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분석 일자	2024.05.10.
작성 일자	2024.05.11.
분석 대상	이진수
문서 버전	3.0
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1. 문제

URL	Game 19 (suninatas.com)
문제 내용	<p>Cipher II : What is it?</p> <pre> 0100111001010110010000110101010001000110010001000101 0110001000000100101101000110001000000100101001001100 0100010101011010010001010101001001001011010100100100 1010001000000101001001000101010101010010000001001011 0100011001010101010100100101000000100000010110100100 1010001000000101001000100000010110000100011001000110 01010101001000000101010101001001010000001000000101 0010010001010101010100100000010100100100110001001011 0101100101000010010101100101000000100000010110100100 1010001000000100011101000011010100100101101001010101 0101010001001011010101110101101001001010010011010101 0110010010010101010000010110010101001001001001010101 </pre>
문제 파일	x
문제 유형	Other forensics
난이도	1 / 3

2. 분석 도구

도구명	다운로드 링크	Version






3. 환경

OS
Windows11 x64

4. Write-Up

파일명	x
용량	x
SHA256	x
Timestamp	x


1. 문제내용이 이진수로 이루어져 있다.

Enter the binary text to convert Sample     

```
0100111001010110010000110101010001000110010001000101
0110001000000100101101000110001000000100101001001100
0100010101011010010001010101001001001011010100100100
1010001000000101001001000101010101010010000001001011
0100011001010101010100100101000000100000010110100100
1010001000000101001000100000010110000100011001000110
0101010100100000010101010101001001010000001000000101
```

Size : **645** B, 635 Characters

☒ Auto ↕ Binary to String ⬆ File.. 🔗 Load URL

The converted string: 

```
NVCTFDV KF JLEZERKRJ REU KFURP ZJ R XFFU URP REU RLKYBVP ZJ
GCRZUTKWZJMVIPYRIU
```

[사진 1] String to Binary 계산 결과([Binary to String Converter Online tool \(codebeautify.org\)](https://codebeautify.org/Binary-to-String-Converter))

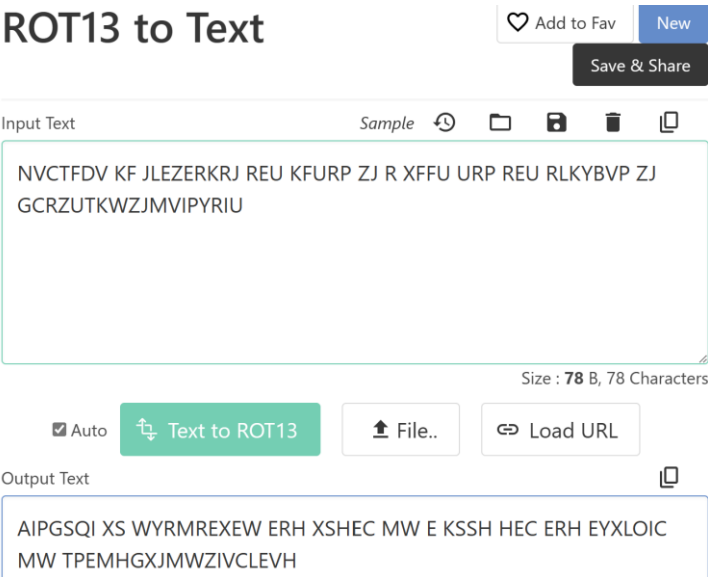
우선 String to Binary 계산기를 통해 문자로 바꾸어 보았다.

결과값이 무슨 의미인지 모르지만, 우선 띄어쓰기가 되어있다는 점이 수상하다.

같은 알파벳들이 반복되는 것을 보아, 일정한 패턴으로 치환된 치환암호로 의심된다.

2. 치환 암호 해독

우선, 유명한 ROT13 to text 해독을 먼저 적용해보았다.



[사진 2] Rot13 to text 변환기([ROT13 to Text Converter \(codebeautify.org\)](https://codebeautify.org/rot13-to-text-converter))

Rot13이 아니라는 것을 알 수 있다.

그렇다면 ROT 변환기 사이트를 찾아 1~25 모두 적용해보았다.

ROT-0: NVCTFDV KF JLEZERKRJ REU KFURP ZJ R XFFU URP REU RLKYBVP ZJ GCRZUTKWZJMVIPYRIU
ROT-1: OWDUGEW LG KMFAFSLK SFV LGVSQ AK S YGGV VSQ SFV SMLZCQW AK HDSAVULXAKNWJQZSJV
ROT-2: PXEVHFX MH LNGBGTM TL TGW MHWTR BL T ZHHW WTR TGW TNMADXR BL IETBWVWVMBLOXKRATKW
ROT-3: QYFWIGY NI MOHCHUNUM UHX NIXUS CM U AIIX XUS UHX UONBEYS CM JFUCXWNZCMPYLSBULX
ROT-4: RZGXJHZ OJ NPIDIVOVN VIY OJYVT DN V BJY YVT VIY VPOCFZT DN KGVXDYOADNQZMTCVMY
ROT-5: SAHYKIA PK OQJEJWPWO WJZ PKZUW EO W CKKZ ZWU WJZ WQPDGAU EO LHWEZYPBEORANUDWNZ
ROT-6: TBIZLJB QL PRKFKXQXP XKA QLAXV FP X DLLA AXV XKA XRQEHV FP MIXFAZQCFPSBOVEXOA
ROT-7: UCJAMKC RM QSLGLYRYQ YLB RMBYW GQ Y EMMB BYW YLB YSRFICW GQ NJYGBARDGQTCWFPYBP
ROT-8: VDKBNLD SN RTMHMZSZR ZMC SNCZX HR Z FNNC CZX ZMC ZTSGJDX HR OKZHCBSERUDQXGZQC
ROT-9: WELCOME TO SUNINATAS AND TODAY IS A GOOD DAY AND AUTHKEY IS PLAIDCTFISVERYHARD
ROT-10: XFMDPNF UP TVOJOBUBT BOE UPEBZ JT B HPPE EBZ BOE BVUILFZ JT QMBJEDUGJTWF5ZIBSE
ROT-11: YGNEQOG VQ UWPKPCVCU CPF VQFCA KU C IQQF FCA CPF CWVJMGA KU RNCKFEVHKUXGTAJCTF
ROT-12: ZHOFRPH WR VXQLQDWDV DQG WRGDB LV D JRRG GDB DQG DXWKNHB LV SODLGFWILVYHUBKDUG
ROT-13: AIPGSQI XS WYRMREXEW ERH XSHEC MW E KSSH HEC ERH EYXLOIC MW TPEMHGXJMWZIVCLEVH
ROT-14: BJQHTRJ YT XZSNSFYFX FSI YTIFD NX F LTTI IFD FSI FZYMPJD NX UQFNHYKNXAJWDMFWI
ROT-15: CKRIUSK ZU YATOTGZGY GTJ ZUJGE OY G MUUJ JGE GTJ GAZNQKE OY VRGOJIZLOYBKXENGXJ
ROT-16: DLSJVT AV ZBUPUHAHZ HUK AVKHF PZ H NVVK KHF HUK HBAORLF PZ WSHPKJAMPZCLYFOHYK
ROT-17: EMTKWUM BW ACVQVIBIA IVL BWLIG QA I OWWL LIG IVL ICBPSMG QA XTIQLKBNQADMZGPZL
ROT-18: FNULXVN CX BDWRWJCJB JWM CXMJH RB J PXXM MJH JWM JDCQTNH RB YUJRMLCORBENAHQJAM
ROT-19: GOVMYWO DY CEXSXKDKC KXN DYNKI SC K QYYN NKI KXN KEDRUOI SC ZVKSNDMPSCFOBIRKBN
ROT-20: HPWNZXP EZ DFYTYLELD LYO EZOLJ TD L RZZO OLJ LYO LFESVPJ TD AWLTONEQTDGPCJSLCO
ROT-21: IQXOAYF QA EGZUZMFME MZP FAPMK UE M SAAP PMK MZP MGFTWQK UE BXMUPOFRUEHQDKTMDP
ROT-22: JRYPBZR GB FHAVANGNF NAQ GBQNL VF N TBBQ QNL NAQ NHGUXRL VF CYNVQPGSVFIRELUNEQ
ROT-23: KSZQCAS HC GIBWBOHOG OBR HCROM WG O UCCR ROM OBR OIHVYSM WG DZOWRQHTWGSF5MVOFR
ROT-24: LTARDBT ID HJCXCIPIH PCS IDSPN XH P VDDS SPN PCS PJIWZTN XH EAPXSRIUXHKTGNWPGS
ROT-25: MUBSECU JE IKDYDQJQI QDT JETQO YI Q WEET TQO QDT QKJXAUO YI FBQYTSJVYILUHOXQHT

[사진 3] ROT encoder/decoder 적용 결과([ROT encoder/decoder \(theblob.org\)](https://theblob.org/rot-encoder-decoder))

ROT-9로 해독 결과 key는 PLAIDCTFISVERYHARD임을 찾았다.

5. Flag

Flag = PLAIDCTFISVERYHARD

6. 별도 첨부

7. Reference