

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Desktop$ pwd  
/home/user_ac/Desktop  
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Desktop$ cd ../Downloads/  
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ls  
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ vi notes.txt
```

Have a nice day

Have a nice day

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(END)

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Desktop$ pwd  
/home/user_ac/Desktop  
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Desktop$ cd ../Downloads/  
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ls  
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ vi notes.txt  
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ less notes.txt  
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ █
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Desktop$ pwd  
/home/user_ac/Desktop  
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Desktop$ cd ../Downloads/  
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ls  
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ vi notes.txt  
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ less notes.txt  
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ head notes.txt  
Have a nice day  
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ wc -l notes.txt  
1 notes.txt  
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ wc -m notes.txt  
16 notes.txt  
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ █
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ tail -n4 sequence1.fasta
LYNTMVISQPAAGSMVQIPSSMPQNSTQSAAVTTFTQDRQIRFSQGQQQLVTKLVTAPVAC
GAVMVPSTMLMGQVVTAYPTFATQQQQSQTLSVTQQQQQQSSQEQQQLTSVQQPSQAQLTQ
PPQQFLQTSLRLLHGNPSTQLILSAAFPLQQSTFPQSHHQHQSQQQQQLSRHRTDSLPDP
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ tail -n4 sequence5.fasta
DELKHLILRAADGFLVVGCDRGKILFVSEVFKILNYSQNDLIGQSLFDYLHPKDIAKVKEQLSSSSRLC
SGARRSFFCRMKCNRPRKSFTIHSTGYLKSNLSCLVAIGRLHSHVVPQPVNGEIRVKSMEYVSRAIDG
KFVFVDQRATAILAYLPQELLGTSCYEYFHQDDIGHLAECHRQLQTREKITTCYKFKIKDGSFITLRS
RWFSFMNPWTKEVEYIVSTNTVVLuser_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ tail -n4 sequence1.fasta
LYNTMVISQPAAGSMVQIPSSMPQNSTQSAAVTFTQDRQIRFSQQGQLVTKLVTAPVAC
GAVMVPSTMMLMGQVVTAYPTFATQQQSQTLSVTQQQQQQSSQEQQLTSVQQPSQAQLTQ
PPQQFLQTSRLLHGNPSTQLLILSAAFFPLQQSTFPQSHHQQHQSQQQQQLSRHRTDSLDPD
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ tail -n4 sequence5.fasta
DELKHLILRAADGFLFVVGCDRGKILFVSESVFKILNYSQNLDLIGQSLFDYLHPKDIAKVKEQLSSRLC
SGARRSFFCRMKCNRPRKSFCIHSYGKLNLSCLVAIGRLHSHVVPQPVNGEIRVKSMEYVSRAIDG
KFVFVDQRATAILAYLPQELLGTSCYEYFHQDDIGHLAECHRQLQTREKITTCYKFKIKDGDSFITLRS
RWFSFMNPWTKEVEYIVSTNTVVLuser_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep '^>' sequence5.fasta
>ahr
>clock
>hif1a
>hif2a
>hif3a
>npas1
>npas2
>npas3
>npas4
>sim1
>sim2
>arnt1
>bmal1
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ tail -n4 sequence1.fasta
LYNTMVISQPAAGSMVQIPSSMPQNSTQSAAVTFTQDRQIRFSQGQQQLVTKLVTAPVAC
GAVMVPSMLMGQVVTAYPTFATQQQSQTLSVTQQQQQQSSQEQLTSVQQPSQAQLTQ
PPQQFLQTSRLLHGNPSTQLILSAAFPLQQSTFPQSHHQHQSQQQQLSRHRTDSLDPD
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ tail -n4 sequence5.fasta
DELKHILRAADGFLVVGCDRGKILFVSESVFKILNYSQNDLTQSLFDYLHPKDIAKVKEQLSSRLC
SGARRSFFCRMKCNRPRKSFTIHTGYLKSNLSCLVAIGRLHSVVPQPVNGEIRVKSMVEYVSRAIDG
KFVFDQRATAILAYLPQELLGTSCYEYFHQDDIGHLAECHRQLQTREKITTCYKFKIKDGFSITLRS
RWFSFMNPWTKEVEYIVSTNTVVLuser_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep '^>' sequence5.fasta
>ahr
>clock
>hif1a
>hif2a
>hif3a
>npas1
>npas2
>npas3
>npas4
>sim1
>sim2
>arnt1
>bmal1
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep -o 'A.G' sequence5.fasta
AKG
ARG
AAG
AGG
AEG
ALG
AAG
APG
ASG
ALG
ALG
AGG
AEG
AEG
AQG
AWG
AVG
AWG
AVG
ADG
AIG
ADG
AIG
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ tail -n4 sequence1.fasta
LYNTMVISQPAAGSMVQIPSSMPQNSTQSAAVTTFQDRQIRFSQQGQQQLVTKLVTAPVAC
GAVMVPSLMLGQQVVTAYPTFATQQQQSQTLSVTQQQQQQSSQEQQLTSVQQPSQAQLTQ
PPQQFLQTTSRLLHGNPSTQLILSAFPPLQQSTFPQSHHQQHQSQQQQQSLSRHRTDSLPDP
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ tail -n4 sequence5.fasta
DELKHILRAADGFLVVGCDRGKILFVSESVFKILNYSQNDLIGQSLFDYLHPKDIAKVKEQLSSRLC
SGARRSFFCRMKCNPRKSFCIYSTGYLKSNLSCLVAIGRLHSVVPQPVNGEIRVKSMYEYVSRAIDG
KFVFDVQRATAILAYLPQELLGTSCYEYFHQDDIGHLAECHRQLTREKITTCYKFKIKDGSFITLRS
RWFSSFMNPWTKEVEYIVSTNTVVLuser_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep '^>' sequence5.fasta
>ahr
>clock
>hif1a
>hif2a
>hif3a
>npas1
>npas2
>npas3
>npas4
>sim1
>sim2
>arnt1
>bmal1
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep -o 'A.G' sequence5.fasta
AKG
ARG
AAG
AGG
AEG
ALG
AAG
APG
ASG
ALG
ALG
AGG
AEG
AEG
AQG
AWG
AVG
AWG
AVG
ADG
AIG
ADG
AIG
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep -o 'P[^A]L' sequence5.fasta
PQL
PLL
PPL
PPL
PLL
PVL
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep -o 'A.G' sequence5.fasta
AKG
ARG
AAG
AGG
AEG
ALG
AAG
APG
ASG
ALG
ALG
AGG
AEG
AGG
AEG
AQG
AWG
AVG
AWG
AVG
ADG
AIG
ADG
AIG
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep -o 'P[^A]L' sequence5.fasta
PQL
PLL
PPL
PPL
PLL
PVL
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep 'VV' sequence5.fasta
AANFREGNLQEgefllQALNGFVLVVTTDALVFYASSTIqdylgfqqsdviHQSVYELIHTEDRAEFQR
IWLQTHYYITYHQWNSRPEFIVCTHTVVSYAEVRAE
TVIYNTKNSQPQCIVCVNYVVSGIIQHDL
QMDNLYLKALEGFIAVVTQDGDMIFLSENISKFMGLTQVELTGHHSIFDFTHPCDHEEIRENLSSTERdff
KFTYCDDRITELIGYHPELLGRSAYEFYHALDSENMTKSHQNLCTKGQVVSGQYRMLAKHGGYVWLETQ
DRIAEVAGYSPDLDLIGCSAYEYIHALDSAVSKSIHTLLSKGQAVTGQYRFLARSGGYLWTQTQATVVSG
QTHYYITYHQWNSKPEFIVCTHSVVSYADVRVE
DVYHPGDHVEMAEQLGMLTLERSFFIRMKSTLTKGVHIKSSGYKVIHITGRLRLRMGLVVVAHALPPPTI
ISESVLIYLGFERSELLCKSWYGLHPEDLAHASAqHYRLLAESGDIQAEMVVRLQAKTGGWAIYCLLY
EKSKNAARTRREKENSEFYELAKLLPLPSAITSQLDKASIIRLTTSYLKMRRVVFPEGLGEAWGHSSRTSP
LDNVGRELGSLLLQTLDFGIFVVAPDGKIMYISETASVHLGLSQVELTGNSIYEYIHPADHDEMTAVLTA
LDGVAKELGSLLLQTLDFGVFVVASDGKIMYISETASVHLGLSQVELTGNSIYEYIHPSDHDEMTAVLTA
SYATVVHNSRSSHRCIVSVNYVLTEIEYKEL
ELKHЛИEAADGFLFIVSCETGRVVYVSDSVTPVLNQPQSEWFGSTLYDQVHPDDVDKLREQLSTSRCM
GSRRSFICRMRCGSSEPHFVVVHCTGYIKAKFCVLAIGRLQVTSSPNCTDMSNVCQPTEFISRHNIEGIF
TFVDHRCVATVGYQPQELLGKNIVEFCHPEDQQQLLRDSFQQVVKLKGQVLSVMFRFRSKNQEWLWMRTSS
DELKHLILRAADGFLFVVGCDRGKILFVSESVFKILNYSQNDLIGQSLFDYLPKDIAKVKEQLSSSRIC
SGARRSFFCRMKCNRPRKSFTIHSTGYLKSNLSCLVAIGRLSHVVPPQPVNGEIRVKSMEYVSRHAIDG
RWFSDMNPWTKEVEYIVSTNTVV
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep -o 'P[^A]L' sequence5.fasta
```

PQL

PLL

PPL

PLL

PVL

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep 'VV' sequence5.fasta
```

AANFREGNLQEGEFLQALNGFVLVVTTDALVFYASSTIQQDYLGFQQSDVIHQSVYELIHTEDRAEFQR

IWLQTHYYITYHQWNSRPEFIVCTHTVVSYAEVRAE

TVIYNTKNSQPQCIVCVNYVVSGIIQHDL

QMDNLYLKALEGFIAVVTQDGDMIFLSENISKFMGLTQVELGHSIFDFTHPCDHEEIRENLSSTERDFF

KFTYCDDRITEIGYHPEELLGRSAYEFYHALDSENMTKSHQNLCKGQVVSGQYRMLAKHGGYWLETQ

DRIAEVAGYSPDDLIGCSAYEYIHADSDAVSKIHTLLSKGQAVTGQYRFLARSGGYLWTQTQATVSG

QTHYYITYHQWNSKPEFIVCTHSVVSYADVRVE

DYVHPGDHVEMAEQLGMLTERSFFIRMKSTLTKGKVHKSSGYKVIHITGRLRLRMGLVVVAHALPPPTI

ISESVLIYLGFERSELLCKSWYGLLHPEDLAHASAQHYRLLAESGDIQAEMVVRLOAKTGGWAWIYCLLY

EKSKNAARTRREKENSEFYELAKLLPLPSAITSQLDKASIIRLTTSYLKMRVVFPEGLGAEAWGHSSRTSP

LDNVGRELGSHLLQTLDGFIFVVAPDGKIMYISETASVHLGLSQVELTGNSIYEYIHPADHDEMTAVLTA

LDGVAKELGSHLLQTLDGFVFVVASDGKIMYISETASVHLGLSQVELTGNSIYEYIHPSDHDEMTAVLTA

SYATVVHNSRSSHRCIVSVNYVLTEIEYKEL

ELKHLILEADGFLFIVSCETGRVVYVSDSVTPVLNPQSEWFGSTLYDQVHPDDVDKLREQLSTSRMCM

GSRRSFICRMRCGSSEPHFVVVHCTGYIKAKFCVLVAIGRLQVTSSPNCTMSNVQCPTEFISRHNIEGIF

TFVDHRCVATVGYPQELLGKNIVEFCHPEDQQLLRDSFQQVVKLKGQVL SVMFRFRSKNQEWLWMRTSS

DELKHLILRAADGFLFVVGCDRGKILFVSESFKILNYSQNDLIGQSLFDYLHPKDIAKVKEQLSSSSRLC

SGARRSFFCRMKCNRPRKSFTIHSTGYLKSNLSCLVIAIGRLSHVVVPQPVNGEIRVKSMEYVSRHAIDG

RWFSFMNPWTKEVEYIVSTNTVVL

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep -E 'AA|DD' sequence5.fasta
```

AANFREGNLQEGEFLQALNGFVLVVTTDALVFYASSTIQQDYLGFQQSDVIHQSVYELIHTEDRAEFQR

IFRTKHKLDFTPIGCDAKGRIVLGYTEAELCTRSGYQFIHAAADMLYCAESHIRMIKTGESGMIVFRLLT

RHSLEWKFLFLDHRAPPIIGYLPFEVLGTSGYDYYHVDDLENLAKCHEHLMQYGKGKSCYYRFLTKGQQW

KEKSRDAAARSRRSKESEVFYELAHLQLPLPHNVSSHLDKASVMRLTISYLRVRKLLDAGLDIEDDMKAQM

NCFYKALDGFVMVLTDDGDMIYISDNVNKYMGLTQFELTGHHSVFDTHPCDHEEMREMLTHNTQRSFFL

KEKSRDAAACRCCRSKETEVFYELAHELPLPHSVSSHLDKASIMRLAISFLRTHKLLSSVCSENESEAEADQ

KFTYCDDRITEIGYHPEELLGRSAYEFYHALDSENMTKSHQNLCKGQVVSQYRMLAKHGGYWLETQ

DAARSRRSQETEVLYQLAHTLPFARGVSAHLKASIMRLTISYLRMHRLCAAGEWNQVGAGGEPLDACYL

LTSRGRTLNKAATWKVLNCNSGHMRAYEPPLQLCLV LICEAIPHPGSLEPPLGRGAFLSRHSLDMKFTYCD

DRIAEVAGYSPDDLIGCSAYEYIHADSDAVSKIHTLLSKGQAVTGQYRFLARSGGYLWTQTQATVSG

KEKSRNAAARSRRGKENLEFFELAKLLPLPGAIISSQLDKASIVRLSVTYLRLRRFAALGAPPWGLRAAGPP

AGLAPGRRGPAAALVSEVFQHLLGGHILQLSDGFVFALNQEGKFLYISETVSIYGLSQVEMTGSSVFDYI

LEWKFLFLDHRAPPIIGYLPFEVLGTSGYDYYHIDDELLARCHQHLMQFGKGKSCCYRFLTKGQQWIWL

SRDAAAARSRRGKENFEFYELAKLLPLPAITSQLDKASIIRLTLTISYLMRDFANQGDPPWNLRMEGPPPNT

IVAAALPGFLVLFVTAEGKLLYLSESVSEHLGHSMVDLVAQGDSIYDIIDPADHLLTVRQQQLTLTDRLFRCRF

EKSKNAARTRREKENSEFYELAKLLPLPSAITSQLDKASIIRLTTSYLKMRVVFPEGLGAEAWGHSSRTSP

EKSKNAAKTRREKENGEFYELAKLLPLPSAITSQLDKASIIRLTTSYLKMRAVFPEGLGDAWGQPSRAGP

ELKHLILEAADGFLFIVSCETGRVYVSDSVTPVLNPQSEWFGSTLYDQVHPDDVDKLREQLSTSRMCM

DELKHLILRAADGFLFVVGCDRGKILFVSESFKILNYSQNDLIGQSLFDYLHPKDIAKVKEQLSSSSRLC

KFVFVDQRATAILAYLPQELLGTSCYEYFHQDDIGHLAECHRQLQTREKITTCYKFKIKDGSFITLRS

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user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ █
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep -v '^>' sequence5.fasta | grep 'P'  
SNPSKRHRDRNLTELDRLASLLPFQDVKNLKSLVRLSLSVYLRAKSFFDVALKSSPTERNGQDNCR  
QLHWQIPPENSPLMERCFCIRLRCILDNSSGFLAMNFQGKLKYLPQQLALFAIATPLQPPSILEIRTKNF  
IFRTKHKLDFTPIGCDAKRIVLGYTEAELCTRSGYQFIHAADMILYCAESHIRMIKGESGMIVFRLLT  
KNNRWTWQSNDARLLYKNGRPDYIIVTQRPLTDEEGTEHLR  
VSRNKSEKKRRDQFNVLILKEGLSMLPGNARKMDKSTVLQKSIDFLRKHKEITAQSDASEIRQDWKPTFLS  
NEEFTQLMLEALDGFFLAIMTDGSIIYVSESVTSLEHLPSDLVDQSISFNFIPEGEHSEVYKILSTEYLK  
SKNQLEFCCHMLRGTDPKEPSTYEYVKFIGNFKSLYEDRVCVFATVRLATPQFIKEMCTVEEPNEEFTS  
RHSLEWKFLFLDHRAPIIGYLPPFEVLGTSGYDYYHVVDDLENLAKCHEHLMQYGKGKSCYYRFLTKGQQW  
IWLQTHYYITYHQWNNSRPFIVCCTHTVVSAYEVRAE  
KEKSRAARSRRRSKESEVFYELAHQLPLPHNVSSHLDKASVMRLTISYLRVRKLLDAGDLDIEDDMKAQM  
NCFYLKALDGFVMMVLTDDGDMIYISDNVNKYMGLTQFELTGHSVFDFTHPCDHEEMREMLTHNTQRSFFL  
RMKCTLTSRGRTMNIKSATWKVLHCTGHIVYKPPMTCLVLICEPIPHPSNIEIPLDSTKFLSRHSLDMK  
FSYCDERITELMGYEPEELLGRSIYEEYHALDSHDLTKTHHDMLFTKGQVTGQYRMLAKRGGYVVETQA  
TVIYNTKNSQPQCIVCVNYVSGIIQHDL  
KEKSRAARCRRSKETEVYELAHPLPHSVSSHLDKASIMRLAISFLRTHKLLSSVCSENESEAEADQ  
QMDNLYLKALEGFIAVVTDQGDMIFLSENISKFMGLTQVELTGHISIFDFTHPCDHEEIRENLSSTERDF  
MRMKCTVNRGRTVNLKSATWKVLHCTGQVVKVYEPILLSCLIMCEPIQHPSHMDIPLDSTKFLSRHSLDM  
KFTYCCDRITELIGYHPEELLGRSAFYHALDSENMTKSHQNLCRKQVVSQYRMLAKHGGYVWLETQ  
GTVIYNPRNLQPQCIMCVNYVSEIEKNDV  
DAARSRRSQETEVLYQLAHTLPFARGVSAHLDKASIMRLTISYLRMHRLCAAGEWNQVGAGGEPLDACYL  
KALEGFVMLTAEGDMAYLSENVSKHLGLSQUELIGHISIFDFTHPCDHEEIRENLSSTERDF  
LTSRGRTLNKAAATWKVLNCNSGHMRAYEPLLQCLVLICEAIPIHGSLEPPPLGREGAFLSRHSLDMKFTYCD  
DRIAEVAGYSRDDLGCSAYEYIHALDSDAVSKSIHTLLSKQQAVTGQYRFLARSGGYLWTQTQATVSG  
GRGPQSESIVCVHFLTISQVEETGV  
KEKSRAARSRRGKENLEFFELAKLPLPQAISSQLDKASIIVRLSVTYLRLRRAALGAPPWGLRAAGPP  
AGLAAPGRRGPAALVSEVFEQHLLGGHIQLQSLDGFVFALNQEGKFLYISETVSIYGLSQVEMTGSSVFDYI  
HPGDHSEVLEQLGLVQERSFFVRMKSTLTKRGHLHVKAISGYKVIHVTGRLRALGLVALGHTLPPAPLAEP  
LHGHMIVFRLSLGLTLIACESRVSVDHMDLGPSLEVGRSCYQFVHQDATTRIRQSHVDLLDKQVMTGYYR  
WLQRAGGFVWLQSVATVAGSGKSPGEHHVWLWVSHVLSQAEGGQT  
NKSEKKRRDQFNVLIKELSSMLPGNTRKMDKTTVLEKVGFLQKHNEVAQTEICDIQQDWKPSFLSNEE  
FTQLMLEALDGFIIAVTTDGSITPPLLGHLPSDVMDQNLNNFLPEQEHEVYKILSSEYLKSDS  
DLEYFCHLLRGSLNPKEFFTYEYIKFGVNRFSYLGKEVCFIATVRLATPQFLKEMCIVDEPLEEFTSRHS  
LEWKFLFLDHRAPIIGYLPPFEVLGTSGYDYYHIDDELLARCHQHLMQFGKGKSCCYRFLTKGQQWIWL  
QTHYYITYHQWNNSRPFIVCCTHSVSYADVRVE  
SRDAARSRRGKENFEFYELAKLPLPAAITSQLDKASIIRLTLTISYKMRDFANQGDPPWNLRMEGPPPNT  
SVKVIGAQRRRSPSALAIEFEAHLGSHILQSLDGFVFALNQEGKFLYISETVSIYGLSQVETGSSVF  
DYVHPGDHVEMAEQLGMTLERSFFIRMKSTLTKRGHVHICKSSGYKVIHITGRLRLRMGLVVAHALPPPTI  
NEVRIDCHMFVTRVNMDLNIIYCENRISDYMDMLTPVDIVGKRCYHFIHAEDVEGIRHSHLDLLNKQCVT  
KYYRWMQKNGGYIWIQSSATIAINAKANANEKNIIVWNYLLSNPEYKDT  
GASKARRDQINAIEIRNLKELLPLAEDKVRSLSYLHIMSACIYTRKGVFFAGGTPLAGPTGLLSAQELED  
IVAALPGFLLVFTAEGKLLYLSESVSEHLGHSMVDLVAQGDSIYDIIDPDADHLTVRQQLTLDRLFRCRF  
NTSKSLRRQSAGNKVLIRGRFHANPVFTAFCAPLEPRPRPGPGPGASLFLAMFQSRHAKDLALLD  
ISESVIYLGFERSELLCKSWYGLHPEDLAHASAQHYRLLAESGDIQAEMVRLQAKTGGWAWIYCLLY  
SEGEGPITANNYPISDMEAWSLRQQL  
EKSNAARTRREKENSEFYELAKLPLPSAITSQLDKASIIRLTTSYLKMRVFPEGLGEAWGHSSRTSP  
LDNVGRELGSHLLQTLDFIFVWAPDGKIMYISETASVHLLGSQVELTGNSIYEYIHPADHDEMTAVLTA  
EIERSFFLRMKCVLAKRNAGLTCGYKVIHCGYLKIRIVGLVAVGQSLPPSAITEIKLYSNMFMRASL  
DMKLIFLDSRVATEVTGYEPQDLIEKTLYHHVHGCDTFLRCAHLLLVKQVTTKYYRFLAKHGGVWVQ  
SYATIVHNSRSSRPHCIVSVNYVLTDTEYKGL  
EKSNAAKTRREKENSEFYELAKLPLPSAITSQLDKASIIRLTTSYLKMRAVFPEGLGDAWGQPSRAGP  
LDQVAKELGSHLLQTLDFIFVVASDGKIMYISETASVHLLGSQVELTGNSIYEYIHPSDHDEMTAVLTA  
EIERSFFLRMKCVLAKRNAGLTCGYKVIHCGYLKIRIVGLVAVGQSLPPSAITEIKLYSNMFMRASL  
DLKLIFLDSRVATEVTGYEPQDLIEKTLYHHVHGCDTFLRCAHLLLVKQVTTKYYRLLSKRGGWVWQ  
SYATIVHNSRSSRPHCIVSVNYVLTDTEYKGL  
NHSEIERRRRNKMTAYITELSDMVPTCSALARKPDKLTILRMAVSHMKSLRGTGNTSTDGSYKPSFLTDQ  
ELKHLILEAADGFLFIVSCTGRVVYVSDSVTPVLNQPOSEWFGSTLYDQVHPDDVDDKLREQLSTSRMCM  
GSRRSFICRMRCGSSEPHFVVVHCTGYIKAKFCLVAIGRLQVTTSPNCTMSNVQCPTEFISRHNIEGIF  
TFVDHRCVATVGYQPQELLGKNIVEFCHPEDQQLLRDSFQQVVKLKGQVLSVMFRRSKNQEWLWMRTSS  
FTFQNPYSSDEIEYIICTNTNVK  
EAHSQIEKRRRDKMNSFIDELASLVPTCNAMSRKLDKLTVLRMAVQHMKTLRGATNPTYEANYKPTFLSD  
DELKHLILRAADGFLFVGCDRGKILFVSESVKILNSYQNDLIQSLFDYLHPKDIAKVKEQLSSRLC  
SGARRSFFCRMKCNRPKSFCTIHSTGLYKLSNLSCLVAIGRLHSHVVPQPVNGEIRVKSMEVVSRHAIDG  
KFVFDQRATAILALYLPQELLGTSCEYFHQDDIGHLAECRQVLQTREKITTNCYKFKIKDGSFITLR  
RWFSFMNPWTKEVEYIVSTNTVL  
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ seq="sequence5.fasta"
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep -c '^>' "$seq"
13
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ seq="sequence5.fasta"
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep -c '^>' "$seq"
13
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ pattern='G\{2,\}'
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep -v '^>' protein.fasta | grep -E "$pattern"
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep -v '^>' protein.fasta | grep -E "$pattern"
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ seq="sequence5.fasta"
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep -c '^>' "$seq"
13
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ pattern='G\{2,\}'
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep -v '^>' protein.fasta | grep -E "$pattern"
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep -v '^>' protein.fasta | grep -E "$pattern"
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ name="Biocuser_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ export name
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ bash -c 'echo $name'
Biocomputing
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$
```

```
#!/bin/bash

if [ -f sequence3.fasta ]; then
    wc -l sequence3.fasta
else
    echo "Missing file"
fi

~
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ vi sequence3.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ █
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ vi sequence3.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ./sequence3.sh
bash: ./sequence3.sh: Permission denied
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ls -al
total 124
drwxr-xr-x  2 user_ac user_ac  4096 Aug 18 12:32 .
drwxr-x--- 15 user_ac user_ac  4096 Aug 18 11:57 ..
-rw-rw-r--  1 user_ac user_ac   16 Aug 18 11:55 notes.txt
-rw-rw-r--  1 user_ac user_ac  467 Aug 18 12:20 protein.fasta
-rw-rw-r--  1 user_ac user_ac  974 Aug 18 11:47 sequence1.fasta
-rw-rw-r--  1 user_ac user_ac 1710 Aug 18 11:47 sequence2.fasta
-rw-rw-r--  1 user_ac user_ac 1000 Aug 18 11:48 sequence3.fasta
-rw-rw-r--  1 user_ac user_ac  100 Aug 18 12:32 sequence3.sh
-rw-rw-r--  1 user_ac user_ac 2374 Aug 18 11:48 sequence4.fasta
-rw-rw-r--  1 user_ac user_ac 4229 Aug 18 11:48 sequence5.fasta
-rw-rw-r--  1 user_ac user_ac 79551 Aug 18 12:17 sequence.fasta
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ chmod +X sequence3.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ./sequence3.sh
bash: ./sequence3.sh: Permission denied
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ chmod +x sequence3.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ./sequence3.sh
19 sequence3.fasta
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$
```

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```
for file in *.fasta; do
    if [ -f "$file" ]; then
        seq_count=$(grep -c '^>' "$file")
        file_size=$(wc -m < "$file")
        echo "$file: Sequences=$seq_count, Size=${file_size}chars"
    fi
done
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ vi sequence3.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ./sequence3.sh
bash: ./sequence3.sh: Permission denied
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ls -al
total 124
drwxr-xr-x  2 user_ac user_ac  4096 Aug 18 12:32 .
drwxr-x--- 15 user_ac user_ac  4096 Aug 18 11:57 ..
-rw-rw-r--  1 user_ac user_ac    16 Aug 18 11:55 notes.txt
-rw-rw-r--  1 user_ac user_ac   467 Aug 18 12:20 protein.fasta
-rw-rw-r--  1 user_ac user_ac   974 Aug 18 11:47 sequence1.fasta
-rw-rw-r--  1 user_ac user_ac  1710 Aug 18 11:47 sequence2.fasta
-rw-rw-r--  1 user_ac user_ac  1000 Aug 18 11:48 sequence3.fasta
-rw-rw-r--  1 user_ac user_ac    100 Aug 18 12:32 sequence3.sh
-rw-rw-r--  1 user_ac user_ac  2374 Aug 18 11:48 sequence4.fasta
-rw-rw-r--  1 user_ac user_ac  4229 Aug 18 11:48 sequence5.fasta
-rw-rw-r--  1 user_ac user_ac 79551 Aug 18 12:17 sequence.fasta
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ chmod +X sequence3.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ./sequence3.sh
bash: ./sequence3.sh: Permission denied
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ chmod +x sequence3.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ./sequence3.sh
19 sequence3.fasta
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ vi fastafiles.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ █
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ vi sequence3.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ./sequence3.sh
bash: ./sequence3.sh: Permission denied
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ls -al
total 124
drwxr-xr-x  2 user_ac user_ac  4096 Aug 18 12:32 .
drwxr-x--- 15 user_ac user_ac  4096 Aug 18 11:57 ..
-rw-rw-r--  1 user_ac user_ac   16 Aug 18 11:55 notes.txt
-rw-rw-r--  1 user_ac user_ac  467 Aug 18 12:20 protein.fasta
-rw-rw-r--  1 user_ac user_ac  974 Aug 18 11:47 sequence1.fasta
-rw-rw-r--  1 user_ac user_ac 1710 Aug 18 11:47 sequence2.fasta
-rw-rw-r--  1 user_ac user_ac 1000 Aug 18 11:48 sequence3.fasta
-rw-rw-r--  1 user_ac user_ac  100 Aug 18 12:32 sequence3.sh
-rw-rw-r--  1 user_ac user_ac 2374 Aug 18 11:48 sequence4.fasta
-rw-rw-r--  1 user_ac user_ac 4229 Aug 18 11:48 sequence5.fasta
-rw-rw-r--  1 user_ac user_ac 79551 Aug 18 12:17 sequence.fasta
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ chmod +X sequence3.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ./sequence3.sh
bash: ./sequence3.sh: Permission denied
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ chmod +x sequence3.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ./sequence3.sh
19 sequence3.fasta
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ vi fastafiles.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ chmod +x fastafiles.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ./fastafiles.sh
protein.fasta: Sequences=1, Size=467chars
sequence1.fasta: Sequences=1, Size=974chars
sequence2.fasta: Sequences=4, Size=1710chars
sequence3.fasta: Sequences=2, Size=1000chars
sequence4.fasta: Sequences=4, Size=2374chars
sequence5.fasta: Sequences=13, Size=4229chars
sequence.fasta: Sequences=1, Size=79551chars
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ █
```

```
for file in *.fasta; do
  if [ -f "$file" ]; then
    seq_count=$(grep -c '^>' "$file")
    if [ "$seq_count" -gt 3 ]; then
      file_size=$(wc -m < "$file")
      echo "$file: Sequences=$seq_count, Size=${file_size} chars"
    fi
  fi
done
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ vi sequence3.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ./sequence3.sh
bash: ./sequence3.sh: Permission denied
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ls -al
total 124
drwxr-xr-x  2 user_ac user_ac  4096 Aug 18 12:32 .
drwxr-x--- 15 user_ac user_ac  4096 Aug 18 11:57 ..
-rw-rw-r--  1 user_ac user_ac    16 Aug 18 11:55 notes.txt
-rw-rw-r--  1 user_ac user_ac   467 Aug 18 12:20 protein.fasta
-rw-rw-r--  1 user_ac user_ac   974 Aug 18 11:47 sequence1.fasta
-rw-rw-r--  1 user_ac user_ac  1710 Aug 18 11:47 sequence2.fasta
-rw-rw-r--  1 user_ac user_ac  1000 Aug 18 11:48 sequence3.fasta
-rw-rw-r--  1 user_ac user_ac    100 Aug 18 12:32 sequence3.sh
-rw-rw-r--  1 user_ac user_ac  2374 Aug 18 11:48 sequence4.fasta
-rw-rw-r--  1 user_ac user_ac  4229 Aug 18 11:48 sequence5.fasta
-rw-rw-r--  1 user_ac user_ac 79551 Aug 18 12:17 sequence.fasta
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ chmod +X sequence3.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ./sequence3.sh
bash: ./sequence3.sh: Permission denied
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ chmod +x sequence3.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ./sequence3.sh
19 sequence3.fasta
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ vi fastafiles.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ chmod +x fastafiles.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ./fastafiles.sh
protein.fasta: Sequences=1, Size=467chars
sequence1.fasta: Sequences=1, Size=974chars
sequence2.fasta: Sequences=4, Size=1710chars
sequence3.fasta: Sequences=2, Size=1000chars
sequence4.fasta: Sequences=4, Size=2374chars
sequence5.fasta: Sequences=13, Size=4229chars
sequence.fasta: Sequences=1, Size=79551chars
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ vi fastafiles.sh
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ./fastafiles.sh
sequence2.fasta: Sequences=4, Size=1710chars
sequence4.fasta: Sequences=4, Size=2374chars
sequence5.fasta: Sequences=13, Size=4229chars
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep -v '^>' sequence5.fasta | grep -E 'C.*C.*C' | sed '/^$/d' > cys_rich.txt
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ls
cys_rich.txt  protein.fasta  sequence3.fasta  sequence5.fasta
fastafiles.sh  sequence1.fasta  sequence3.sh  sequence.fasta
notes.txt  sequence2.fasta  sequence4.fasta
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ head cys_rich.txt
QLHWQIPPENSPLMERCFCIRLRCLLDNSSGFLAMNFQGKLKYLPQLALFAIATPLQPPSILEIRTKNF
IFRTKHKLDFTPIGCDAKGRIVLGYTEAELCTRGSYQFIHAADMLYCAESHIRMIKTGESGMIVFRLLT
SKNQLEFCCHMLRGTDIDPKEPSTYEYVKFIGNFKSLYEDRVCVATVRLATPQFIKEMCTVEEPNEEFTS
RMKCTLTSRGRTMNIKSATWKVLHCTGHIHVYKPPMTCLVLICEPIPHPSNIEIPLDSKTFLSRHSLDMK
MRMKCTVTNRGRTVNLKSATWKVLHCTGQVKVYEPLLSCLIIMCEPIQHPHMDIPLDSKTFLSRHSMMD
LTSRGRTLNLAATWKVLNCNSGHMRAYEPPLQCLVLICEAIPHGSLEPPLGRGAFLSRHSLDMKFTYCD
DLEFYCHLLRGSLNPKEFPTYEYIKFGVNFRSYLGKEVCFIATVRLATPQFLKEMCIVDEPLEEFTSRHS
LEWKFLFLDHRAPPIIGYLPEVLTGTYDYYHIDDLLELLARCHQHLMQFGKGKSCCYRFLTKGQQWIWL
NEVRIDCHMFVTRVNMDLNIIYCENRISDYMDSLTPVDIVGKRCYHFIHAEDVEGIRHSHLDLLNKGQCVT
EIERSFFLRMKCVLAKRNAGLTCGGYKVIHCSGYLKIRNVGLVAVGHSLPPSAVTEIKLHSNMFMFRASL
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ grep -v '^>' sequence5.fasta | grep -E 'C.*C.*C' | sed '/^$/d' > cys_rich.txt
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ ls
cys_rich.txt  protein.fasta  sequence3.fasta  sequence5.fasta
fastafiles.sh  sequence1.fasta  sequence3.sh  sequence.fasta
notes.txt  sequence2.fasta  sequence4.fasta
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ head cys_rich.txt
QLHWQIPPENSPLMERCFCIRLRCLEDNSSGLAMNFQGKLKYLPQLALFAIATPLQPPSILEIRTKNF
IFRTKHLDFTPIGCDAKGRIVLGYTEAEELCTRGSYQFIHAADMLYCAESHIRMIKTGESGMIVFRLLT
SKNQLEFCCHMLRGTDIDPKEPSTYEYVKFIGNFKSLYEDRVCVATVRLATPQFIKEMCTVEEPNEEFTS
RMKCTLTSRGRTMNIKSATWKVLHCTGHIHVYKPPMTCLVLICEPIPHPSNIEIPLDSKTFLSRHSLDMK
MRMKCTVTNRGRTVNLKSATWKVLHCTGQVKVYEPLLSCLIIMCEPIQHPSHMDIPLDSKTFLSRHSMMD
LTSRGRTLNLKAATWKVLNCGHMRAYEPLLQCLVLICEAIPHGSLEPPLGRGAFLSRHSLDMKFTYCD
DLEYCHLLRGSLNPKEFPTYEYIKFVGFRSYLGKEVCFIATVRLATPQFLKEMCIVDEPLEEFTSRHS
LEWKFLFLDHRAPIIGYLPEVLTSGYDYYHIDDLLELLARCHQHLMQFGKGKSCCYRFLTKGQQWIWL
NEVRIDCHMFVTRVNMDLNIIYCENRISDYMDLTPVDIVGKRCYHFIHAEDVEGIRHSHLDLLNKQCVT
EIERSFFLRMKCVLAKRNAGLTCGGYKVIHCSGYLKIRNVGLVAVGHSLPPSAVTEIKLHSNMFMFRASL
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ cat cys_rich.txt
QLHWQIPPENSPLMERCFCIRLRCLEDNSSGLAMNFQGKLKYLPQLALFAIATPLQPPSILEIRTKNF
IFRTKHLDFTPIGCDAKGRIVLGYTEAEELCTRGSYQFIHAADMLYCAESHIRMIKTGESGMIVFRLLT
SKNQLEFCCHMLRGTDIDPKEPSTYEYVKFIGNFKSLYEDRVCVATVRLATPQFIKEMCTVEEPNEEFTS
RMKCTLTSRGRTMNIKSATWKVLHCTGHIHVYKPPMTCLVLICEPIPHPSNIEIPLDSKTFLSRHSLDMK
MRMKCTVTNRGRTVNLKSATWKVLHCTGQVKVYEPLLSCLIIMCEPIQHPSHMDIPLDSKTFLSRHSMMD
LTSRGRTLNLKAATWKVLNCGHMRAYEPLLQCLVLICEAIPHGSLEPPLGRGAFLSRHSLDMKFTYCD
DLEYCHLLRGSLNPKEFPTYEYIKFVGFRSYLGKEVCFIATVRLATPQFLKEMCIVDEPLEEFTSRHS
LEWKFLFLDHRAPIIGYLPEVLTSGYDYYHIDDLLELLARCHQHLMQFGKGKSCCYRFLTKGQQWIWL
NEVRIDCHMFVTRVNMDLNIIYCENRISDYMDLTPVDIVGKRCYHFIHAEDVEGIRHSHLDLLNKQCVT
EIERSFFLRMKCVLAKRNAGLTCGGYKVIHCSGYLKIRNVGLVAVGHSLPPSAVTEIKLHSNMFMFRASL
EIERSFFLRMKCVLAKRNAGLTCGGYKVIHCSGYLKIRIVGLVAVGQSLSPPSAITEIKLYSNMFMFRASL
GSRRSFICRMRCGSSEPHFVVVHCTGYIKAKFCLVAIGRLQVTSSPNCTMSNVQCQPTEFISRHNIEGIF
SGARRSFFCRMKCNRPRKSFTIHSTGYLKSNLSCVAIGRLHSHVVPQPVNGEIRVKSMEYVSRAIDG
KFVFVDQRATAILAYLPQELLGTSCYEFHQDDIGHLAECHRQLQTREKITTCYKFKIKDGFSITLRS
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$
```

```
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB: ~/Downloads
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$ for file in *.fasta; do echo "$(grep -c '^>' "$file") $file"; done | sort -nr | head -1 | awk '{print $2 " has " $1 " sequences"}'
sequence5.fasta has 13 sequences
user_ac@choudhary-ASUS-TUF-Gaming-A15-FA506ICB-FA506ICB:~/Downloads$
```