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```

tyler@tjw-laptop

OS: Arch Linux

Kernel: x86_64 Linux 4.20.3-arch1-1-ARCH

Uptime: 17h 22m

Packages: 572

Shell: bash 5.0.0

Resolution: 1920x1080

WM: OpenBox

WM Theme: tjw-dark-theme

GTK Theme: tjw-dark-theme [GTK2/3]

Icon Theme: Arc

Font: Cantarell 11

CPU: Intel Core i7-8550U @ 8x 4GHz [58.0°C]

GPU: intel

RAM: 2087MiB / 11750MiB

[tyler@tjw-laptop ~]\$ cd ./Documents/CEC\ 320/Workshop\ 1/

[tyler@tjw-laptop Workshop 1]\$ gcc cec320_sec_1_ws1_wise_tyler_alkhwar_ahmed.c -o cec320_sec_1_ws1_wise_t

yler_alkhwar_ahmed.o

[tyler@tjw-laptop Workshop 1]\$./cec320_sec_1_ws1_wise_tyler_alkhwar_ahmed.o

Group Members: Tyler Wise & Ahmed Alkhwar

Testing the printout of binary numbers:

Compact display for 0x1234 is 0001001000110100

Verbose display for 0x1234 is 0b0001_0010_0011_0100

Compact display for 0x5678 is 0101011001111000

Verbose display for 0x5678 is 0b0101_0110_0111_1000

Compact display for 0x9ABC is 1001101010111100

Verbose display for 0x9ABC is 0b1001_1010_1011_1100

Compact display for 0xDEF0 is 1101111011110000

Verbose display for 0xDEF0 is 0b1101_1110_1111_0000

printf("\n");

}

while (1);

}

void uint16_2_binary_str(uint16_t num, char *cPtr){

for(int i = 0; i < 30; i++){

{

*(cPtr + i) = 0;

}

for(int i = 0; i < 16; i++){

uint16_t number = num;

int mask = 1 << 15 - i;

int masked_n = number & mask;

*(cPtr + i) = masked_n == 0 ? '0' : '1';

*(cPtr + 16) = '\0';

void print_str_c(uint16_t num, char *cPtr) {

uint16_2_binary_str(num, cPtr);

printf("%s", cPtr);

}

void print_str_v(uint16_t num, char *cPtr_c, char *cPtr_v) {

char *cPtr_v_original = cPtr_v;

uint16_2_binary_str(num, cPtr_c);

*(cPtr_v++) = '0';

*(cPtr_v++) = 'b';

for(int i = 0; i < 17; i++) {

*(cPtr_v + i) = *(cPtr_c + i);

if((i + 1) % 4 == 0 && i != 15){

*((++cPtr_v) + i) = '_';

}

}

printf("%s\0", cPtr_v_original);

}

~

~

<hop 1/cec320_sec_1_ws1_wise_tyler_alkhwar_ahmed.c" [dos] 69L, 1710C written

57,33

Bot

```

Linux 4.20.3-arch1-1-ARCH
tjw-laptop 10.33.5.20
System Time: 2019-02-04 08:27:25
Zulu Time: 2019-02-04 13:27:25
Uptime: 17h 23m 0s
Arch Updates: 40
AUR Updates: 3

```

HARDWARE

Battery: discharging 87%

CURRENT USAGE

CPU

```

ce320_sec_1_ws 12.50%
Xorg 0.25%
firefox 0.25%
Web Content 0.25%
conky 0.13%

```

RAM 2.37GiB/11.5GiB (20%)

```

firefox 522MiB 4.55%
WebExtensions 506MiB 4.41%
Web Content 461MiB 4.02%
Web Content 308MiB 2.68%
Web Content 247MiB 2.16%

```

DISKS

```

Root 11.5GiB/28.3GiB (40%)
Home 82.3GiB/203GiB (40%)
Swap 0B/1.95GiB (0%)

```

INTERNET DEVICE: wlan1

Up: 44B / 22.8MiB

Down: 1.06KiB / 255MiB