

MS Assignment 01

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Binary Output :

```
root@Vitesh-Reddy:~/MS Assignments/Assign 01# od -N 500 giphy.gif
0000000 044507 034106 060471 000740 000740 177767 006000 001404
0000020 003020 010404 003011 003426 013404 005417 006034 017007
0000040 010425 011442 022416 013032 007447 024010 014436 015054
0000060 030023 016442 013063 032015 020445 025471 035045 011042
0000100 031476 040060 007435 023102 041034 011447 030506 044044
0000120 031470 041110 044473 010043 027513 046031 020454 027115
0000140 047430 037110 032521 051042 016464 035525 053056 011047
0000160 031126 053044 016063 047527 055110 020472 040533 056066
0000200 014056 034535 057043 046530 040137 060444 026065 037544
0000220 062462 015463 043545 063077 026513 037147 063437 052140
0000240 035154 066057 033124 042556 067450 015071 047157 072105
0000260 034103 047167 073464 034530 055571 074515 063556 040173
0000300 076442 037112 066576 100126 042522 056201 101473 025510
0000320 050604 104070 040516 054210 104512 070571 047213 106470
0000340 034527 062616 107526 022514 052220 110107 056567 057621
0000360 111117 035541 052224 112475 073202 051230 114047 053145
0000400 063631 115077 045532 056232 117066 037130 070236 120537
0000420 024126 060241 120523 035542 067243 122536 043136 065245
0000440 123076 067172 076247 124140 074207 056251 124456 057150
0000460 075651 126121 041157 063655 127123 063167 107656 130201
0000500 043546 103260 130145 107232 071663 132550 043164 102265
0000520 133127 031145 100266 133557 043163 120267 134224 055561
0000540 123673 136237 050557 075674 136157 066613 104675 136572
0000560 103623 067700 140074 046575 127700 140653 061171 105301
0000600 140536 072623 075703 141513 106632 122303 142231 073204
0000620 134305 143265 052571 110706 143147 121255 114710 144573
0000640 065201 106311 145175 104642 126712 145235 143302 073313
0000660 146100 051603 113715 147153 056200 132716 147653 070611
0000700 121317 150176 101223 120720 150170 135700 145320 150721
0000720 055614 117321 151213 067641 125722 151214 122665 104324
0000740 152542 041575 123725 153226 073620 104727 153525 100250
0000760 131727 153630
0000764
root@Vitesh-Reddy:~/MS Assignments/Assign 01#
```

HexaDecimal Output :

```
root@Vitesh-Reddy:~/MS Assignments/Assign 01# od -Ax -tx1 -N 500 giphy.gif
0000000 47 49 46 38 39 61 e0 01 e0 01 f7 ff 00 0c 04 03
0000010 10 06 04 11 09 06 16 07 04 17 0f 0b 1c 0c 07 1e
0000020 15 11 22 13 0e 25 1a 16 27 0f 08 28 1e 19 2c 1a
0000030 13 30 22 1d 33 16 0d 34 25 21 39 2b 25 3a 22 12
0000040 3e 33 30 40 1d 0f 42 26 1c 42 27 13 46 31 24 48
0000050 38 33 48 42 3b 49 23 10 4b 2f 19 4c 2c 21 4d 2e
0000060 18 4f 48 3e 51 35 22 52 34 1d 55 3b 2e 56 27 12
0000070 56 32 24 56 33 1c 57 4f 48 5a 3a 21 5b 41 36 5c
0000080 2e 18 5d 39 23 5e 58 4d 5f 40 24 61 35 2c 64 3f
0000090 32 65 33 1b 65 47 3f 66 4b 2d 67 3e 1f 67 60 54
00000a0 6c 3a 2f 6c 54 36 6e 45 28 6f 39 1a 6f 4e 45 74
00000b0 43 38 77 4e 34 77 58 39 79 5b 4d 79 6e 67 7b 40
00000c0 22 7d 4a 3e 7e 6d 56 80 52 45 81 5c 3b 83 48 2b
00000d0 84 51 38 88 4e 41 88 58 4a 89 79 71 8b 4e 38 8d
00000e0 57 39 8e 65 56 8f 4c 25 90 54 47 90 77 5d 91 5f
00000f0 4f 92 61 3b 94 54 3d 95 82 76 98 52 27 98 65 56
000100 99 67 3f 9a 5a 4b 9a 5c 36 9e 58 3e 9e 70 5f a1
000110 56 28 a1 60 53 a1 62 3b a3 6e 5e a5 5e 46 a5 6a
000120 3e a6 7a 6e a7 7c 60 a8 87 78 a9 5c 2e a9 68 5e
000130 a9 7b 51 ac 6f 42 ad 67 53 ae 77 66 ae 8f 81 b0
000140 66 47 b0 86 65 b0 9a 8e b3 73 68 b5 74 46 b5 84
000150 57 b6 65 32 b6 80 6f b7 73 46 b7 a0 94 b8 71 5b
000160 bb a7 9f bc 6f 51 bc 7b 6f bc 8b 6d bd 89 7a bd
000170 93 87 c0 6f 3c c0 7d 4d c0 af ab c1 79 62 c1 8a
000180 5e c1 93 75 c3 7b 4b c3 9a 8d c3 a4 99 c4 84 76
000190 c5 b8 b5 c6 79 55 c6 91 67 c6 ad a2 c8 99 7b c9
0001a0 81 6a c9 8c 7d ca a2 89 ca ad 9d ca c2 c6 cb 76
0001b0 40 cc 83 53 cd 97 6b ce 80 5c ce b5 ab cf 89 71
0001c0 cf a2 7e d0 93 82 d0 a1 78 d0 c0 bb d0 ca d1 d1
0001d0 8c 5b d1 9e 8b d2 a1 6f d2 ab 8c d2 b5 a5 d4 88
0001e0 62 d5 7d 43 d5 a7 96 d6 90 77 d7 89 55 d7 a8 80
0001f0 d7 b3 98 d7
0001f4
root@Vitesh-Reddy:~/MS Assignments/Assign 01# |
```

Storing Output in a file :

```
root@Vitesh-Reddy:~/MS Assignments/Assign 01# od -Ax -tx1 giphy.gif > output.txt
root@Vitesh-Reddy:~/MS Assignments/Assign 01# ls
giphy.gif giphy.gif:Zone.Identifier output.txt
root@Vitesh-Reddy:~/MS Assignments/Assign 01# |
```

Offset (HEX)	Hex Value	Component Name	Description
0	47 49 46 38 39 61	GIF Header	Identifies the file as a GIF89a, supporting transparency and animation.
6	E0 01 E0 01	Logical Screen Descriptor	Defines the canvas size. E0 01 (hex) is 480 pixels in both width and height.
00000A	F7	Global Color Table Flag	Indicates a global color table exists with 256 colors (8-bit depth).
00000D	0C 04 03 ...	Global Color Table	The RGB color palette starting with the first color. This table spans 768 bytes.
00030D	21 FF 0B	Application Extension	Introduces the NETSCAPE2.0 extension, which confirms this is an animated GIF designed for looping.
320	21 F9 04	Graphic Control Extension	Controls animation specifics such as delay time and transparency.
328	2C	Image Descriptor	Separator marking the beginning of an individual image frame.
00032D	E0 01 E0 01	Image Dimensions	Defines the width and height for this specific image frame as 480 x 480 pixels.
End	3B	Trailer	The single byte 3B at the end of the file indicates the termination of the GIF data stream.

Summary of Analysis

- **Version:** GIF89a (Supports transparency and animation).
- **Dimensions:** 480 pixels width by 480 pixels height.
- **Animation:** The presence of the NETSCAPE2.0 string confirms this file is an animated GIF loop.
- **Color Depth:** The F7 flag confirms a full 256-color global palette is used.

Table of screenshots

Gif Signature:

```
root@Vitesh-Reddy:~/MS Assignments/Assign 01# od -An -j 0 -N 6 -c giphy.gif
G I F 8 9 a
```

Screen descriptor:

```
root@Vitesh-Reddy:~/MS Assignments/Assign 01# od -An -j 6 -N 7 -tx1 giphy.gif
e0 01 e0 01 f7 ff 00
root@Vitesh-Reddy:~/MS Assignments/Assign 01# |
```

Global Color Table:

```
root@Vitesh-Reddy:~/MS Assignments/Assign 01# od -An -j 13 -N 192 -tx1 giphy.gif
0c 04 03 10 06 04 11 09 06 16 07 04 17 0f 0b 1c
0c 07 1e 15 11 22 13 0e 25 1a 16 27 0f 08 28 1e
19 2c 1a 13 30 22 1d 33 16 0d 34 25 21 39 2b 25
3a 22 12 3e 33 30 40 1d 0f 42 26 1c 42 27 13 46
31 24 48 38 33 48 42 3b 49 23 10 4b 2f 19 4c 2c
21 4d 2e 18 4f 48 3e 51 35 22 52 34 1d 55 3b 2e
56 27 12 56 32 24 56 33 1c 57 4f 48 5a 3a 21 5b
41 36 5c 2e 18 5d 39 23 5e 58 4d 5f 40 24 61 35
2c 64 3f 32 65 33 1b 65 47 3f 66 4b 2d 67 3e 1f
67 60 54 6c 3a 2f 6c 54 36 6e 45 28 6f 39 1a 6f
4e 45 74 43 38 77 4e 34 77 58 39 79 5b 4d 79 6e
67 7b 40 22 7d 4a 3e 7e 6d 56 80 52 45 81 5c 3b
root@Vitesh-Reddy:~/MS Assignments/Assign 01#
```

Gif image descriptor :

```
root@Vitesh-Reddy:~/MS Assignments/Assign 01# od -An -j 328 -N 16 -tx1 giphy.gif
b3 73 68 b5 74 46 b5 84 57 b6 65 32 b6 80 6f b7
root@Vitesh-Reddy:~/MS Assignments/Assign 01# |
```

Application extension :

```
root@Vitesh-Reddy:~/MS Assignments/Assign 01# od -Ax -j 0x30D -N 3 -tx1 giphy.gif
00030d 21 ff 0b
000310
root@Vitesh-Reddy:~/MS Assignments/Assign 01# |
```

Graphic control extension :

```
root@Vitesh-Reddy:~/MS Assignments/Assign 01# od -Ax -j 0x320 -N 3 -tx1 giphy.gif
000320 21 f9 04
000323
root@Vitesh-Reddy:~/MS Assignments/Assign 01# |
```