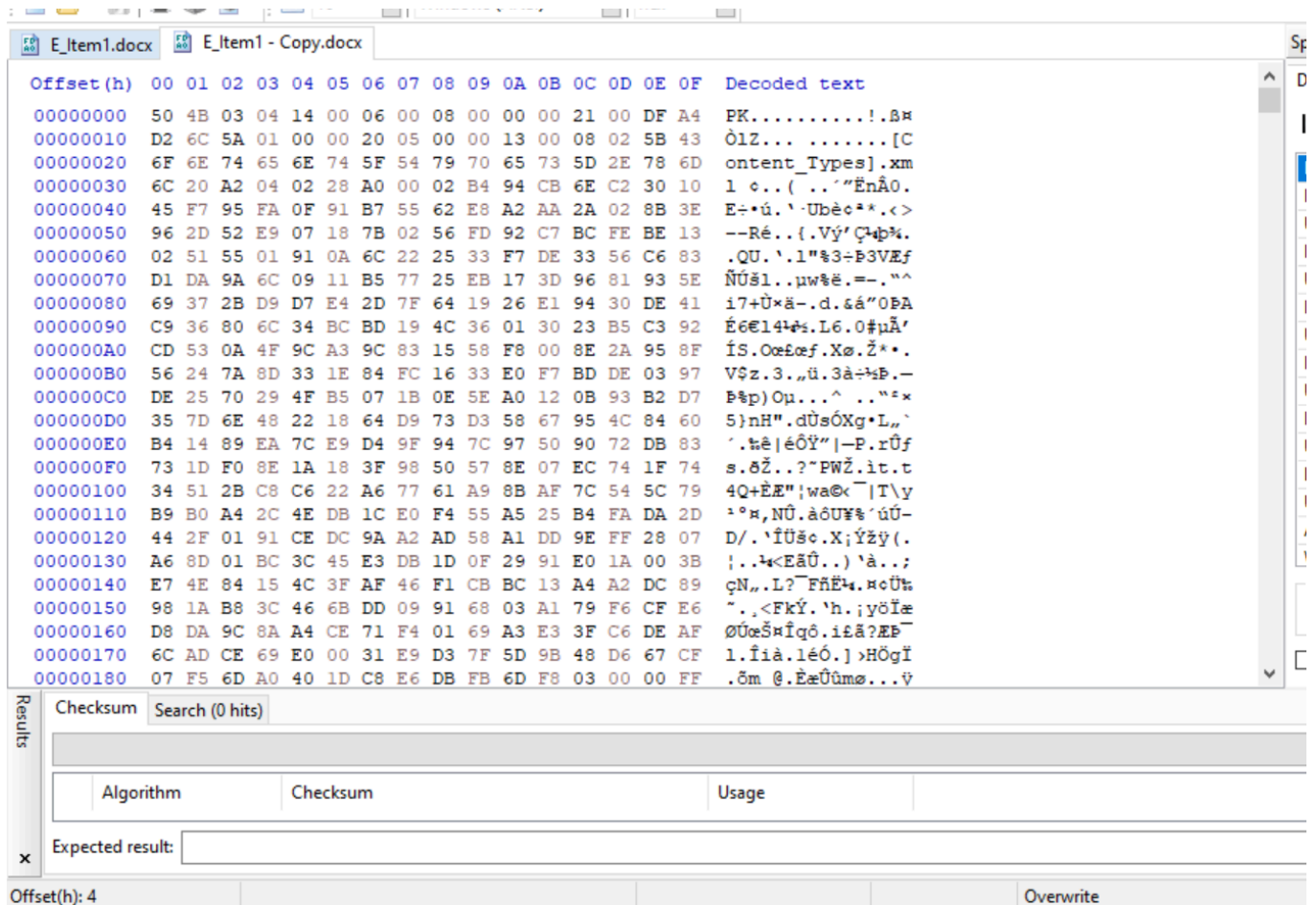
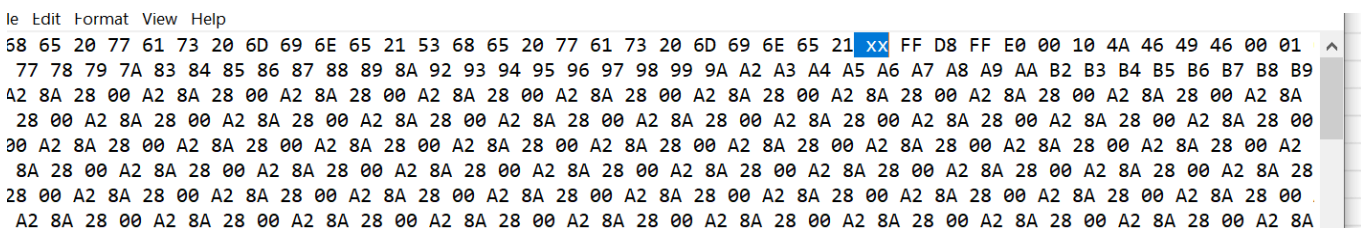


# Doc File Analysis



Made a copy of the doc file and removed the multiple lines of zeroes from the file

put doc contents into a text file called shewasmine



found invalid hex values

xx FR

The hex in the word file also seems to be filled with valid hex values that muddy up the image

[illegible]

Checksum

Search (0 hits)

Algorithm

Checksum

Usage

Expected result:

Offset(h): 2F2

Block(h): 2F2-C32

Length(h): 941

Overwrite

repeated hex values, probably anti-forensics tactics  
Removed them



00000010 69 F7 30 92 FD AB 36 E9 2E 77 1E BF 9D 7A 3B 69 i÷0'ý«6é.w.¿.z;i  
00000020 EB 34 7B 70 2A B7 FC 23 51 C8 D9 C5 4A 60 79 BA é4{p\*·ü\*QEUÄJ'y°  
00000030 89 61 65 CE 71 5B 42 D5 EE AD D4 27 2D 5D 25 D7 ðaeİq[BÖi.Ö'-]§\*  
00000040 85 61 DC 3D AA 4B 5D 2E 3B 6E 07 34 53 68 65 20 ..aÜ="K].;n.4She  
00000050 77 61 73 20 6D 69 6E 65 21 53 68 65 20 77 61 73 was mine!She was  
00000060 20 6D 69 6E 65 21 53 68 65 20 77 61 73 20 6D 69 mine!She was mi  
00000070 6E 65 21 53 68 65 20 77 61 73 20 6D 69 6E 65 21 ne!She was mine!  
00000080 FF D8 FF E0 00 10 4A 46 49 46 00 01 01 01 00 90 ýØyÄ..JFIF.....  
00000090 00 90 00 00 FF DB 00 43 00 02 01 01 02 01 01 02 ....ÿÜ.C.....  
000000A0 02 02 02 02 02 02 02 03 05 03 03 03 03 06 04 .....  
000000B0 04 03 05 07 06 07 07 07 06 07 07 08 09 0B 09 08 .....  
000000C0 08 0A 08 07 07 0A 0D 0A 0A 0B 0C 0C 0C 0C 07 09 .....  
000000D0 0E 0F 0D 0C 0E 0B 0C 0C 0C FF DB 00 43 01 02 02 .....ÿÜ.C...  
000000E0 02 03 03 03 06 03 03 06 0C 08 07 08 0C 0C 0C .....  
000000F0 0C 0C 0C 0C 0C 0C 0C 0C 0C 0C 0C 0C 0C 0C 0C .....  
00000100 0C 0C 0C 0C 0C 0C 0C 0C 0C 0C 0C 0C 0C 0C 0C .....  
00000110 0C 0C 0C 0C 0C 0C 0C 0C 0C 0C 0C 0C 0C FF C0 .....ÿÄ  
00000120 00 11 08 02 88 04 80 03 01 22 00 02 11 01 03 11 ....^..€..".....  
00000130 01 FF C4 00 1F 00 00 01 05 01 01 01 01 01 01 00 ..ÿÄ.....  
00000140 00 00 00 00 00 00 00 01 02 03 04 05 06 07 08 09 .....  
00000150 0A 0B FF C4 00 B5 10 00 02 01 03 03 02 04 03 05 ..ÿÄ.µ.....  
00000160 05 04 04 00 00 01 7D 01 02 03 00 04 11 05 12 21 .....}  
00000170 31 41 06 13 51 61 07 22 71 14 32 81 91 A1 08 23 1A..Qa."q.2.'i. #  
00000180 42 B1 C1 15 52 D1 F0 24 33 62 72 82 09 0A 16 17 B±Ä.RNð\$3br,....  
00000190 18 19 1A 25 26 27 28 29 2A 34 35 36 37 38 39 3A ...%&'()\*456789:  
000001A0 43 44 45 46 47 48 49 4A 53 54 55 56 57 58 59 5A CDEFGHIJSTUVWXYZ  
000001B0 63 64 65 66 67 68 69 6A 73 74 75 76 77 78 79 7A cdefghijstuvwxyz  
000001C0 83 A4 85 86 87 88 89 8A 92 93 94 95 96 97 98 99 f.....t+`§\$`"·.——~"  
000001D0 9A A2 A3 A4 A5 A6 A7 A8 A9 AA B2 B3 B4 B5 B6 B7 §`@\*~`µ¶·.°ÄÄÄ  
000001E0 B8 B9 BA C2 C3 C4 C5 C6 C7 C8 C9 CA D2 D3 D4 D5 ,°ÄÄÄÄÇÈÈÈÖÖÖÖ  
000001F0 D6 D7 D8 D9 DA E1 E2 E3 E4 E5 E6 E7 E8 E9 EA F1 Ö×ØÜÜÄÄÄÄÇÈÈÈÖÖÖÖ  
00000200 F2 F3 F4 F5 F6 F7 F8 F9 FA FF C4 00 1F 01 00 03 öööö÷÷÷÷ÿÄ.....  
00000210 01 01 01 01 01 01 01 01 01 00 00 00 00 00 01 .....  
00000220 02 03 04 05 06 07 08 09 0A 0B FF C4 00 B5 11 00 .....ÿÄ.µ..  
00000230 02 01 02 04 04 03 04 07 05 04 04 00 01 02 77 00 .....w..  
00000240 01 02 03 11 04 05 21 31 06 12 41 51 07 61 71 13 .....!1..AQ.aq..  
00000250 22 32 81 08 14 42 91 A1 B1 C1 09 23 33 52 F0 15 "2...B`i;±Ä.#3Rð..  
00000260 62 72 D1 0A 16 24 34 E1 25 F1 17 18 19 1A 26 27 brñN..\$4â§ñ....&'  
00000270 28 29 2A 35 36 37 38 39 3A 43 44 45 46 47 48 49 ()\*56789:CDEFGHI  
00000280 4A 53 54 55 56 57 58 59 5A 63 64 65 66 67 68 69 JSTUVWXYZcdefghi  
00000290 6A 73 74 75 76 77 78 79 7A 82 83 84 85 86 87 88 jstuvwxyz,f.....t+`  
000002A0 89 8A 92 93 94 95 96 97 98 99 9A A2 A3 A4 A5 A6 §`@\*~`µ¶·.°ÄÄÄ  
000002B0 A7 A8 A9 AA B2 B3 B4 B5 B6 B7 B8 B9 BA C2 C3 C4 §`@\*~`µ¶·.°ÄÄÄ  
000002C0 C5 C6 C7 C8 C9 CA D2 D3 D4 D5 D6 D7 D8 D9 DA E2 ÄÇÈÈÈÈÖÖÖÖÖ×ØÜÜÄ  
000002D0 E3 E4 E5 E6 E7 E8 E9 EA F2 F3 F4 F5 F6 F7 F8 F9 ÄÄÄÇÈÈÈÈÖÖÖÖ÷÷÷÷ÿÄ  
000002E0 FA FF DA 00 0C 03 01 00 02 11 03 11 00 3F 00 FD úÿÜ.....?..ý  
000002F0 FC A2 F9 B7 FE 0A 49 FB 5E C7 FB 3A 7C 26 93 44 ü÷÷.p.Iû^Çû:|&"D  
00000300 D1 EF 2D FF 00 E1 32 F1 44 4F 6F 6F 1A DC 3C 77 Ñi-ÿ.â2ñDÖÖÖ.Ü<w  
00000310 1A 6D AB AB AB DE 8D 98 2A C0 8D B1 92 CB F3 92 .m«««P.~\*Ä.±'Èó'  
00000320 C3 70 89 D6 B0 C4 E2 21 42 9B AB 53 64 7B 19 0E Äp«Ö°ÄÄ!B>«Sd{..  
00000330 49 8A CD F1 F4 F2 EC 1C 6F 39 BB 7A 2E AD F9 25 IŠİñööi.o9»z..ù§  
00000340 AB F2 37 BF 6A 4F F8 28 1F 81 7F 65 EB 8B 8D 2A «ö7¿jJÖø(...eë<.\*  
00000350 F2 6B 8D 73 C5 51 44 1D 74 7B 11 F3 44 5D 19 A3 òk.sÄQD.t{.óD].£  
00000360 33 CA 7E 48 94 90 B9 1F 34 81 64 46 11 B2 90 6B 3È~H".².4.dF.°.k  
00000370 E3 0F 89 3F F0 57 CF 8A 7E 2E F3 A2 D0 E3 D0 7C ä.¿?ðWİŠ~.óçðÄð|  
00000380 27 BF F6 A3 2C 12 5F DA FD AA E8 43 F3 05 8A 47 'oö£,.ZÜý\*èCö.ŠG  
00000390 9C BC 6D C1 52 59 62 42 4A 02 36 82 54 FC BD AA ö«mÄRYbBJ.6,Tü«\*  
000003A0 EA B7 5A F6 A9 73 7D 7D 73 71 79 7B 79 2B 4F 71 è-Zö@s)}sqy{y+Oq  
000003B0 71 3C 86 49 67 91 89 66 77 63 92 CC 49 24 92 72 q<tIg`«fwc'İİ§'r  
000003C0 49 CD 57 AF 84 C6 67 B8 9A D2 F7 1F 2A EC BF CF İİW~„Æg.šÖ÷.\*i¿İ  
000003D0 73 FB 23 86 3C 1D E1 FC AE 8C 7E B5 49 62 2A E9 sü#t<.áuØE~µİb\*é  
000003E0 79 4D 5D 5F AD A1 F0 A5 7D AE 9B EE D9 E9 BE 27 yM]\_.;ð¥}ø>iÜé%'  
000003F0 FD B3 FE 2C 78 BB 5C 9F 50 BA F8 89 E2 E8 6E 2E ý'b,x»\ŸP°ø«âèn.  
00000400 36 EE 4B 2D 4A 4B 18 06 D5 0A 36 C3 09 48 D7 80 6İK-JK..Ö.6Ä.H×ē  
00000410 A3 B5 46 4E 49 C9 24 99 FC 19 FB 70 FC 5D F0 1E 3µFNİEŞµü.ûpü]ð.  
00000420 AR 25 E5 8F C4 2F 13 4F 34 91 18 4A EA 37 67 52 ©%Ä.Ä/.O4'.Jè7αR

Results

Checksum Search (0 hits)

Algorithm	Checksum	Usage
-----------	----------	-------

x Expected result:

Offset(h): 4C Block(h): 4C-7F Length(h): 34 \* Modified \* Overwrite

Checksum

Search (0 hits)

Algorithm	Checksum	Usage
-----------	----------	-------

Expected result:

Offset(h): 158

Block(h): 158-17E

Length(h): 27

\* Modified \*

Overwrite

Decided to backtrack and check the file again since this didnt seem to work

Original had xx and I removed it and put into HxD

Removedxx.txt		capturedimage.jpg															
Offset(h)	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	Decoded text
00000000	53	68	65	20	77	61	73	20	6D	69	6E	65	21	90	73	72	She was mine!.sr
00000010	69	F7	30	92	FD	AB	36	E9	2E	77	1E	BF	9D	7A	3B	69	i÷0'ý«6é.w.¿.z;i
00000020	EB	34	7B	70	2A	B7	FC	23	51	C8	D9	C5	4A	60	79	BA	ë4{p*·ü#QËÜÄ`y`
00000030	89	61	65	CE	71	5B	42	D5	EE	AD	D4	27	2D	5D	25	D7	¾æîq[BÖi.Ô'-]¾*
00000040	85	61	DC	3D	AA	4B	5D	2E	3B	6E	07	34	53	68	65	20	...aÜ="K].;n.4She
00000050	77	61	73	20	6D	69	6E	65	21	53	68	65	20	77	61	73	was mine!She was
00000060	20	6D	69	6E	65	21	53	68	65	20	77	61	73	20	6D	69	mine!She was mi
00000070	6E	65	21	53	68	65	20	77	61	73	20	6D	69	6E	65	21	ne!She was mine!
00000080	FF	D8	FF	E0	00	10	4A	46	49	46	00	01	01	01	00	90	ÿØyà..JFIF.....
00000090	00	90	00	00	FF	DB	00	43	00	02	01	01	02	01	01	02	....ÿÛ.C.....
000000A0	02	02	02	02	02	02	03	05	03	03	03	03	03	06	04		.....
000000B0	04	03	05	07	06	07	07	06	07	07	08	09	0B	09	08		.....
000000C0	08	0A	08	07	07	0A	0D	0A	0A	0B	0C	0C	0C	0C	07	09	.....
000000D0	0E	0F	0D	0C	0E	0B	0C	0C	0C	FF	DB	00	43	01	02	02	.....ÿÛ.C...
000000E0	02	03	03	03	06	03	03	06	0C	08	07	08	0C	0C	0C	0C	.....
000000F0	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	.....
00000100	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	.....
00000110	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	FF	C0	.....ÿÀ
00000120	00	11	08	02	88	04	80	03	01	22	00	02	11	01	03	11	....^.€..".
00000130	01	FF	C4	00	1F	00	00	01	05	01	01	01	01	01	01	00	.ÿÄ.....
00000140	00	00	00	00	00	00	00	01	02	03	04	05	06	07	08	09	.....
00000150	0A	0B	FF	C4	00	B5	10	00	02	01	03	03	02	04	03	05	..ÿÄ.p.....
00000160	05	04	04	00	00	01	7D	01	02	03	00	04	11	05	12	21	.....}.
00000170	31	41	06	13	51	61	07	22	71	14	32	81	91	A1	08	23	1A...Qa."q.2.'i.#
00000180	42	B1	C1	15	52	D1	F0	24	33	62	72	82	09	0A	16	17	B±Ä.RÑø\$3br,...
00000190	18	19	1A	25	26	27	28	29	2A	34	35	36	37	38	39	3A	...¾&'()*456789:
000001A0	43	44	45	46	47	48	49	4A	53	54	55	56	57	58	59	5A	CDEFGHIJSTUVWXYZ
000001B0	63	64	65	66	67	68	69	6A	73	74	75	76	77	78	79	7A	cdefghijstuvwxyz
000001C0	83	84	85	86	87	88	89	8A	92	93	94	95	96	97	98	99	f.....t+^¾\$'"".....™
000001D0	9A	A2	A3	A4	A5	A6	A7	A8	A9	AA	B2	B3	B4	B5	B6	B7	šc£¾\$!\$'©ª«»´µ¶·
000001E0	B8	B9	BA	C2	C3	C4	C5	C6	C7	C8	C9	CA	D2	D3	D4	D5	,ª«AAAÀÆÇÈÉÊËÏÓÔÕ
000001F0	D6	D7	D8	D9	DA	E1	E2	E3	E4	E5	E6	E7	E8	E9	EA	F1	Ö×ØÙÁâãäåæçèéêñ
00000200	F2	F3	F4	F5	F6	F7	F8	F9	FA	FF	C4	00	1F	01	00	03	òóôõö÷øùúÿÄ.....
00000210	01	01	01	01	01	01	01	01	01	00	00	00	00	00	00	01	.....
00000220	02	03	04	05	06	07	08	09	0A	0B	FF	C4	00	B5	11	00	.....ÿÄ.p..
00000230	02	01	02	04	04	03	04	07	05	04	04	00	01	02	77	00	.....w.
00000240	01	02	03	11	04	05	21	31	06	12	41	51	07	61	71	13	.....!l..AQ.aq.
00000250	22	32	81	08	14	42	91	A1	B1	C1	09	23	33	52	F0	15	"2...B'¡;Ä.#3Rø.
00000260	62	72	D1	0A	16	24	34	E1	25	F1	17	18	19	1A	26	27	brÑ..\$4áñ....&'
00000270	28	29	2A	35	36	37	38	39	3A	43	44	45	46	47	48	49	()*56789:CDEFGHI
00000280	4A	53	54	55	56	57	58	59	5A	63	64	65	66	67	68	69	JSTUVWXYZcdefghi
00000290	6A	73	74	75	76	77	78	79	7A	82	83	84	85	86	87	88	jstuvwxyz,f.....t+^
000002A0	89	8A	8B	8C	8D	8E	8F	89	8A	8B	8C	8D	8E	8F	89	8A	¾\$'"".....™šc£¾\$!\$'©ª«»´µ¶·
Checksum		Search (0 hits)															
Results																	
Algorithm		Checksum										Usage					
Expected result:																	
x																	
Offset(h): C33												Overwrite					

Saw evidence of potential anti-forensics with the words: She was mine!



HxD - [D:\Forensic Midterm\JC Vape Shop\Exhibit 1\Removedxx.txt]

File Edit Search View Analysis Tools Window Help

16 Windows (ANSI) hex

Removedxx.txt capturedimage.jpg

Offset(h)	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	Decoded text
00000000	53	68	65	20	77	61	73	20	6D	69	6E	65	21	90	73	72	She was mine!.sr
00000010	69	F7	30	92	FD	AB	36	E9	2E	77	1E	BF	9D	7A	3B	69	i÷0'ý«6é.w.¿.z;i
00000020	EB	34	7B	70	2A	B7	FC	23	51	C8	D9	C5	4A	60	79	BA	ë4{p*·ü#QÈÜÄJ'y°
00000030	89	61	65	CE	71	5B	42	D5	EE	AD	D4	27	2D	5D	25	D7	æaeİq[BÖi.Ô'-]§*
00000040	85	61	DC	3D	AA	4B	5D	2E	3B	6E	07	34	53	68	65	20	..aÜ="K].;n.4She
00000050	77	61	73	20	6D	69	6E	65	21	53	68	65	20	77	61	73	was mine!She was
00000060	20	6D	69	6E	65	21	53	68	65	20	77	61	73	20	6D	69	mine!She was mi
00000070	6E	65	21	53	68	65	20	77	61	73	20	6D	69	6E	65	21	ne!She was mine!
00000080	FF	D8	FF	E0	00	10	4A	46	49	46	00	01	01	01	00	90	ÿÿà..JFIF.....
00000090	00	90	00	00	FF	DB	00	43	00	02	01	01	02	01	01	02	....ÿÛ.C.....
000000A0	02	02	02	02	02	02	03	05	03	03	03	03	03	03	06	04	.....
000000B0	04	03	05	07	06	07	07	06	07	07	08	09	0B	09	08		.....
000000C0	08	0A	08	07	07	0A	0D	0A	0A	0B	0C	0C	0C	0C	07	09	.....
000000D0	0E	0F	0D	0C	0E	0B	0C	0C	0C	FF	DB	00	43	01	02	02	.....ÿÛ.C...
000000E0	02	03	03	03	06	03	03	06	0C	08	07	08	0C	0C	0C	0C	.....
000000F0	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	.....
00000100	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	.....
00000110	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	0C	FF	C0	.....ÿÀ
00000120	00	11	08	02	88	04	80	03	01	22	00	02	11	01	03	11	....^..€.."
00000130	01	FF	C4	00	1F	00	00	01	05	01	01	01	01	01	01	00	.ÿÀ.....
00000140	00	00	00	00	00	00	00	01	02	03	04	05	06	07	08	09	.....
00000150	0A	0B	FF	C4	00	B5	10	00	02	01	03	03	02	04	03	05	..ÿÀ.µ.....
00000160	05	04	04	00	00	01	7D	01	02	03	00	04	11	05	12	21	.....}.....!
00000170	31	41	06	13	51	61	07	22	71	14	32	81	91	A1	08	23	1A..Qa."q.2.'i. #
00000180	42	B1	C1	15	52	D1	F0	24	33	62	72	82	09	0A	16	17	B±Ä.RNð\$3br,....
00000190	18	19	1A	25	26	27	28	29	2A	34	35	36	37	38	39	3A	...%&'()*456789:
000001A0	43	44	45	46	47	48	49	4A	53	54	55	56	57	58	59	5A	CDEFGHIJSTUVWXYZ
000001B0	63	64	65	66	67	68	69	6A	73	74	75	76	77	78	79	7A	cdefghijstuvwxyz
000001C0	83	84	85	86	87	88	89	8A	92	93	94	95	96	97	98	99	f,...t+^%\$'""~™
000001D0	9A	A2	A3	A4	A5	A6	A7	A8	A9	AA	B2	B3	B4	B5	B6	B7	šcŁxŸ!\$'©ª³´µ¶·
000001E0	B8	B9	BA	C2	C3	C4	C5	C6	C7	C8	C9	CA	D2	D3	D4	D5	,²°ÄÅÄÄÇÈÉÊËÖÓÔÕ
000001F0	D6	D7	D8	D9	DA	E1	E2	E3	E4	E5	E6	E7	E8	E9	EA	F1	Ö×ØÙÚÄÅÄÄÄÄÇÈÉÊË
00000200	F2	F3	F4	F5	F6	F7	F8	F9	FA	FF	C4	00	1F	01	00	03	ðóôõö÷øùúÿÀ.....
00000210	01	01	01	01	01	01	01	01	01	00	00	00	00	00	00	01	.....
00000220	02	03	04	05	06	07	08	09	0A	0B	FF	C4	00	B5	11	00	.....ÿÀ.µ..
00000230	02	01	02	04	04	03	04	07	05	04	04	00	01	02	77	00	.....w.
00000240	01	02	03	11	04	05	21	31	06	12	41	51	07	61	71	13	.....!l..AQ.aq.
00000250	22	32	81	08	14	42	91	A1	B1	C1	09	23	33	52	F0	15	"2...B`j;±Ä.#3Rð.
00000260	62	72	D1	0A	16	24	34	E1	25	F1	17	18	19	1A	26	27	brÑ..\$4á%ñ....&'
00000270	28	29	2A	35	36	37	38	39	3A	43	44	45	46	47	48	49	()*56789:CDEFGHI
00000280	4A	53	54	55	56	57	58	59	5A	63	64	65	66	67	68	69	JSTUVWXYZcdefghi
00000290	6A	73	74	75	76	77	78	79	7A	82	83	84	85	86	87	88	jstuvwxyz,f,...t+^
000002A0	89	9A	9B	9C	9D	9E	9F	9G	9H	9I	9J	9K	9L	9M	9N	9O	~šŸ""~™šçŁxŸ!

Results

Checksum Search (0 hits)

Algorithm	Checksum	Usage
-----------	----------	-------

x Expected result:

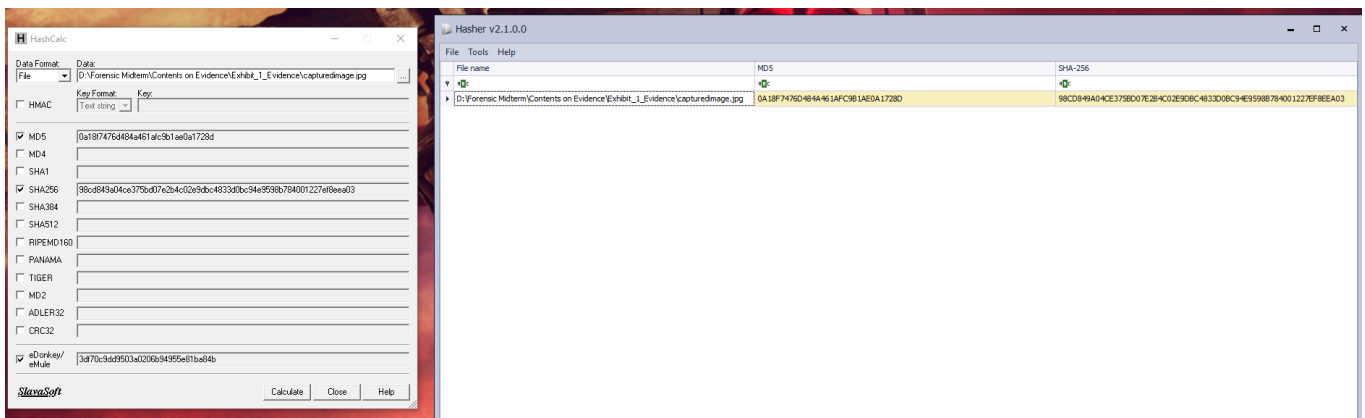
Offset(h): 0 Block(h): 0-7F Length(h): 80 Overwrite

Got rid of all hex data before the FF D8 FF E0



Got an image with the words: she was mine

Initial hex values that repeated that I thought to be anti-forensics techniques may be corruption of the data, investigators can look further if they want to, but the only anti-forensics seems to be the hex data at the start



0a18f7476d484a461afc9b1ae0a1728d

98cd849a04ce375bd07e2b4c02e9dbc4833d0bc94e9598b784001227ef8eea03