Challenge Title: The Cat Ate My Homework
Author: MaryEllen Kennel/aka @icanhaspii
Points: 100
Difficulty: Easy

Summary:

This challenge is designed to be an easy stego/forensics-carving exercise which utilizes a hex editor to carve out a docx file stuffed inside of a file jpeg file:

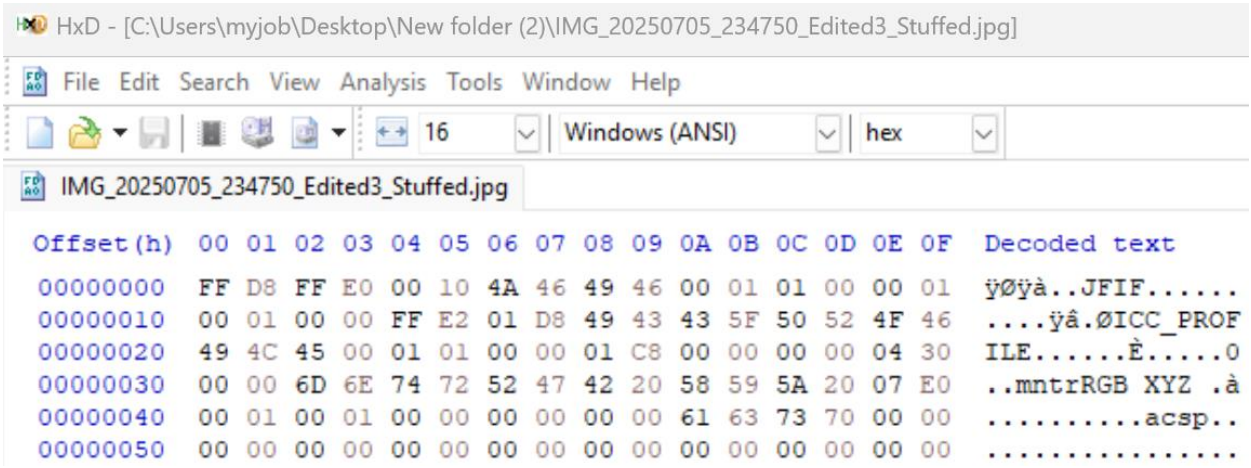
1. **Initial Screen:**

Fun fact: Cats enjoy gnawing on paper! This innocent little creature ate my homework, can you help me recover it?

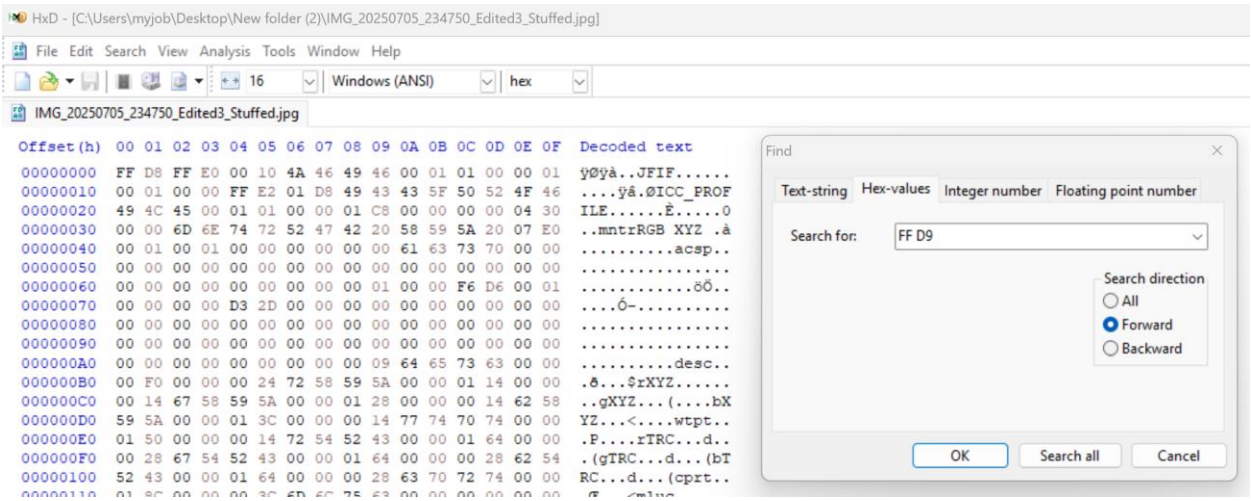
Photo Credit: Chloe Regas

Solution:

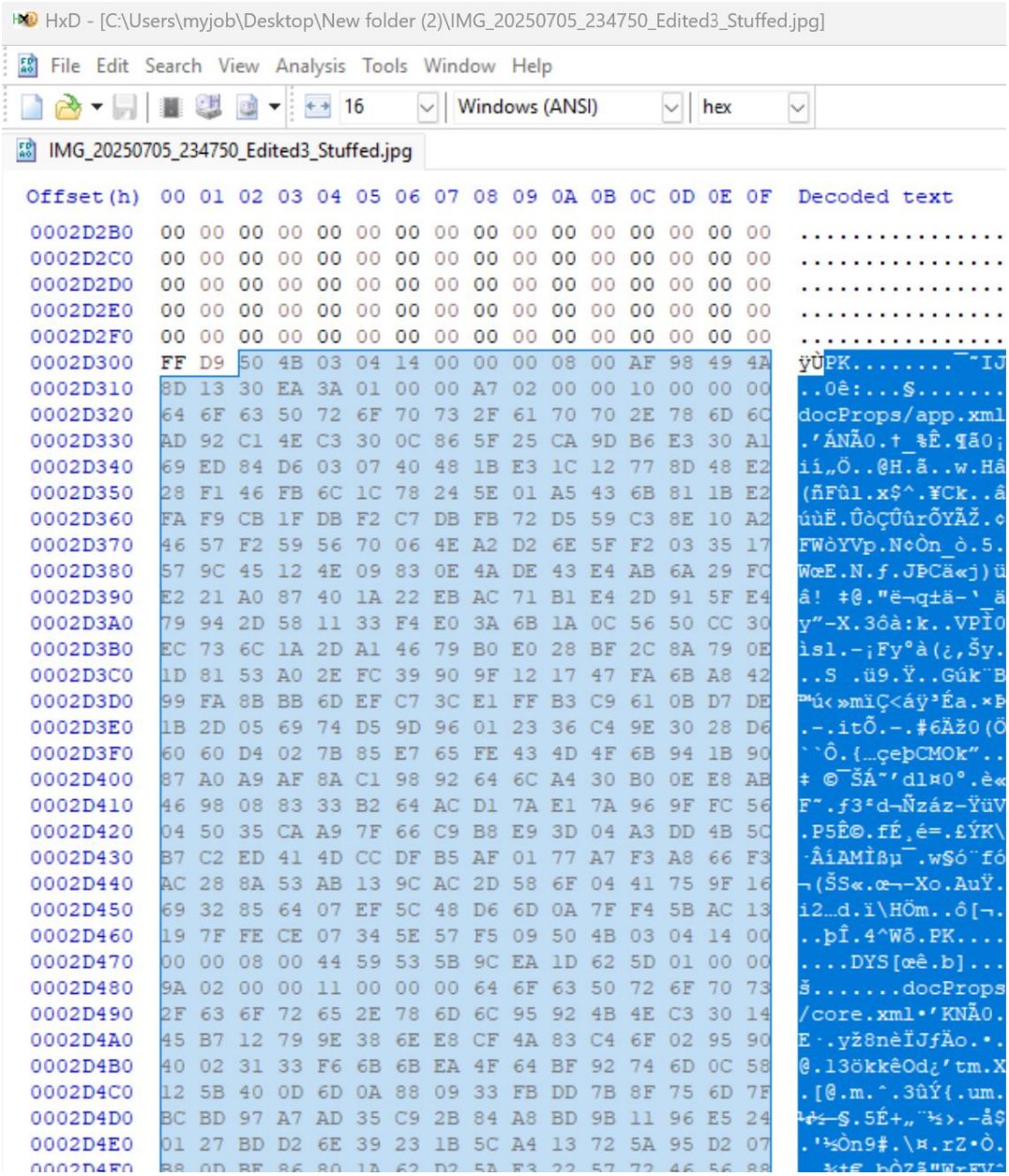
1. **Open the cat image file in a hex editor (I used HxD: https://mh-nexus.de/en/hxd):**

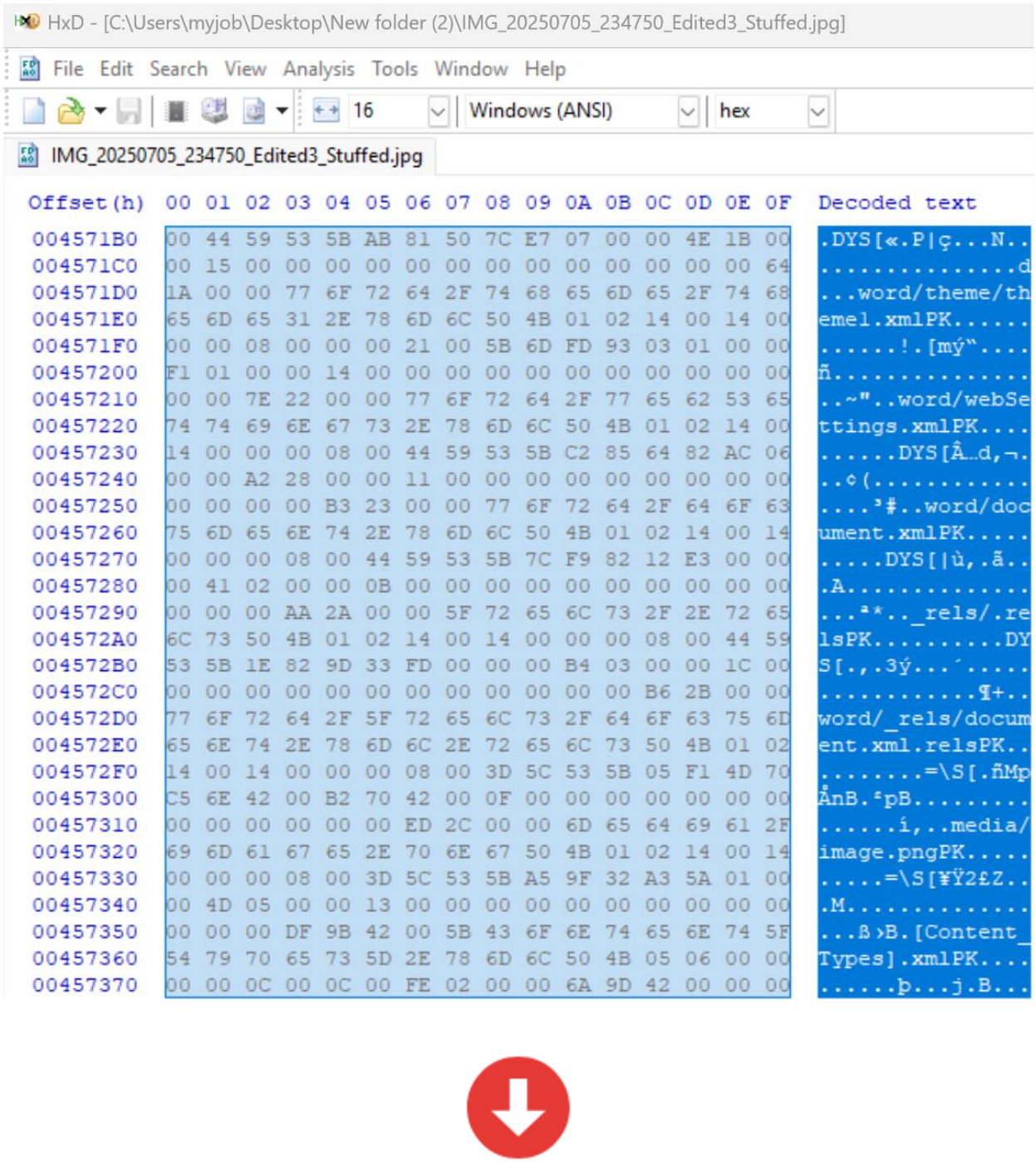


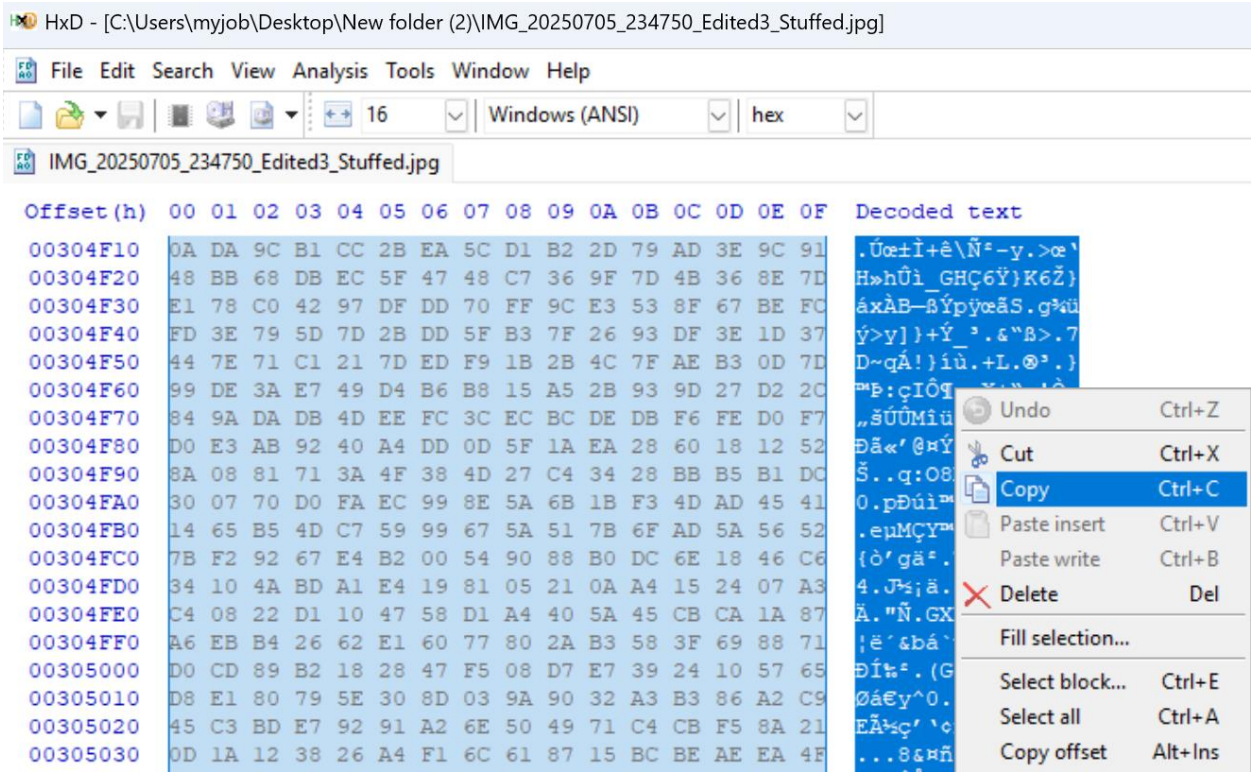
2. **Locate the end-of-image marker - For JPEGs, this marker is typically FF D9:**



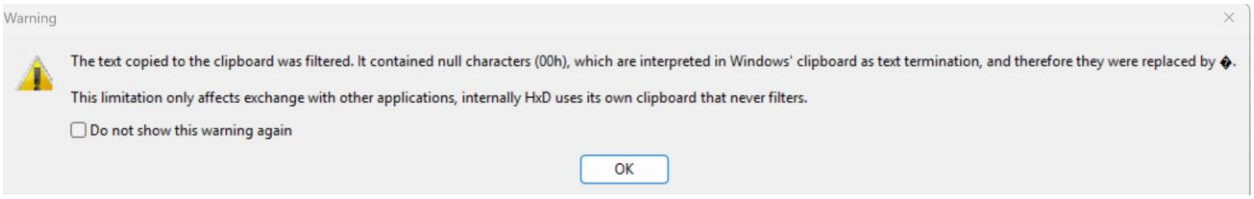
3. **Copy all the hex data of the DOCX file:**


HxD - [C:\Users\myjob\Desktop\New folder (2)\IMG_20250705_234750_Edited3_Stuffed.jpg]
File Edit Search View Analysis Tools Window Help
16
Windows (ANSI)
hex
IMG_20250705_234750_Edited3_Stuffed.jpg
Offset(h) 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F Decoded text
0002D2B0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ....
0002D2C0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ....
0002D2D0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ....
0002D2E0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ....
0002D2F0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ....
0002D300 FF D9 50 4B 03 04 14 00 00 00 08 00 AF 98 49 4A ÿÙPK........¯˜IJ
0002D310 8D 13 30 EA 3A 01 00 00 A7 02 00 00 10 00 00 00 ..0ê:...§.......
0002D320 64 6F 63 50 72 6F 70 73 2F 61 70 70 2E 78 6D 6C docProps/app.xml
0002D330 AD 92 C1 4E C3 30 0C 86 5F 25 CA 9D B6 E3 30 A1 .'ÁNÃ0.†_%Ê.¶ã0¡
0002D340 69 ED 84 D6 03 07 40 48 1B E3 1C 12 77 8D 48 E2 ií„Ö..@H.ã..w.Hâ
0002D350 28 F1 46 FB 6C 1C 78 24 5E 01 A5 43 6B 81 1B E2 (ñFûl.x$^.¥Ck..â
0002D360 FA F9 CB 1F DB F2 C7 DB FB 72 D5 59 C3 8E 10 A2 úùË.ÛòÇÛûrÕYÃŽ.¢
0002D370 46 57 F2 59 56 70 06 4E A2 D2 6E 5F F2 03 35 17 FWòYVp.N¢Òn_ò.5.
0002D380 57 9C 45 12 4E 09 83 0E 4A DE 43 E4 AB 6A 29 FC WœE.N.ƒ.JÞCä«j)ü
0002D390 E2 21 A0 87 40 1A 22 EB AC 71 B1 E4 2D 91 5F E4 â! ‡@."ë¬q±ä-'_ä
0002D3A0 79 94 2D 58 11 33 F4 E0 3A 6B 1A 0C 56 50 CC 30 y"-X.3ôà:k..VPÌ0
0002D3B0 EC 73 6C 1A 2D A1 46 79 B0 E0 28 BF 2C 8A 79 0E ìsl.-¡Fy°à(¿,Šy.
0002D3C0 1D 81 53 A0 2E FC 39 90 9F 12 17 47 FA 6B A8 42 ..S .ü9.Ÿ..Gúk¨B
0002D3D0 99 FA 8B BB 6D EF C7 3C E1 FF B3 C9 61 0B D7 DE ™ú‹»mïÇ<áÿ³Éa.×Þ
0002D3E0 1B 2D 05 69 74 D5 9D 96 01 23 36 C4 9E 30 28 D6 .-.itÕ.–.#6ÄŽ0(Ö
0002D3F0 60 60 D4 02 7B 85 E7 65 FE 43 4D 4F 6B 94 1B 90 ``Ô.{…çeþCMOk"..
0002D400 87 A0 A9 AF 8A C1 98 92 64 6C A4 30 B0 0E E8 AB ‡ ©¯ŠÁ˜'dl¤0°.è«
0002D410 46 98 08 83 33 B2 64 AC D1 7A E1 7A 96 9F FC 56 F˜.ƒ3²d¬Ñzáz–ŸüV
0002D420 04 50 35 CA A9 7F 66 C9 B8 E9 3D 04 A3 DD 4B 5C .P5Ê©.fÉ¸é=.£ÝK\
0002D430 B7 C2 ED 41 4D CC DF B5 AF 01 77 A7 F3 A8 66 F3 ·ÂíAMÌßµ¯.w§ó¨fó
0002D440 AC 28 8A 53 AB 13 9C AC 2D 58 6F 04 41 75 9F 16 ¬(ŠS«.œ¬-Xo.AuŸ.
0002D450 69 32 85 64 07 EF 5C 48 D6 6D 0A 7F F4 5B AC 13 i2…d.ï\HÖm..ô[¬.
0002D460 19 7F FE CE 07 34 5E 57 F5 09 50 4B 03 04 14 00 ..þÎ.4^Wõ.PK....
0002D470 00 00 08 00 44 59 53 5B 9C EA 1D 62 5D 01 00 00 ....DYS[œê.b]...
0002D480 9A 02 00 00 11 00 00 00 64 6F 63 50 72 6F 70 73 š.......docProps
0002D490 2F 63 6F 72 65 2E 78 6D 6C 95 92 4B 4E C3 30 14 /core.xml•'KNÃ0.
0002D4A0 45 B7 12 79 9E 38 6E E8 CF 4A 83 C4 6F 02 95 90 E·.yž8nèÏJƒÄo.•.
0002D4B0 40 02 31 33 F6 6B 6B EA 4F 64 BF 92 74 6D 0C 58 @.13ökkêOd¿'tm.X
0002D4C0 12 5B 40 0D 6D 0A 88 09 33 FB DD 7B 8F 75 6D 7F .[@.m.ˆ.3ûÝ{.um.
0002D4D0 BC BD 97 A7 AD 35 C9 2B 84 A8 BD 9B 11 96 E5 24 ¼½—§.5É+„¨½›.–å$
0002D4E0 01 27 BD D2 6E 39 23 1B 5C A4 13 72 5A 95 D2 07 .'½Òn9#.\¤.rZ•Ò.

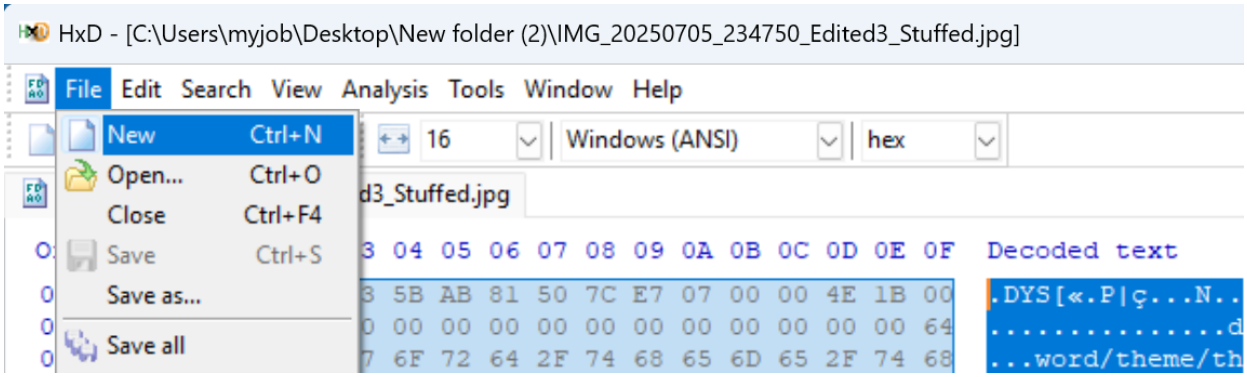

HxD - [C:\Users\myjob\Desktop\New folder (2)\IMG_20250705_234750_Edited3_Stuffed.jpg]
File Edit Search View Analysis Tools Window Help
16
Windows (ANSI)
hex
IMG_20250705_234750_Edited3_Stuffed.jpg
Offset(h) 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F Decoded text
004571B0 00 44 59 53 5B AB 81 50 7C E7 07 00 00 4E 1B 00 .DYS[«.P|ç...N..
004571C0 00 15 00 00 00 00 00 00 00 00 00 00 00 00 00 64 ....d
004571D0 1A 00 00 77 6F 72 64 2F 74 68 65 6D 65 2F 74 68 ...word/theme/th
004571E0 65 6D 65 31 2E 78 6D 6C 50 4B 01 02 14 00 14 00 eme1.xmlPK......
004571F0 00 00 08 00 00 00 21 00 5B 6D FD 93 03 01 00 00 ......!.[mý"....
00457200 F1 01 00 00 14 00 00 00 00 00 00 00 00 00 00 00 ñ...............
00457210 00 00 7E 22 00 00 77 6F 72 64 2F 77 65 62 53 65 ..~"..word/webSe
00457220 74 74 69 6E 67 73 2E 78 6D 6C 50 4B 01 02 14 00 ttings.xmlPK....
00457230 14 00 00 00 08 00 44 59 53 5B C2 85 64 82 AC 06 ......DYS[Â…d,¬.
00457240 00 00 A2 28 00 00 11 00 00 00 00 00 00 00 00 00 ..¢(............
00457250 00 00 00 00 B3 23 00 00 77 6F 72 64 2F 64 6F 63 ....³#..word/doc
00457260 75 6D 65 6E 74 2E 78 6D 6C 50 4B 01 02 14 00 14 ument.xmlPK.....
00457270 00 00 00 08 00 44 59 53 5B 7C F9 82 12 E3 00 00 .....DYS[|ù,.ã..
00457280 00 41 02 00 00 0B 00 00 00 00 00 00 00 00 00 00 .A..............
00457290 00 00 00 AA 2A 00 00 5F 72 65 6C 73 2F 2E 72 65 ...ª*.._rels/.re
004572A0 6C 73 50 4B 01 02 14 00 14 00 00 00 08 00 44 59 lsPK..........DY
004572B0 53 5B 1E 82 9D 33 FD 00 00 00 B4 03 00 00 1C 00 S[.,.3ý...´.....
004572C0 00 00 00 00 00 00 00 00 00 00 00 00 B6 2B 00 00 ....¶+..
004572D0 77 6F 72 64 2F 5F 72 65 6C 73 2F 64 6F 63 75 6D word/_rels/docum
004572E0 65 6E 74 2E 78 6D 6C 2E 72 65 6C 73 50 4B 01 02 ent.xml.relsPK..
004572F0 14 00 14 00 00 00 08 00 3D 5C 53 5B 05 F1 4D 70 ....=\S[.ñMp
00457300 C5 6E 42 00 B2 70 42 00 0F 00 00 00 00 00 00 00 ÅnB.²pB.........
00457310 00 00 00 00 00 00 ED 2C 00 00 6D 65 64 69 61 2F ......í,..media/
00457320 69 6D 61 67 65 2E 70 6E 67 50 4B 01 02 14 00 14 image.pngPK.....
00457330 00 00 00 08 00 3D 5C 53 5B A5 9F 32 A3 5A 01 00 .....=\S[¥Ÿ2£Z..
00457340 00 4D 05 00 00 13 00 00 00 00 00 00 00 00 00 00 .M..............
00457350 00 00 00 DF 9B 42 00 5B 43 6F 6E 74 65 6E 74 5F ...ß›B.[Content_
00457360 54 79 70 65 73 5D 2E 78 6D 6C 50 4B 05 06 00 00 Types].xmlPK....
00457370 00 00 0C 00 0C 00 FE 02 00 00 6A 9D 42 00 00 00 ......þ...j.B...



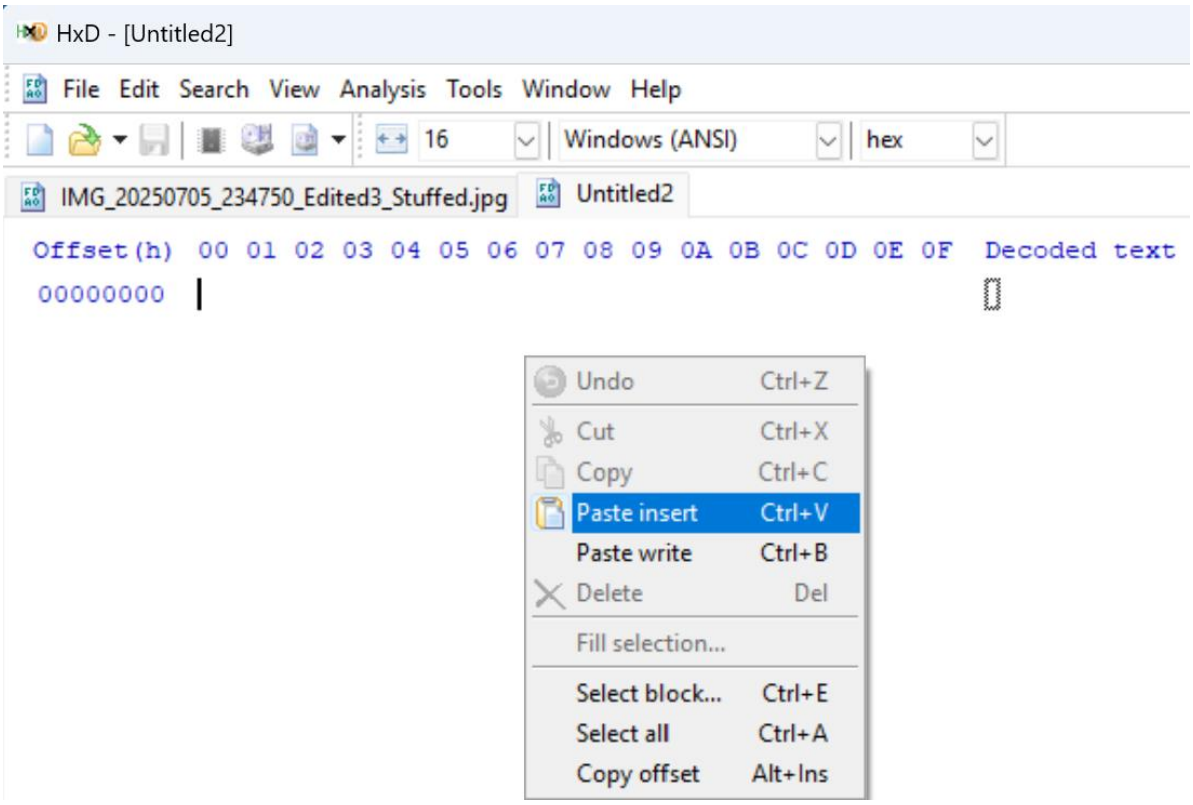
4. **If you see the following error, you can just hit "OK":**



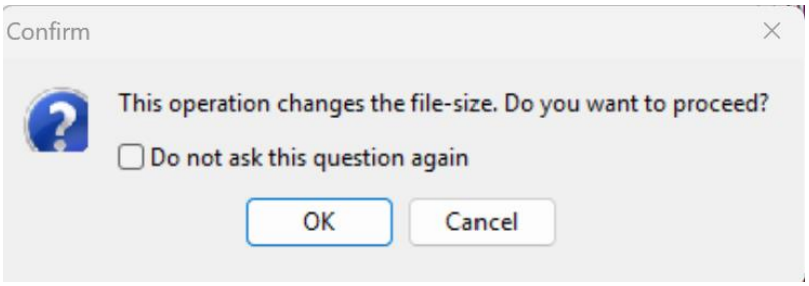
5. **Open a new tab in your hex editor:**

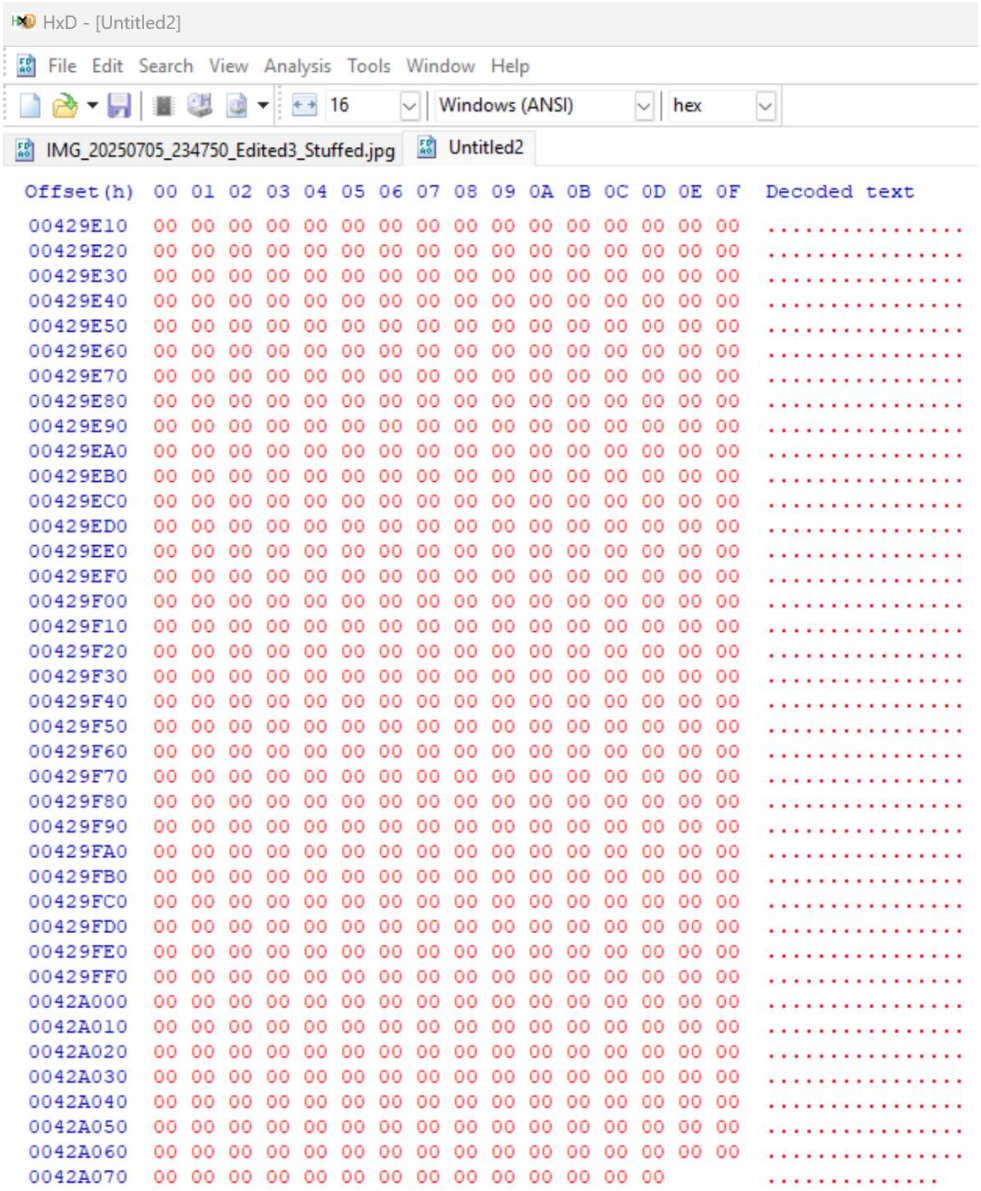


6. **Paste the copied Docx data directly into the new tab of the Hex Editor:**

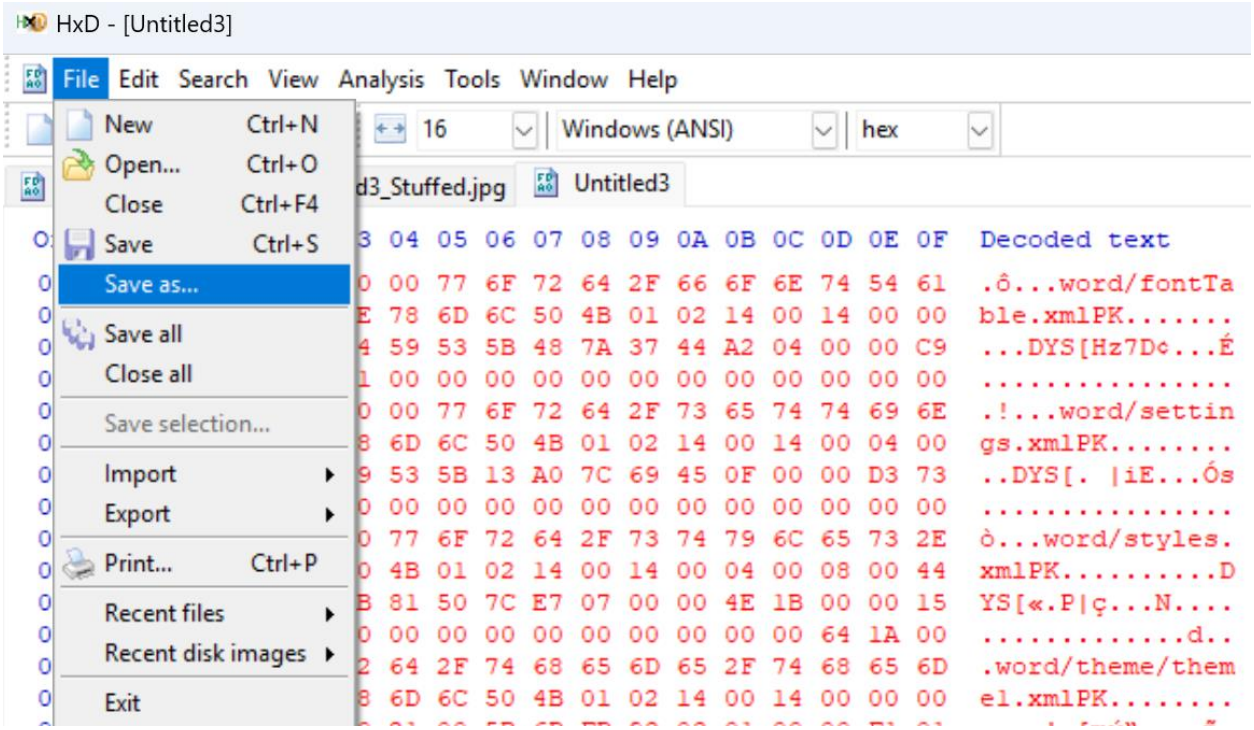


7. **If you see the following error, you can just hit "OK":**

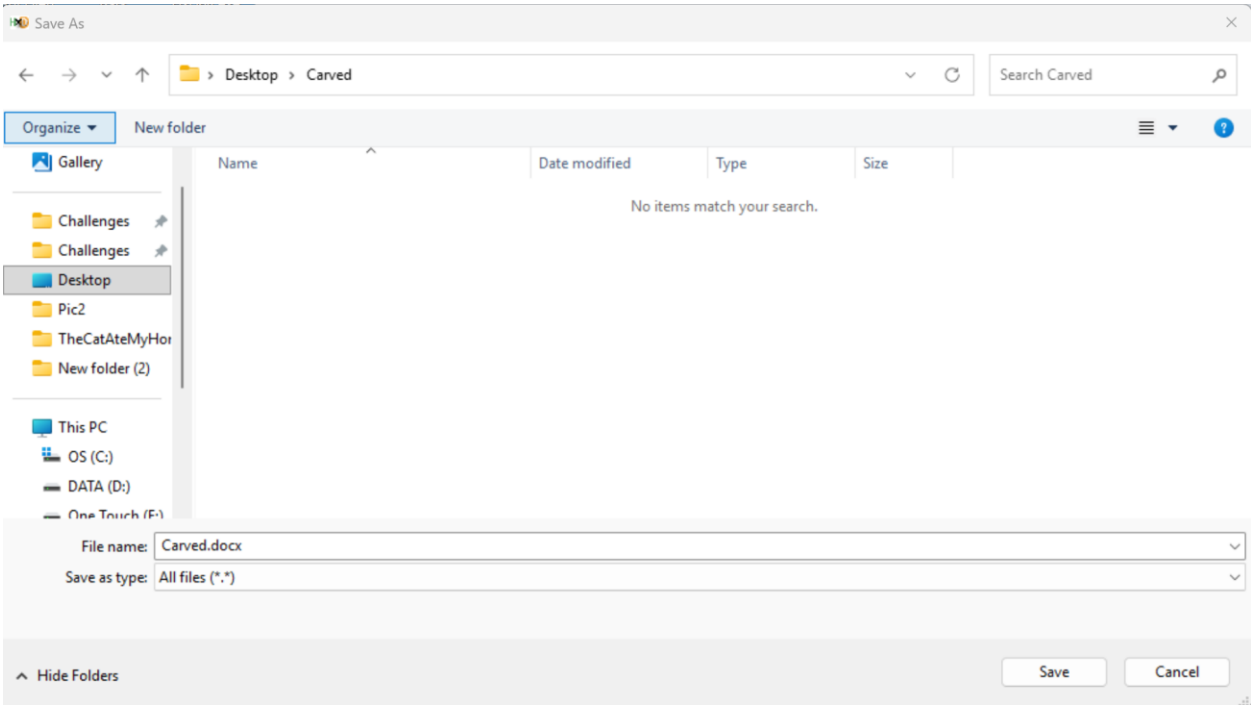




8. **Choose “Save as” in your hex editor:**



9. **Choose “Save as type” All and give it the .docx extension - I named mine “Carved.docx”:**



10. **Hit “Save” and you should end up with a fully functional .docx file:**

Carved.docx

11. **When you open the newly carved file, “Carved.docx”, you should see the flag revealed inside the homework assignment:**

Homework Assignment: Forensics 101

This little guy might look cuddly and cute...but he assisted my cat in eating my homework!

Photo Credit: Chloe Regas

The flag is: csawctf{C@ts_Luv_3@7ing_p@per!}.

12. **Flag:**

csawctf{C@ts_Luv_3@7ing_p@per!}.

End of Report