CS202

ASSIGNMENT 1

NAME:

ARCHIT AGRAWAL

ROLL NO. :
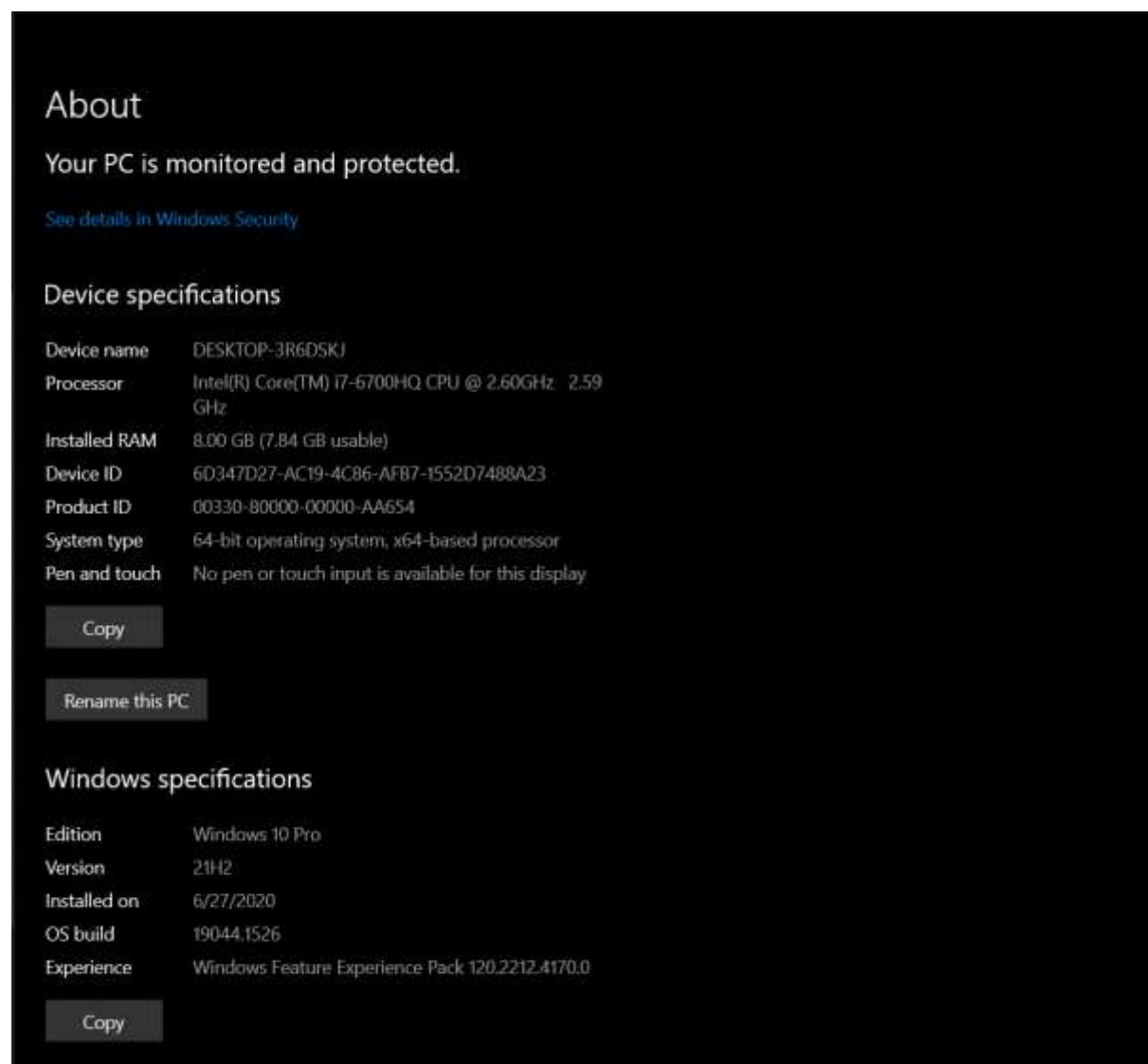
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SECTION:

2

Explore your current machine (Desktop/Laptop/Mobile) you are using, collect the details of the following.

1. Name and Model of device

Name -> HP Pavillion Gaming Notebook

Model -> 5-AU009TX

Item	Value
System Summary	
⊕ Hardware Resources	
⊕ Components	
⊕ Software Environment	
OS Name	Microsoft Windows 10 Pro
Version	10.0.19044 Build 19044
Other OS Description	Not Available
OS Manufacturer	Microsoft Corporation
System Name	DESKTOP-3R6DSKJ
System Manufacturer	HP
System Model	HP Pavilion Gaming Notebook
System Type	x64-based PC
System SKU	P7G56PA#ACL
Processor	Intel(R) Core(TM) i7-6700HQ CPU @ 2.60GHz, 2592 Mhz, 4 ...
BIOS Version/Date	Insyde F.91, 6/20/2019
SMBIOS Version	2.8
Embedded Controller V...	91.30
BIOS Mode	UEFI
BaseBoard Manufacturer	HP
BaseBoard Product	80A9
BaseBoard Version	91.1E
Platform Role	Mobile
Secure Boot State	Off
PCR7 Configuration	Binding Not Possible
Windows Directory	C:\Windows
System Directory	C:\Windows\system32
Boot Device	\Device\HarddiskVolume1
Locale	United States
Hardware Abstraction L...	Version = "10.0.19041.1503"
User Name	DESKTOP-3R6DSKJ\Archit
Time Zone	India Standard Time

2. Take a device picture

3. CPU
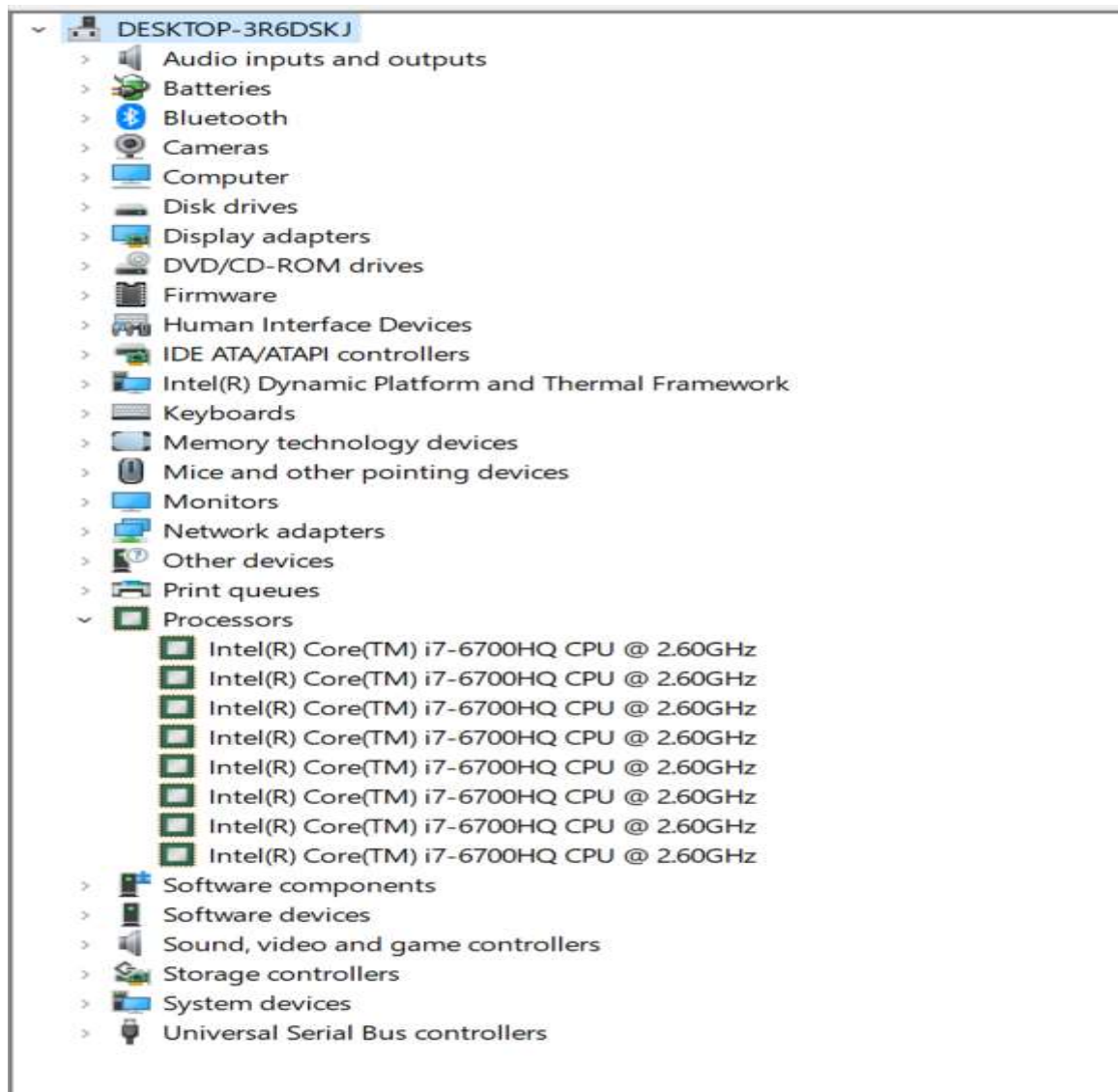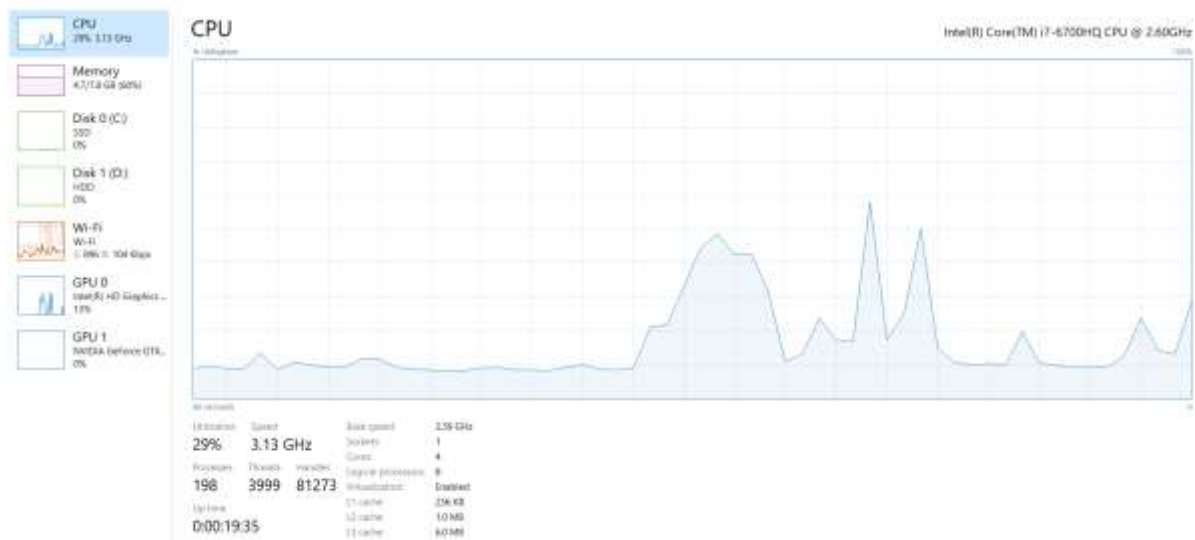
4. Register Size
  → 64 bits

Device specifications

Device name	DESKTOP-3R6DSKJ
Processor	Intel(R) Core(TM) i7-6700HQ CPU @ 2.60GHz 2.59 GHz
Installed RAM	8.00 GB (7.84 GB usable)
Device ID	6D347D27-AC19-4C86-AFB7-1552D7488A23
Product ID	00330-80000-00000-AA654
System type	64-bit operating system, x64-based processor
Pen and touch	No pen or touch input is available for this display

5. RAM

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Memory   8.0 GB DDR3

4.4 GB (89.8 MB)   3.3 GB
4.9/9.1 GB   3.4 GB
346 MB   207 MB

6. Cache

7. Motherboard

```
C:\Users\Archit>wmic baseboard get product,Manufacturer
Manufacturer    Product
HP              80A9


C:\Users\Archit>
```

8. Word size

→ 64 bits

9. List of Ports

- 1 x USB 2.0, 2 x USB 3.0 (1 HP USB Boost)
- 1 x HDMI Port
- SD Card Slot
- Mic Port
- Ethernet Connector

10. Other details

Technical Details

Brand	HP
Manufacturer	hp
Colour	Natural Silver
Form Factor	Laptop
Item Height	6.9 Centimeters
Item Width	30.5 Centimeters
Standing screen display size	15.6 Inches
Resolution	1920x1080
Product Dimensions	52 x 30.5 x 6.9 cm; 2.77 Kilograms
Item model number	15-AU009TX
Processor Brand	Intel
Processor Type	Core i7 6500U
Processor Speed	2.5 GHz
RAM Size	8 GB
Memory Technology	DDR4
Maximum Memory Supported	16 GB
Hard Drive Size	1 TB
Hard Disk Description	Serial ATA
Hard Drive Interface	Serial ATA
Hard Disk Rotational Speed	5400 RPM
Audio Details	Bang and Olufsen
Speaker Description	Dual Speakers
Graphics Coprocessor	NVIDIA GeForce 940MX

Graphics Coprocessor	NVIDIA GeForce 940MX
Graphics Chipset Brand	NVIDIA
Graphics Card Ram Size	4000 MB
Connectivity Type	Bluetooth, Wi-Fi, WiDi
Wireless Type	801.11ac
Number of USB 2.0 Ports	1
Number of USB 3.0 Ports	2
Number of HDMI Ports	1
Number of Audio-out Ports	1
Number of Ethernet Ports	1
Number of Microphone Ports	1
Optical Drive Type	DVD-RW
Card Reader	Secure Digital Card
Operating System	Windows 10 Home
Supported Software	HP CoolSense Technology
Are Batteries Included	No
Number Of Lithium Ion Cells	2
Included Components	Laptop
Manufacturer	hp
Item Weight	2 kg 770 g
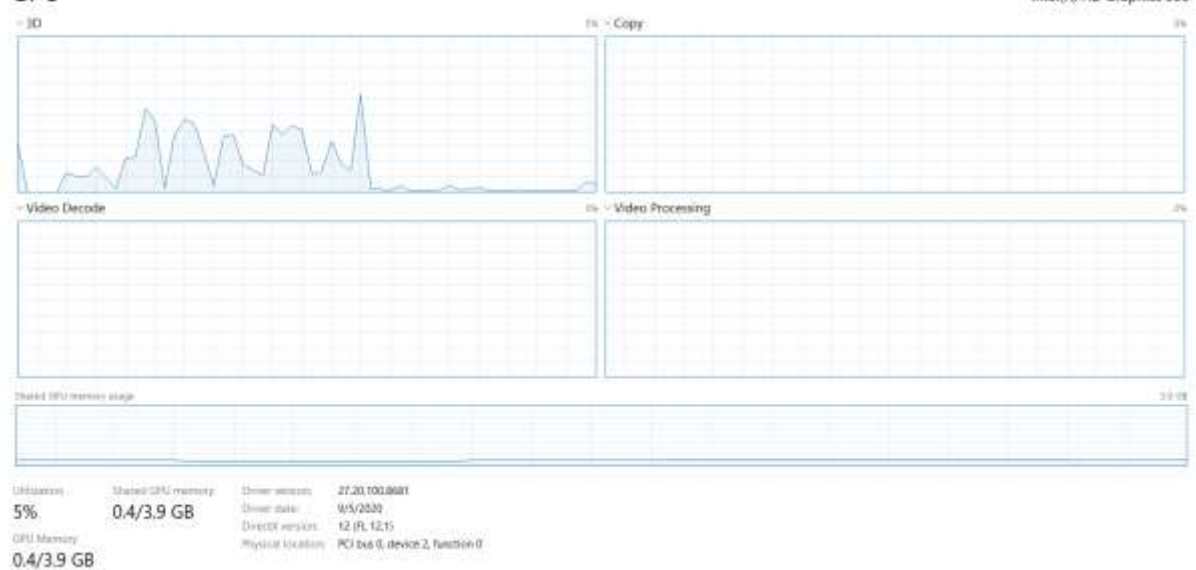
2. Write a generic C (or any other language) program to verify the Endianness of a machine. Verify its output on your machine. Send a pdf file containing the program and the outputs (analyze it over different size of inputs).

Code:

```c
#include <stdio.h>

void show_mem_rep(char *start, int n)
{
    int i;
    for (i = 0; i < n; i++)
        printf(" %.2x", start[i]);
    printf("\n");
}


int main()
{
int i = 0x33504;
show_mem_rep((char *)&i, sizeof(i));
getchar();
return 0;
}
```

Output:

```
cd "c:\Users\User\OneDrive\Desktop\C codes\.vscode\" ; if ($?) { gcc endian.c -o endian } ; if ($?) { .\en
dian }
PS C:\Users\User\OneDrive\Desktop\C codes\.vscode> cd "c:\Users\User\OneDrive\Desktop\C codes\.vscode\" ;
if ($?) { gcc endian.c -o endian } ; if ($?) { .\endian }
 04 35 03 00
```

Since last byte of binary representation of the multibyte data-type is present first, we can conclude that the machine is <mark>Little endian</mark>.