

Name : Abdulah Bin Noman Pabid

Student ID : 21201800 31

Course Code : CSB-233

Course Title : Computer Organization and
Assembly Language.

"Mid Term Assessment"

1

Ans to the Q No 1

Computers

"Desktop computers"

- Eg: PCs, MACs,
- Includes Notebooks

"Servers"

- Web servers
- File and compute servers
- Supercomputers

"Embedded computers"

- Usually NOT directly observable
- Very wide range of applications

Computer Organizational Diagram

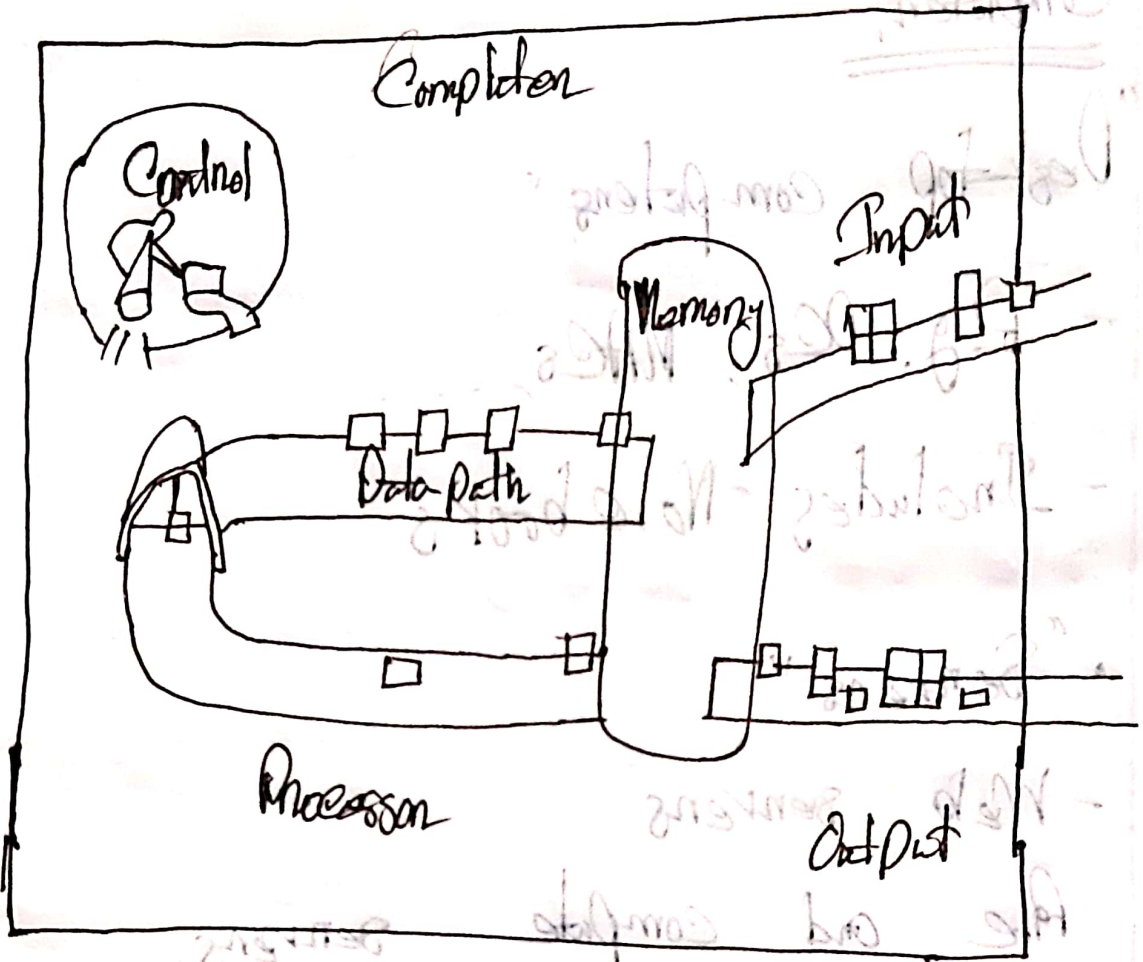


Figure: Computer Organization

Block diagram of computer organization

Diagram showing the internal structure of a computer system.

Ans to the Q. No. 3

Translator:

A translator or language translation program is a software application or service that translates text or speech from one language to another.

An example:

High level
language
Program
(in C)

```
void swap(int v[], int k)
{
    int temp;
```

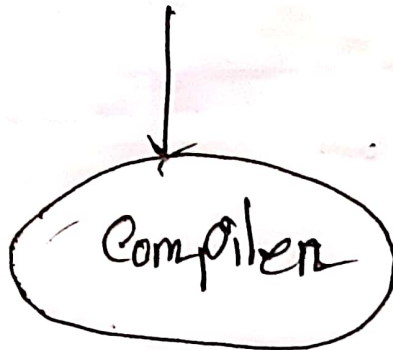
4

```

temp = v[k];
v[k] = v[k+1];
v[k+1] = temp;

```

}



Assembly
language
Program
(for MIPS):

~~Swap:~~

~~mult \$2, \$5, 4~~

~~add \$2, \$4, \$2~~

~~lw \$at~~

~~Swap:~~

~~mult \$t0, \$a0, 4~~

~~add \$t0, \$a1, \$t0~~

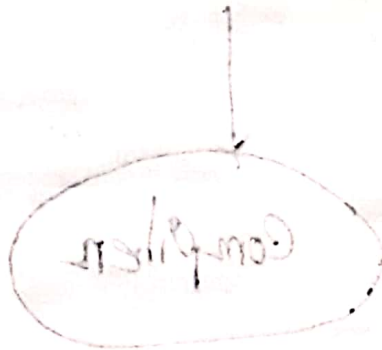
5

~~lw \$t1, 0(\$t0)~~

~~lw \$t2, 4(\$t0)~~



Swap :-
Assembly
Language
Program :-



Swap :-

~~mult \$t0, \$a0, 4~~

~~add \$t0, \$a1, \$t0~~

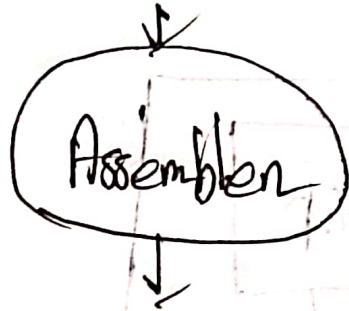
~~lw \$t1, 0(\$t0)~~

~~lw \$t2, 4(\$t0)~~

~~sw \$t2, 0(\$t0)~~

~~sw \$t1, 4(\$t0)~~

in C/C++



Binary

Language

Program:

00000000 1010000 10

000000000000 110000

1000 11000 11000 100

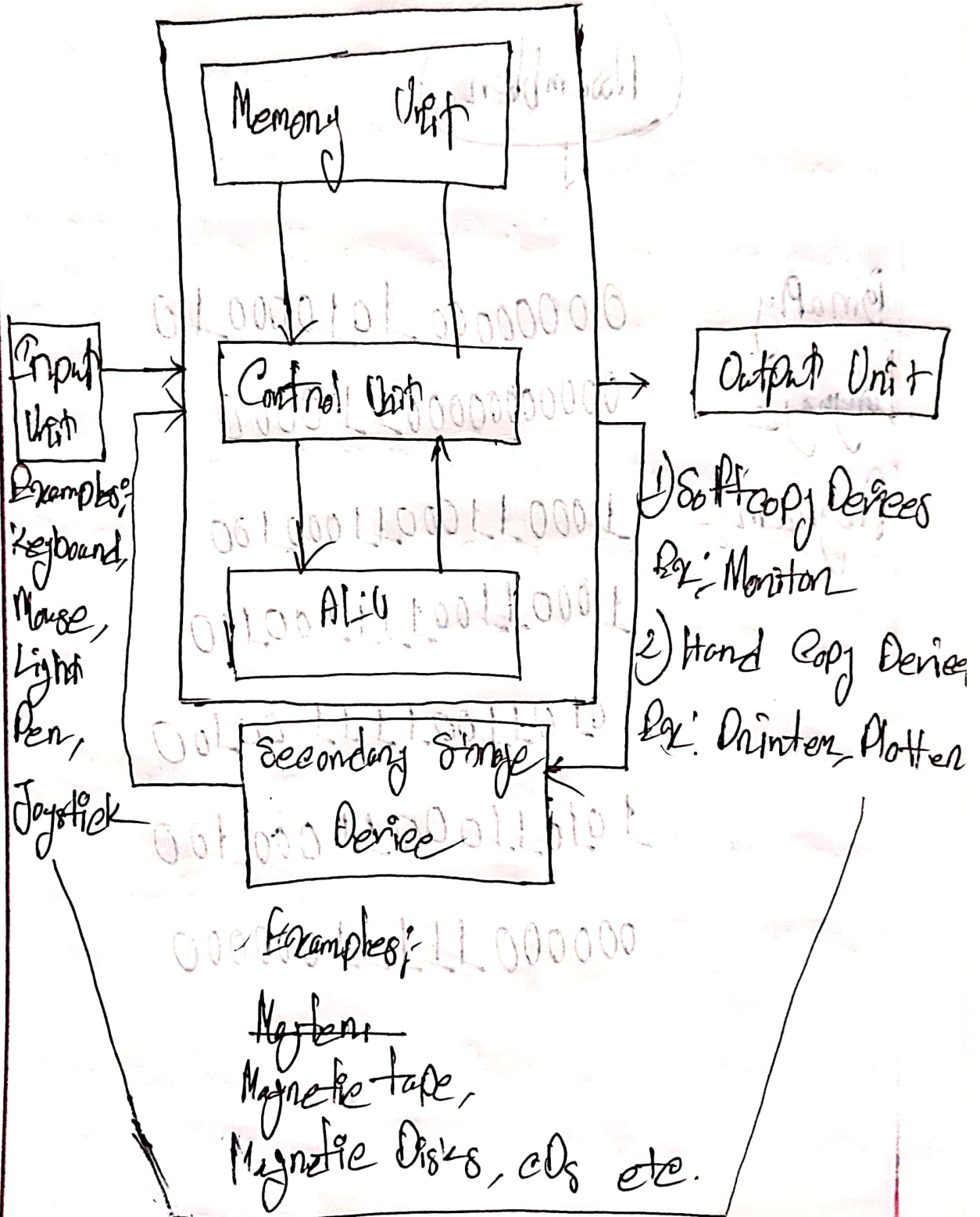
1000 1100 1100 100 1

1010 1100 1111 0010

1010 1100 11000 100 1

000000 1111000000

Ans-to-Que-No-2(a)



Peripheral Devices of Computer System.

Computer System: A computer system consists of hardware components that have been carefully chosen so that they work well together and software components or programs that run in the computer.

Evolution of computer systems:-

- ① Early models.
- ② The personal computer.
- ③ Operating system.
- ④ Laptops.
- ⑤ The cloud.
- ⑥ Virtualization.

The following are common hardware components of a computer system:

- ① Keyboard.
- ② Monitor.

Ans. to the Q. No. 2(b)

These are the differences between primary and secondary storage:

Primary Storage

Secondary Storage

① Data is directly accessed by the processing unit.

① Data can't be accessed directly by the processor.

② It's a volatile memory meaning data can't be retained in case of power failure.

② It's a non-volatile memory so data can be retained even after power failure.

③ Memory is stored in semiconductor chips which are relatively expensive.

③ Memory is stored in external storage devices such as hard disks, flash drives, etc.

④ It can be categorized into cache memory and random access memory.

④ They are permanent storage devices such as CD, DVD, HDD, floppy disk, etc.

<p>⑤ It's relatively faster than secondary memory because of its volatile nature.</p>	<p>⑤ They are usually slower than primary memory. It's like a backup memory.</p>
<p>⑥ It is less powerful.</p>	<p>⑥ It is more more powerful than primary storage.</p>

These are the differences between these two storage. There are many storage in the computer system. Storage means memory. All the data that are stored & needed in the computer system which are stored in the memory. Computer uses these data in its regular work. So, we should regularly clear the unnecessary memory data to reduce the damage in computer storage.