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Script started on 2024-09-19 20:56:25-05:00 [TERM="xterm-256color" TTY="/dev/pts/5" COLUMNS="310" LINES="63"]
[?2004h(base) ]0;jovyan@jupyter-rs8f: ~/3240/Projects/Project 1[01;32mjovyan@jupyter-rs8f[00m:[01;34m~/3240/Projects/Project
1[00m$ ls
[?2004l
Project1_Log.txt actualOutput.txt expectedOutput.txt expetedOutput.txt [0m[01;32mproject1[0m project1.c project1.sh
[01;32mproject2[0m project2.c test.txt [01;32mtesting.sh[0m
[?2004h(base) ]0;jovyan@jupyter-rs8f: ~/3240/Projects/Project 1[01;32mjovyan@jupyter-rs8f[00m:[01;34m~/3240/Projects/Project
1[00m$ [7mgcc project1.c -o project1[27mgcc project1.c -o project1
[?2004l
[?2004h(base) ]0;jovyan@jupyter-rs8f: ~/3240/Projects/Project 1[01;32mjovyan@jupyter-rs8f[00m:[01;34m~/3240/Projects/Project
1[00m$ [7m./project1 test.txt[27m[1P./project1 test.txt
[?2004l
00000000: 496d 706f 7274 616e 7420 4869 6e74 3a20 Important Hint:
00000010: 0a0a 5468 6520 6973 7072 696e 7428 2920 ..The isprint()
00000020: 6675 6e63 7469 6f6e 2063 6865 636b 7320 function checks
00000030: 7768 6574 6865 7220 6120 6368 6172 6163 whether a charac
00000040: 7465 7220 0a69 7320 6120 7072 696e 7461 ter .is a printa
00000050: 626c 6520 6368 6172 6163 7465 7220 6f72 ble character or
00000060: 206e 6f74 2e0a 4368 6563 6b20 6d6f 7265 not..Check more
00000070: 2069 6e66 6f72 6d61 7469 6f6e 2069 6e3a information in:
00000080: 200a 6874 7470 733a 2f2f 7777 772e 7072 .https://www.pr
00000090: 6f67 7261 6d69 7a2e 636f 6d2f 632d 7072 ogramiz.com/c-pr
000000a0: 6f67 7261 6d6d 696e 672f 6c69 6272 6172 ogramming/librar
000000b0: 792d 6675 6e63 7469 6f6e 2f63 7479 7065 y-function/ctype
000000c0: 2e68 2f69 7370 7269 6e74 .h/isprint
[?2004h(base) ]0;jovyan@jupyter-rs8f: ~/3240/Projects/Project 1[01;32mjovyan@jupyter-rs8f[00m:[01;34m~/3240/Projects/Project
1[00m$ [7m./project1 project1.c[27m./project1 project1.c
[?2004l
00000000: 2f2f 5261 686d 6120 5365 6964 0a2f 2f43 //Rahma Seid.//C
00000010: 5343 4920 3332 3430 0a2f 2f54 6173 6b3a SCI 3240.//Task:
00000020: 2057 7269 7465 2061 2043 2070 726f 6772 Write a C progr
00000030: 616d 2074 6861 7420 7461 6b65 7320 6120 am that takes a
00000040: 7369 6e67 6c65 2063 6f6d 6d61 6e64 2d6c single command-l
00000050: 696e 6520 6172 6775 6d65 6e74 2061 6e64 ine argument and
00000060: 2070 726f 6475 6365 7320 7468 6520 7361 produces the sa
00000070: 6d65 206f 7574 7075 7420 6173 2074 6865 me output as the
00000080: 2078 7864 2070 726f 6772 616d 2077 6974 xxd program wit
00000090: 6820 7468 6520 7361 6d65 2061 7267 756d h the same argum
000000a0: 656e 742e 0a2f 2f54 6578 7473 2066 696c ent.//Texts fil
000000b0: 6573 2075 7365 643a 2074 6573 742e 7478 es used: test.tx
000000c0: 740a 0a23 696e 636c 7564 6520 3c73 7464 t..#include <std
000000d0: 696f 2e68 3e0a 2369 6e63 6c75 6465 203c io.h>.#include <
000000e0: 7374 646c 6962 2e68 3e0a 2369 6e63 6c75 stdlib.h>.#inclu
000000f0: 6465 203c 6374 7970 652e 683e 0a0a 696e de <ctype.h>..in
00000100: 7420 6d61 696e 2869 6e74 2061 7267 632c t main(int argc,
00000110: 2063 6861 7220 2a61 7267 765b 5d29 7b0a char *argv[]){.
00000120: 2020 2020 6966 2028 6172 6763 2021 3d20 if (argc !=
00000130: 3229 7b0a 2020 2020 2020 2020 7072 696e 2){. prin
00000140: 7466 2822 5573 6167 653a 2025 7320 3c66 tf("Usage: %s <f
00000150: 696c 656e 616d 653e 5c6e 222c 2061 7267 ilename>\n", arg
00000160: 765b 305d 293b 0a20 2020 2020 2020 2072 v[0]);. r
00000170: 6574 7572 6e20 313b 0a20 2020 207d 0a0a eturn 1;. }..
00000180: 2020 2020 2f2f 204f 7065 6e20 6669 6c65 // Open file
00000190: 0a20 2020 2046 494c 4520 2a66 696c 6520 . FILE *file
000001a0: 3d20 666f 7065 6e28 6172 6776 5b31 5d2c = fopen(argv[1],
000001b0: 2022 7262 2229 3b20 2f2f 2027 7262 2720 "rb"); // 'rb'
000001c0: 6f70 656e 7320 696e 2062 696e 6172 7920 opens in binary
000001d0: 6d6f 6465 0a20 2020 2069 6620 2866 696c mode. if (fil
000001e0: 6520 3d3d 204e 554c 4c29 7b0a 2020 2020 e == NULL){.
000001f0: 2020 2020 7072 696e 7466 2822 4572 726f printf("Erro
00000200: 723a 2043 6f75 6c64 206e 6f74 206f 7065 r: Could not ope
00000210: 6e20 6669 6c65 2025 735c 6e22 2c20 6172 n file %s\n", ar
00000220: 6776 5b31 5d29 3b0a 2020 2020 2020 2020 gv[1]);.
00000230: 7265 7475 726e 2031 3b0a 2020 2020 7d0a return 1;. }.
00000240: 0a20 2020 2075 6e73 6967 6e65 6420 6368 . unsigned ch
00000250: 6172 2062 7566 6665 725b 3136 5d3b 202f ar buffer[16]; /
00000260: 2f20 4172 7261 7920 746f 2068 6f6c 6420 / Array to hold
00000270: 3136 2063 6861 7261 6374 6572 7320 2831 16 characters (1
00000280: 3620 6279 7465 7320 7065 7220 6c69 6e65 6 bytes per line
00000290: 290a 2020 2020 696e 7420 696e 6465 783b ). int index;
000002a0: 0a20 2020 2069 6e74 2062 7974 6573 5f72 . int bytes_r
000002b0: 6561 643b 0a20 2020 2069 6e74 206f 6666 ead;. int off
000002c0: 7365 7420 3d20 303b 202f 2f20 5472 6163 set = 0; // Trac
000002d0: 6b73 2074 6865 2070 6f73 6974 696f 6e20 ks the position
000002e0: 696e 2074 6865 2066 696c 650a 0a20 2020 in the file..
000002f0: 2077 6869 6c65 2028 2862 7974 6573 5f72 while ((bytes_r
00000300: 6561 6420 3d20 6672 6561 6428 6275 6666 ead = fread(buff
00000310: 6572 2c20 312c 2073 697a 656f 6628 6275 er, 1, sizeof(bu
00000320: 6666 6572 292c 2066 696c 6529 2920 3e20 ffer), file)) >
00000330: 3029 207b 0a20 2020 2020 2020 202f 2f20 0) {. //
00000340: 5072 696e 7420 7468 6520 6f66 6673 6574 Print the offset
00000350: 2028 3820 6469 6769 7473 2c20 6865 7861 (8 digits, hexa
00000360: 6465 6369 6d61 6c2c 2066 6f6c 6c6f 7765 decimal, followe
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00000370: 6420 6279 2061 2063 6f6c 6f6e 290a 2020 d by a colon).
00000380: 2020 2020 2020 7072 696e 7466 2822 2530 printf("%0
00000390: 3878 3a20 222c 206f 6666 7365 7429 3b0a 8x: ", offset);.
000003a0: 0a20 2020 2020 2020 202f 2f20 5072 696e . // Prin
000003b0: 7420 6865 7820 7661 6c75 6573 2069 6e20 t hex values in
000003c0: 7477 6f20 636f 6c75 6d6e 7320 6f66 2038 two columns of 8
000003d0: 2062 7974 6573 0a20 2020 2020 2020 2066 bytes. f
000003e0: 6f72 2028 696e 6465 7820 3d20 303b 2069 or (index = 0; i
000003f0: 6e64 6578 203c 2031 363b 2069 6e64 6578 ndex < 16; index
00000400: 2b2b 2920 7b0a 2020 2020 2020 2020 2020 ++).
00000410: 2020 6966 2028 696e 6465 7820 3c20 6279 if (index < by
00000420: 7465 735f 7265 6164 2920 7b0a 2020 2020 tes_read) {.
00000430: 2020 2020 2020 2020 2020 2020 2f2f 2050 // P
00000440: 7269 6e74 2065 6163 6820 6279 7465 2069 rint each byte i
00000450: 6e20 6865 7820 666f 726d 6174 0a20 2020 n hex format.
00000460: 2020 2020 2020 2020 2020 2020 2070 7269 pri
00000470: 6e74 6628 2225 3032 7822 2c20 6275 6666 nt("%02x", buff
00000480: 6572 5b69 6e64 6578 5d29 3b0a 2020 2020 er[index]);.
00000490: 2020 2020 2020 2020 7d20 656c 7365 207b } else {
000004a0: 0a20 2020 2020 2020 2020 2020 2020 2020 .
000004b0: 202f 2f20 5072 696e 7420 7370 6163 6573 // Print spaces
000004c0: 2066 6f72 2070 6164 6469 6e67 2077 6865 for padding whe
000004d0: 6e20 6665 7765 7220 7468 616e 2031 3620 n fewer than 16
000004e0: 6279 7465 730a 2020 2020 2020 2020 2020 bytes.
000004f0: 2020 2020 2020 7072 696e 7466 2822 2020 printf("
00000500: 2229 3b0a 2020 2020 2020 2020 2020 2020 ");.
00000510: 7d0a 0a0a 2020 2020 2020 2020 2020 2020 }...
00000520: 6966 2028 696e 6465 7820 2520 3220 3d3d if (index % 2 ==
00000530: 2031 2920 7b0a 2020 2020 2020 2020 2020 1) {.
00000540: 2020 2020 2020 7072 696e 7466 2822 2022 printf(" "
00000550: 293b 202f 2f20 4164 6420 6120 7370 6163 ); // Add a spac
00000560: 6520 6166 7465 7220 6576 6572 7920 7477 e after every tw
00000570: 6f20 6279 7465 730a 2020 2020 2020 2020 o bytes.
00000580: 2020 2020 7d0a 2020 2020 2020 2020 7d0a }.
00000590: 0a20 2020 2020 2020 2020 202f 2f20 4164 6420 . // Add
000005a0: 7370 6163 6520 6265 7477 6565 6e20 6865 space between he
000005b0: 7820 6475 6d70 2061 6e64 2070 7269 6e74 x dump and print
000005c0: 6162 6c65 2063 6861 7261 6374 6572 730a able characters.
000005d0: 2020 2020 2020 2020 7072 696e 7466 2822 printf("
000005e0: 2022 293b 0a0a 2020 2020 2020 2020 2f2f ");.. //
000005f0: 2050 7269 6e74 2070 7269 6e74 6162 6c65 Print printable
00000600: 2063 6861 7261 6374 6572 7320 6f72 2027 characters or '
00000610: 2e27 2066 6f72 206e 6f6e 2d70 7269 6e74 .' for non-print
00000620: 6162 6c65 730a 2020 2020 2020 2020 666f ables. fo
00000630: 7220 2869 6e64 6578 203d 2030 3b20 696e r (index = 0; in
00000640: 6465 7820 3c20 6279 7465 735f 7265 6164 dex < bytes_read
00000650: 3b20 696e 6465 782b 2b29 207b 0a20 2020 ; index++) {.
00000660: 2020 2020 2020 2020 2069 6620 2869 7370 if (isp
00000670: 7269 6e74 2862 7566 6665 725b 696e 6465 rint(buffer[inde
00000680: 785d 2929 207b 0a20 2020 2020 2020 2020 x))) {.
00000690: 2020 2020 2020 2070 7269 6e74 6628 2225 printf("%
000006a0: 6322 2c20 6275 6666 6572 5b69 6e64 6578 c", buffer[index
000006b0: 5d29 3b20 2f2f 2050 7269 6e74 6162 6c65 ]); // Printable
000006c0: 2063 6861 7261 6374 6572 0a20 2020 2020 character.
000006d0: 2020 2020 2020 207d 2065 6c73 6520 7b0a } else {.
000006e0: 2020 2020 2020 2020 2020 2020 2020 2020
000006f0: 7072 696e 7466 2822 2e22 293b 202f 2f20 printf("."); //
00000700: 4e6f 6e2d 7072 696e 7461 626c 6520 6368 Non-printable ch
00000710: 6172 6163 7465 720a 2020 2020 2020 2020 aracter.
00000720: 2020 2020 7d0a 2020 2020 2020 2020 7d0a }.
00000730: 0a20 2020 2020 2020 202f 2f20 4e65 7720 . // New
00000740: 6c69 6e65 2066 6f72 2074 6865 206e 6578 line for the nex
00000750: 7420 6c69 6e65 206f 6620 6f75 7470 7574 t line of output
00000760: 0a20 2020 2020 2020 2070 7269 6e74 6628 . printf(
00000770: 225c 6e22 293b 0a20 2020 2020 2020 202f "\n");. /
00000780: 2f20 496e 6372 6561 7365 206f 6666 7365 / Increase offse
00000790: 7420 6279 2031 3620 666f 7220 7468 6520 t by 16 for the
000007a0: 6e65 7874 206c 696e 6520 6f66 2062 7974 next line of byt
000007b0: 6573 0a20 2020 2020 2020 206f 6666 7365 es. offse
000007c0: 7420 2b3d 2031 363b 0a20 2020 207d 0a0a t += 16;. }..
000007d0: 2020 2020 2f2f 2043 6c6f 7365 2074 6865 // Close the
000007e0: 2066 696c 650a 2020 2020 6663 6c6f 7365 file. fclose
000007f0: 2866 696c 6529 3b0a 2020 2020 7265 7475 (file);. retu
00000800: 726e 2030 3b0a 7d0a rn 0;}.

[?2004h(base) ]0;jovyan@jupyter-rs8f: ~/3240/Projects/Project 1[01;32mjovyan@jupyter-rs8f[00m:[01;34m~/3240/Projects/Project
1[00m$ [7mxxd project1.c > expectedOutput.txt[27mxxd project1.c > expectedOutput.txt
[?2004l
[?2004h(base) ]0;jovyan@jupyter-rs8f: ~/3240/Projects/Project 1[01;32mjovyan@jupyter-rs8f[00m:[01;34m~/3240/Projects/Project
1[00m$ [7m./project1 project1.c > actualOutput.txt[27m./project1 project1.c > actualOutput.txt
[?2004l
[?2004h(base) ]0;jovyan@jupyter-rs8f: ~/3240/Projects/Project 1[01;32mjovyan@jupyter-rs8f[00m:[01;34m~/3240/Projects/Project
1[00m$ [7mdiff expectedOutput.txt actualOutput.txt[27mdiff expectedOutput.txt actualOutput.txt
[?2004l

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[?2004h(base) ]0;jovyan@jupyter-rs8f: ~/3240/Projects/Project 1[01;32mjovyan@jupyter-rs8f[00m:[01;34m~/3240/Projects/Project 1[00m$ exit
[?2004l
exit
```

Script done on 2024-09-19 20:58:14-05:00 [COMMAND\_EXIT\_CODE="0"]