Cryptography

Assignment:
Cryptanalyst (Message Decryption)

Instructions:

The following ciphertext was generated using a simple substitution (monoalphabetic cipher) algorithm.

1. Read this message

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* #!&&)#~(!& !@()&~)$ (&~)/@(~[ ^)@{(#), !&) ~%*~ $)*\^ >(~% * ^~@)*] !}
])^^*/)^, *^^<@)^ ~%*~ ])^^*/)^ *@) @)#)({)$ *^ ^)&~ >(~% &!
$<+\(#*~(!&, (&^)@~(!&, ]!$(}(#*~(!&, @)!@$)@(&/, !@ @)+\*[^. ~%)
$)^~@<#~(!& !} $*~* (^ *\^! #!{)@)$ <&$)@ ~%(^ ^)@{(#). ~%<^, ~%)
#!&&)#~(!&-!@()&~)$ (&~)/@(~[ ^)@{(#) *$$@)^^)^ =!~% ])^^*/) ^~@)*]
]!$(}(#*~(!& *&$ $)&(*\ !} ^)@{(#). !& ~%) !~%)@ %*&$, * #!&&)#~(!&\)^^
(&~)/@(~[ ^)@{(#), !&) ~%*~ $)*\^ >(~% (&$({($<*\ ])^^*/)^ >(~%!<~
@)/*@$ ~! *&[ \*@/)@ #!&~)y~, /)&)@*\\[ +@!{($)^ +@!~)#~(!& */*(&^~
])^^*/) ]!$(}(#*~(!& !&\[. >) #*& ]*|) * $(^~(&#~(!& =)~>))& ^)@{(#)
>(~% *&$ >(~%!<~ @)#!{)@[. =)#*<^) ~%) (&~)/@(~[ ^)@{(#) @)\*~)^ ~!
*#~({) *~~*#|^, >) *@) #!&#)@&)$ >(~% $)~)#~(!& @*~%)@ ~%*& +@){)&~(!&.
(} * {(!\*~(!& !} (&~)/@(~[ (^ $)~)#~)$, ~%)& ~%) ^)@{(#) ]*[ ^(]+\[
@)+!@~ ~%(^ {(!\*~(!&, *&$ ^!]) !~%)@ +!@~(!& !} ^!}~>*@) !@ %<]*&
(&~)@{)&~(!& (^ @)x<(@)$ ~! @)#!{)@ }@!] ~%) {(!\*~(!&. *\~)@&*~({)\[,
~%)@) *@) ])#%*&(^]^ *{*(\*=\) ~! @)#!{)@ }@!] ~%) \!^^ !} (&~)/@(~[ !}
$*~*, *^ >) >(\\ @){()> ^<=^)x<)&~\[. ~%) (&#!@+!@*~(!& !} *<~!]*~)$
@)#!{)@[ ])#%*&(^]^ (^, (& /)&)@*\, ~%) ]!@) *~~@*#~({) *\~)@&*~({).
```

2. Decrypt this message using frequency analysis technique (count most frequently words, digraphs, trigraphs, find possible words, etc)
3. Submit your work to: prajanto@dsn.dinus.ac.id and **handwriting** exercise within **1 weeks** !
   the sooner you will submit the higher score you will have

Hints:

- The dot, comma, and space are not encrypted in this message. This will help you to separate the words
- The most frequently words in the message are ‘e’ and ‘t’
- The most common digraphs in the message are th and on
- The most common trigraphs in the message are ‘tio’ and ‘ion’
- The most common double letters in the message are ‘ss’ and ‘nn’
- Complete the missing letters to form a word that makes sense
  for example:
  - the possible word form ‘th t’ is ‘that’
  - the possible word from ‘c n’ is ‘can’