I did the frequency analysis of the cipher text frequency analysis where I get to know that the letter ‘q’ is used the most 407 times so I already guess it by it is replaceable by ‘e’ and the second most used is ‘f’ and it is replaced by ‘t’ and letter ‘m’ is replaced by ‘a’ as a third highest frequency and so on. As compare to English frequency analysis matches with cipher text by comparing and guessing from highest to lowest.

Also, I guess the key by that second word ‘m’ which could be only as ‘a’. So, I count it from ‘m’ to ‘a’ and I found the key which is “13”.

|  |  |
| --- | --- |
| **Replacing Text in Cipher** | |
| a | o |
| b | p |
| c | q |
| d | r |
| e | s |
| f | t |
| g | u |
| h | v |
| i | w |
| j | x |
| k | y |
| l | z |
| m | a |
| n | b |
| o | c |
| p | d |
| q | e |
| r | f |
| s | g |
| t | h |
| u | i |
| v | j |
| w | k |
| x | l |
| y | m |
| z | n |

Following are the Analysis of Word in Cipher text.

|  |  |
| --- | --- |
| q: 407 | 11.74% |
| f: 290 | 8.36 % |
| m: 287 | 8.28 % |
| a: 278 | 8.02 % |
| z: 211 | 6.08 % |
| u: 211 | 6.08 % |
| x: 197 | 5.68 % |
| d: 197 | 5.68 % |
| e: 189 | 5.45 % |
| t: 177 | 5.10 % |
| g: 156 | 4.50 % |
| p: 146 | 4.21 % |
| o: 110 | 3.17 % |
| k: 106 | 3.05 % |
| y: 99 | 2.85 % |
| i: 94 | 2.71 % |
| s: 64 | 1.84 % |
| r: 61 | 1.76 % |
| b: 60 | 1.73 % |
| n: 47 | 1.35 % |
| h: 46 | 1.32 % |
| w: 18 | 0.51 % |
| j: 8 | 0.23 % |
| v: 3 | 0.08 % |
| c: 2 | 0.05 % |
| l: 2 | 0.02 % |

The Decrypted form of this cipher is: -

At a recent computer expo (COMDEX), Bill Gates reportedly compared the

computer industry with the auto industry and stated: "If GM had kept up with

technology like the computer industry has, we would all be driving twenty-five dollar cars that got 1000 miles to the gallon." In response to Bill's comments, General Motors issued a press release stating (supposedly by Mr. Welch himself): "Yes, but would you want your car to crash twice a day?"

Then others added these comments:

1. Every time they repainted the lines on the road you would have to buy a ne

car.

2. Occasionally your car would die on the freeway for no reason, and you

would just accept this, restart and drive on.

3. Occasionally, executing a maneuver such as a left turn would cause your

car to stop and fail and you would have to re-install the engine. For some

strange reason, you would accept this too.

4. You could only have one person in the car at a time, unless you bought

Car95 or CarNT . But then you would have to buy more seats.

5. Macintosh would make a car that was powered by the sun, was reliable, five times as fast, twice as easy to drive, but would only run on five percent of the roads.

6. The Macintosh car owners would get expensive Microsoft uprgrades to their cars, which would make their cars run much slower.

7. The oil, gas and alternator warning lights would be replaced by a single

"general car fault" warning light.

8. New seats would force everyone to have the same size butt.

9. The airbag system would say are you sure? before going off.

10. If you were involved in a crash, you would have no idea what happened.

11. Occasionally, for no reason whatsoever, your car would lock you out an

refuse to let you in until you simultaneously lifted the door handle, turned the

key, and grabbed hold of the radio antenna

12. GM would require all car buyers to also purchase a deluxe set of Rand

McNally road maps (now a GM subsidiary), even though they neither needed nor wanted them. Attempting to delete this option would immediately cause the car's performance to diminish by 50% or more. Moreover, GM would become the target of investigation by the Justice Department.

13. Every time GM would introduce a new model car buyers would have to learn.

how to drive all over again because none of the controls would operate in the

same manner as the old car.

14. You'd press the "start" button to shut off the engine.

An American businessman was at the pier of a small coastal Mexican

village when a small boat with just one fisherman docked. Inside the small

boat were several large yellowfin tuna. The American complimented the

fisherman on the quality of his fish and asked how long it took to catch them. The fisherman replied that it only took a little while. The American then asked why didn't he stay out longer and catch more fish. The fisherman said he had enough to support his family's immediate needs.

The American then asked, "But what do you do with the rest of your time?"

The fisherman said, "I sleep late, fish a little, play with my children, have

lunch with my wife, Maria, stroll into the village each evening where I sip wine and play guitar with my amigos. I have a full and busy life, senor The American scoffed. "I am a Wharton MBA and could help you. You should

spend more time fishing and with the proceeds, buy a bigger boat. With the

proceeds from the bigger boat you could buy several boats. Eventually you

would have a fleet of fishing boats. Instead of selling your catch to a

middleman you would sell directly to the processor, eventually opening your

own cannery. You would control the product, processing and distribution. You

would need to leave this small coastal fishing village and move to Mexico

City, then L.A., and eventually New York City, where you will run your expanding enterprise."

The fisherman asked, "But how long will this all take?"

To which the American replied, "Fifteen or 20 years."

"But what then?"

The American laughed and said, "That's the best part. When the time is right you would announce an IPO and sell your company stock to the public and become very rich. You would make millions."

"Millions? Then what?"

The American said, "Then you would retire. Move to a small coastal fishing

village where you would sleep late, fish a little, play with your kids, have

lunch with your wife, stroll to the village in the evenings where you could sip wine and play your guitar with your friends.

**Python Script: -**

import string  
text = """  
Mf m dqoqzf oaybgfqd qjba (OAYPQJ), Nuxx Smfqe dqbadfqpxk oaybmdqp ftq oaybgfqd uzpgefdk iuft ftq mgfa uzpgefdk mzp efmfqp: "Ur SY tmp wqbf gb iuft fqotzaxask xuwq ftq oaybgfqd uzpgefdk tme, iq iagxp mxx nq pduhuzs fiqzfk-ruhq paxxmd omde ftmf saf 1000 yuxqe fa ftq smxxaz." Uz dqebazeq fa Nuxx'e oayyqzfe, Sqzqdmx Yafade ueegqp m bdqee dqxqmeq efmfuzs (egbbaeqpxk nk Yd. Iqxot tuyeqxr): "Kqe, ngf iagxp kag imzf kagd omd fa odmet fiuoq m pmk?" Ftqz aftqde mppqp ftqeq oayyqzfe:  
1. Qhqdk fuyq ftqk dqbmuzfqp ftq xuzqe az ftq damp kag iagxp tmhq fa ngk m zqi omd.  
2. Aoomeuazmxxk kagd omd iagxp puq az ftq rdqqimk rad za dqmeaz, mzp kag iagxp vgef mooqbf ftue, dqefmdf mzp pduhq az.  
3. Aoomeuazmxxk, qjqogfuzs m ymzqghqd egot me m xqrf fgdz iagxp omgeq kagd omd fa efab mzp rmux mzp kag iagxp tmhq fa dq-uzefmxx ftq qzsuzq. Rad eayq efdmzsq dqmeaz, kag iagxp mooqbf ftue faa.  
4. Kag oagxp azxk tmhq azq bqdeaz uz ftq omd mf m fuyq, gzxqee kag nagstf  
Omd95 ad OmdZF . Ngf ftqz kag iagxp tmhq fa ngk yadq eqmfe.  
5. Ymouzfaet iagxp ymwq m omd ftmf ime baiqdqp nk ftq egz, ime dqxumnxq, ruhq fuyqe me rmef, fiuoq me qmek fa pduhq, ngf iagxp azxk dgz az ruhq bqdoqzf ar ftq dampe.  
6. Ftq Ymouzfaet omd aizqde iagxp sqf qjbqzeuhq Yuodaearf gbdsdmpqe fa ftqud omde, ituot iagxp ymwq ftqud omde dgz ygot exaiqd.  
7. Ftq aux, sme mzp mxfqdzmfad imdzuzs xustfe iagxp nq dqbxmoqp nk m euzsxq "sqzqdmx omd rmgxf" imdzuzs xustf.  
8. Zqi eqmfe iagxp radoq qhqdkazq fa tmhq ftq emyq eulq ngff.  
9. Ftq mudnms ekefqy iagxp emk mdq kag egdq? nqradq sauzs arr.  
10. Ur kag iqdq uzhaxhqp uz m odmet, kag iagxp tmhq za upqm itmf tmbbqzqp.  
11. Aoomeuazmxxk, rad za dqmeaz itmfeaqhqd, kagd omd iagxp xaow kag agf mzp dqrgeq fa xqf kag uz gzfux kag euygxfmzqagexk xurfqp ftq paad tmzpxq, fgdzqp ftq wqk, mzp sdmnnqp taxp ar ftq dmpua mzfqzzm.  
12. SY iagxp dqcgudq mxx omd ngkqde fa mxea bgdotmeq m pqxgjq eqf ar Dmzp YoZmxxk damp ymbe (zai m SY egneupumdk), qhqz ftagst ftqk zquftqd zqqpqp zad imzfqp ftqy. Mffqybfuzs fa pqxqfq ftue abfuaz iagxp uyyqpumfqxk omgeq ftq omd'e bqdradymzoq fa puyuzuet nk 50% ad yadq. Yadqahqd, SY iagxp nqoayq ftq fmdsqf ar uzhqefusmfuaz nk ftq Vgefuoq Pqbmdfyqzf.  
13. Qhqdk fuyq SY iagxp uzfdapgoq m zqi yapqx omd ngkqde iagxp tmhq fa xqmdz tai fa pduhq mxx ahqd msmuz nqomgeq zazq ar ftq oazfdaxe iagxp abqdmfq uz ftq emyq ymzzqd me ftq axp omd.  
14. Kag'p bdqee ftq "efmdf" ngffaz fa etgf arr ftq qzsuzq.  
Mz Myqduomz ngeuzqeeymz ime mf ftq buqd ar m eymxx oamefmx Yqjuomz huxxmsq itqz m eymxx namf iuft vgef azq ruetqdymz paowqp. Uzeupq ftq eymxx namf iqdq eqhqdmx xmdsq kqxxairuz fgzm. Ftq Myqduomz oaybxuyqzfqp ftq ruetqdymz az ftq cgmxufk ar tue ruet mzp mewqp tai xazs uf faaw fa omfot ftqy. Ftq ruetqdymz dqbxuqp ftmf uf azxk faaw m xuffxq ituxq. Ftq Myqduomz ftqz mewqp itk pupz'f tq efmk agf xazsqd mzp omfot yadq ruet. Ftq ruetqdymz emup tq tmp qzagst  
fa egbbadf tue rmyuxk'e uyyqpumfq zqqpe.  
Ftq Myqduomz ftqz mewqp, "Ngf itmf pa kag pa iuft ftq dqef ar kagd fuyq?"  
Ftq ruetqdymz emup, "U exqqb xmfq, ruet m xuffxq, bxmk iuft yk otuxpdqz, tmhq xgzot iuft yk iurq, Ymdum, efdaxx uzfa ftq huxxmsq qmot qhqzuzs itqdq U eub iuzq mzp bxmk sgufmd iuft yk myusae. U tmhq m rgxx mzp ngek xurq, eqzad." Ftq Myqduomz eoarrqp. "U my m Itmdfaz YNM mzp oagxp tqxb kag. Kag etagxp ebqzp yadq fuyq ruetuzs mzp iuft ftq bdaoqqpe, ngk m nussqd namf. Iuft ftq bdaoqqpe rday ftq nussqd namf kag oagxp ngk eqhqdmx namfe. Qhqzfgmxxk kag iagxp tmhq m rxqqf ar ruetuzs namfe. Uzefqmp ar eqxxuzs kagd omfot fa m yuppxqymz kag iagxp eqxx pudqofxk fa ftq bdaoqeead, qhqzfgmxxk abqzuzs kagd aiz omzzqdk. Kag iagxp oazfdax ftq bdapgof, bdaoqeeuzs mzp puefdungfuaz. Kag iagxp zqqp fa xqmhq ftue eymxx oamefmx ruetuzs huxxmsq mzp yahq fa Yqjuoa Oufk, ftqz X.M., mzp qhqzfgmxxk Zqi Kadw Oufk, itqdq kag iuxx dgz kagd qjbmzpuzs  
qzfqdbdueq."  
Ftq ruetqdymz mewqp, "Ngf tai xazs iuxx ftue mxx fmwq?"  
Fa ituot ftq Myqduomz dqbxuqp, "Rurfqqz ad 20 kqmde."  
"Ngf itmf ftqz?"  
Ftq Myqduomz xmgstqp mzp emup, "Ftmf'e ftq nqef bmdf. Itqz ftq fuyq ue dustf kag iagxp mzzagzoq mz UBA mzp eqxx kagd oaybmzk efaow fa ftq bgnxuo mzp nqoayq hqdk duot. Kag iagxp ymwq yuxxuaze."  
"Yuxxuaze? Ftqz itmf?"  
Ftq Myqduomz emup, "Ftqz kag iagxp dqfudq. Yahq fa m eymxx oamefmx ruetuzs huxxmsq itqdq kag iagxp exqqb xmfq, ruet m xuffxq, bxmk iuft kagd wupe, tmhq xgzot iuft kagd iurq, efdaxx fa ftq huxxmsq uz ftq qhqzuzse itqdq kag oagxp eub iuzq mzp bxmk kagd sgufmd iuft kagd rduqzpe."  
"""  
letter\_count = {}  
  
  
for letter in text:  
 if letter.isalpha():  
 letter = letter.lower()   
 if letter in letter\_count:  
 letter\_count[letter] += 1  
 else:  
 letter\_count[letter] = 1  
  
  
print("Alphabet Frequency Table:")  
print("------------------------")  
  
for letter in string.ascii\_lowercase:  
 count = letter\_count.get(letter, 0)  
 print(f"{letter}: {count}")

Procedure of phython program

Python program that counts the frequency of each letter in a given text (assuming the text is stored in a variable called text) and then displays the alphabet frequency table. Here's a step-by-step explanation of what it does:

.

\* Iterate through each character (presumably letters) in the text variable.

\* Check if the character is an alphabetical letter using the isalpha() method.

\* Convert the letter to lowercase to ensure case-insensitivity.

\* If the lowercase letter is already in the letter\_count dictionary, increment its count by 1. If not, add it to the dictionary with a count of 1.

\* After processing all the letters in the text, a dictionary letter\_count will contain the frequency of each letter.

\* The code then displays an alphabet frequency table by iterating through the lowercase alphabet (string.ascii\_lowercase) and looking up the corresponding count in the letter\_count dictionary.

\* It prints the letter and its count to show the frequency of each letter in the text.

So, when you run this code with a specific text, it will provide a table showing the frequency of each letter in that text, disregarding case.