۲ ΊΙ iat fix elt ely dly dog dom don edo eds edy eed cas ted ГMЭ oir ois oit mme lth ley bec ams ael try ous out ova oon oop oor Say cue cum cup god nes esk nue יָרַע wal wan war ULS uit SKZ. ket įlm ibe fle cat cay MSB afe yee tta tee ГVе геа геd mmy lts <del>ી</del>માં hic hie bed amy rms rmy yer urt SKS pot net 듯 tte tel sad NUM MNS lia key isa ils ica gon fly ess ema bee dse ana aff lty sal yes uгу ula ГПe Гее ррi ove 00t ok e Snu new MOM duJ lic 전 e isc ilt ice him gor est eme CUL CCa and tti tem sky for bel SSE aft yet SPM esn tto геf рру esy plu sle Mes ГNS PMO ope 앙 nut ney MON lid 선 ise ily hin gos emi eef dor Sno ast ane ten lue 000 ben age ίch fox ush ule got ang yle sly ues БJd pwo ola nga fth eta eek asy tts sdo ПОГ 것 <del>إ</del>رك emn ber ago way web tep rnt rod reg rel rem ren nyl nza Jum lie ish isk ism iss , Tma hio hip Sop cut dad ced cel cer ces ete SSN owe opt plo K]e gro Mop ata ani yme ulf tty SMa JPS рго nge MOS SnJ lim qшp ico fts ems eel eem een eep bes ags ter tue his yne wed ust tes pse lin kly ics ank uli opy ora ord mph gry gst gth fty dox dra dro aho aic SMS Ses roe rol rom swo uwo lwo ole olf oli nze oad ngo ngs lux lve ime ims eth eto ets emy ena dae dal dam bet bey ate ath psy pth 닞 mps ful wel lio kyo yon yor usy tum Sol sat hit hly ann tex tha ict icy , гег che wen ute ist ina end JJu tur SOM Mes ) ABO nia mpt lip lab fun bia ano aid lyn սխ mud you wer uth tus the SON say ГOП Гes pts oxy оге 양 oal nic mac lad ita יחכ ida hms gue fur ett ene еег dry dan chi bίc ato SUP aii lis wes uto pty nie gal eng pid ype two SOL sch Гор гet oyd MUM mad lit ite ind ide hod ees dar ant uls ult thm ori ork orm oll olm oln olo ols oam oan oat lae ety eum eur ail aim gun gus guy dst dth due cho chs cht uts ual uan геv геw pub pur oys pal MUS ith ito eet eff das day big bin att ypt yst yte wet who SCO ror ros nin nio mal КS gan gap enn ens tho ths ess lag ine ing ids hoe any ape uty nah aty uly sea man lla idy ીળ ain SSe lah had ent efs dum chy aud MUN uba геу pan obe its יויי ied gar eus spp bis BMD ssy Гot OLU OLO nis nit nks nal map hom aph air why win thy Sec pus put que lle lam yth eny eft 붓 cia uys dmu ube tia sta sed MO гge раг obs nam mar lli lan itt ief hon hai gas eva snp ddy bit Jue app ais Nis ead ָ ייחח Гоу cid zed val ume sdn tic ste see rgh pat οгр olt och ueu Mas اله lap ity iel hop gay eve eof ege dea Ыlе sne aps ait hal wit Nev ΠMI ubt sto sel SJO oly nly Jeu itz יווס ged evy eon egg ded cil blу apt aka zen гgо гаЬ pay mat เปร hor ham eaf aux tie ien гps Jar wly SPA dwn sts ort oma oda Buu Jun' rus han gee eph cin ЬОЬ apy uce til sen БJJ гду ped nas XPW ier hot ews ego eah del eve ake zer гad lly las eak wns won wth SMD uch огу omb nne รทา ext eps egs dem cis ara ved sty Гia bbo nat int ies hap gel Jod ave aks zes ser ГГе pel lat non tim tin may mbs Swl rag rah ral eye - uck bon dus رزر ۲۷a MOU har gen egy eal den cit ala ۷el Bun ses ГГУ pen eso nny Me יווע ept avy arc zil zle ome ode nay log iet Cke ven Lid hth has eid eam bnu tio sue Jon ieu ger eГа рог ard ald ГSе рег med ive ize jod deo BWB uct ude set ose SMO spo nce lon lay eys eze Sex Ver une tip MUS sey гsh Гiе Гam ody non nch lop Spl ion iew hts hat ges S bot ZON pes osh оту mel ean der