

HTML TAGSExercise 01

Write an HTML code for the below table.

Student Records

Student ID	student Name	degree.
1002323	Nimesh Fernando	BSc in IT
1002424	Lasudun Banadara	BSc in Computer Science.

```

<html>
<head> </head>
</head>
<body>
<h2> Student records </h2> .
<table>
<tr>
<td> student ID </td> .
<td> student Name </td> .

```

```
</html>
```

```

<head>
</head>

```

```
<body>
```

```
<table style="border: 1px solid black; width: 100%; border-collapse: collapse;">
```

```
<tr>
```

```
<td style="border: 1px solid black; padding: 5px;">student ID </td>
```

```
<td style="border: 1px solid black; padding: 5px;">student <del> Name </td>
```

<td> </td>
<td> Agree </td> ← first row.
</tr>
</table>

<td> 1002323 </td>

<td> Nimesh Fernando </td> .

<td> BSC in IT </td> ..

<tr> .

table <td> 1002424 </td> .

<td> Lasadun Bandara </td> .

<td> BSC in Computer science </td> .

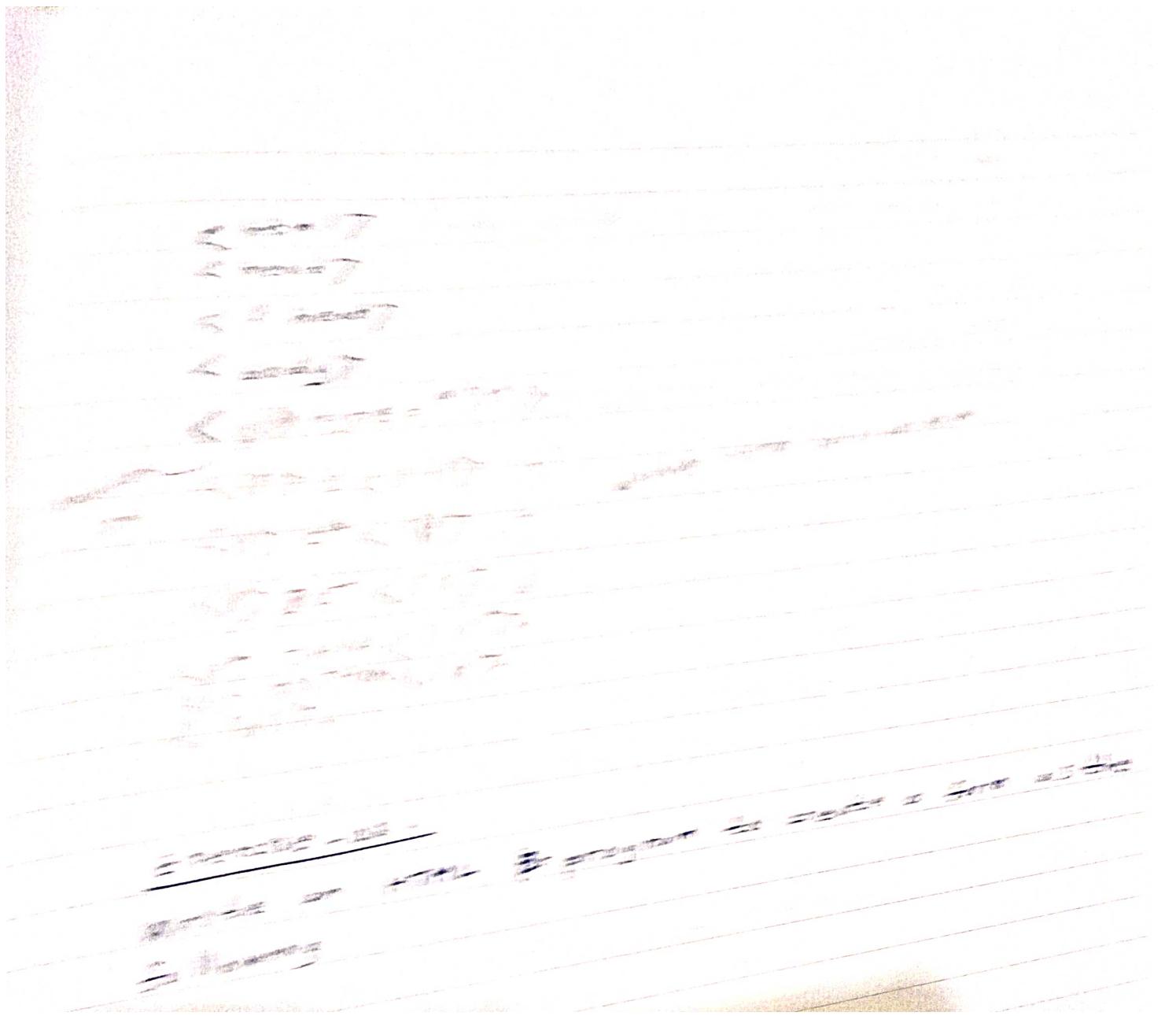
</tr> .

Exercise - 02

Write a html code to get the output.

Programming languages .

- i. C
- ii. C#
- iii. C++
- iv. JAVA
- v. PYTHON



```

<html>
<head>
</head>
<body>
<ol type="1">
  <li> C </li>
  <li> C++ </li>
  <li> JAVA </li>
  <li> PYTHON </li>
</ol>
  
```

ordered list

Exercise - 03 .

Write an HTML program to create a form as the following

Name

Index Number:

```

<html>
<head>
</head>
<body>
<form>action=""
  <input type="text" name="Name"> Name 
  <br>
  <input type="text" name="Index"> Index 
</body>
</html>
  
```

Q create ur HTML form to get below output

```
<html>
<title head>
<title> Application form </title>
<body>
<form>
<center>
<div style="border: 1px solid black">
<h1> Application form </h1>
<div style="color: red">
<div>
<center> name of applicant
<hr/>
<input type="text" name="value"
      value="Enter Name here with data" />
```

Exercise - 01

```

<html>
<head>      My Web Page
<title> quotes for life </title>
<body>      <style>
<center>      <h1> i
<div style = "border: 1px solid black; width: 100px; height: 100px; margin: auto; border-radius: 50%; background-color: yellow; position: relative; overflow: hidden; ">

```

```

< html>
< head>
    < title> My Web Page < /title>
    < style>
        body {

```

```

            font-family: Arial, sans-serif;
            text-align: center;
            padding-top: 50px;
            background-color: white;
        }
    
```

```

        #img {
            width: 300px;
            height: auto;
            margin-bottom: 20px;
        }
    
```

```

        .content {
            background-color: blue;
            padding: 20px;
            border-radius: 5px;
        }
    
```

```
    box-shadow: 0 0 5px rgba(0, 0, 0, 0.2);  
    display: inline-block;
```

}

```
</style>  
</head>  
<body>  
    <div class="Content">  
          
        <h1> Quotes For Life </h1>  
        <p> You only live once,  
            but if you do it right,  
            once is enough </p>  
    </div>  
</body>  
</html>.
```

①

```
<html>  
    <head>  
        <title> Quotes For Life </title>  
    </head>  
    <body style="background-image: url(bg.jpg)">  
        <center>  
            <h1> Quotes For Life </h1>  
        </center>  
        <h1 style="color: red;"> Quotes for  
        <center>
```

pretty

transparent

```
<div> style="background-color: #f9f9f9; border: 1px solid black; font-size: 30px; margin: auto; width: 50%;>  
    <p> style="color: blue; font-weight: bold; font-size: 18px; margin: 10px; padding: 10px; text-align: center; ">  
        You only live once, <br/>  
        but if you do it right, <br/>  
        one is enough</p>  
</div>
```

</p>
</div>

</center>

* d for transparency

rgba
1 ↗ not transparent

if you can change height,

```
<div style="background-color: rgba(255, 255, 255, 1);  
width: 500px; height: 200px;>
```

); " >

* Inside the div tag, we use

```
<table>  
<tr>  
<td>
```

<p style="font-size: 1em; font-weight: bold;">rest of sentences.

<td>
 <td> <td>
 <td>
 <td>
 <td> </td>
 <td>

} by using table and align

Correct Answer

```

<html>
  <head>
  </head>
  <body style="background-image: url('bg.jpg');">
    <center>
      <h1 style="color: red; "> Quotes for Life </h1>
      <div style="background-color: rgba(255, 255, 255, 0.8); width: 500px; height: 300px;">
        <table>
          <tr>
            <td>
              <p style="color: blue; font-weight: bold; ">

```

" You only live once,

but if you do it right,

one is enough,

</p>

</div>

<td></td>

</tr>

4

<tr>

<td></td>

<td>

<p style="font-size: 25px;"> "name </p>

</td>

</tr>

</table>

</div>

4

</center>

</body>

</html>

font-size: 30px; >

* added another styling to the central area.

div

26-08-2023

Tutorial

- Q Create the following webpage using HTML CSS. (Banner)

start {
the banner (web page) {
background-color: black;
background-image: url('Banner.jpg');
background-repeat: no-repeat;
background-size: cover;
height: 300px;
}

→ using old naming style i.e.

background-image url('Banner.jpg')
}

file to save my folder data image in zip.

background-repeat : no-repeat is used only one time.
background-size: cover.

background-size:

Cover



image - div do.

div IC RA equal tag + style

③

- repeat

product list

<li style="color: blue;



 row von der cell 3rd .

alt="Image 1"

image play 3rd .

<head> no spec. style tag use

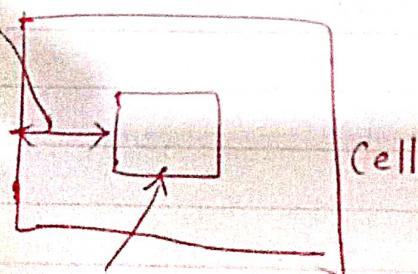
< style>

```
table {  
    width: 100%;  
}  
td {  
    text-align: center;  
    padding: 10px;  
}
```

internat

Page No 81996
Date 0000 000.

Padding image and cell 20 806 36



image

82-84 802 81

img tag

 - insert the image (must have src attribute)

number 3rd of bootstrap rows

html

<head>

<title>

</title>

[<body>]

heading already
want to closing tag

 } They don't require closing tag

 }

① <html>

<head>

<title>

</title>

</head>

<body>

80px
80px

image 80

size only

no.

jpg/jpg
80px 80px

css is styling purpose,
can also

webpage
size

image size
html

my size src

source

(correct image
source no.)

⑥ text can use other good tags features.

<p>

<h1>

<front>

tag size 100%

size @ 100%

css (inline css)

it only apply this to

 tag use
size apply @ 100%

< h1 > Product List </h1 >

size and no 8

<div style="width: 100%;>

(1) * text and color and a & #0 color tag up.

(2) * text on this need text align.

< h1 style="color: blue; text-align: center" > products

•
• } unordered list
•

 ul > li > strong tag on.

< ul >

1 } ordered list
2
3 }

< ol >

③ < ul >

 1 @ item, < li > Electronics < /li >

 under list < li > Foods < /li >

 tag & #0 < li > Clothes < /li >

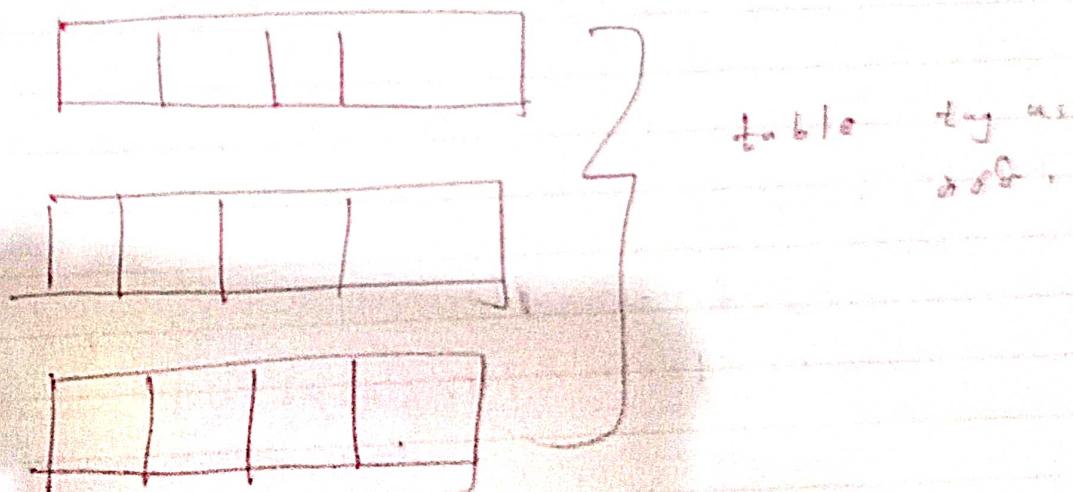
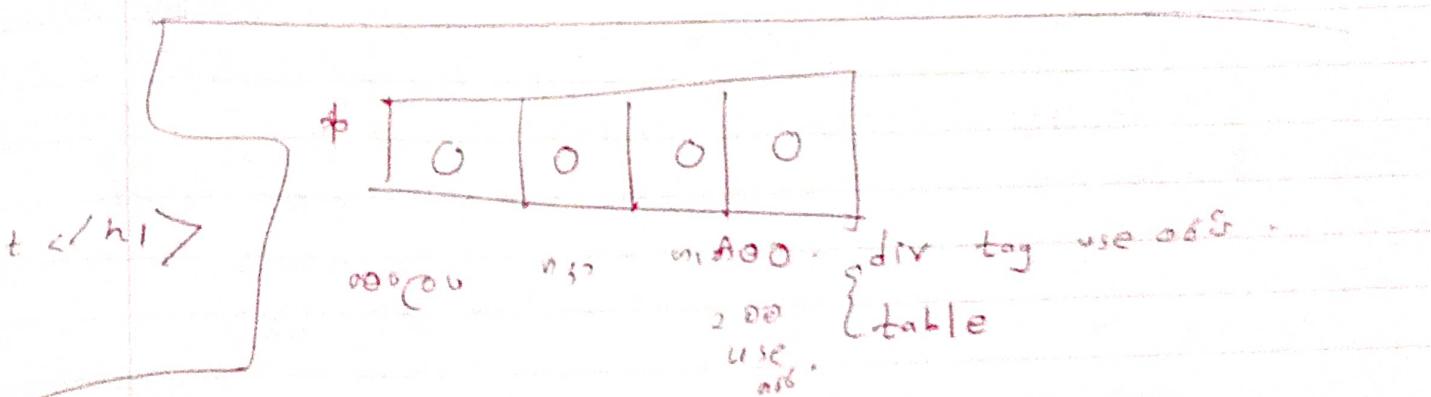
item 3 of no and after add it tag $\frac{1}{10}$

* 4 MA very good h₂ tag used seq@ 40 S

< h₂ > < !> Electronics < /!> < /h₂ >

< h₂ > < !> foods < /!> < /h₂ >

< h₂ > < !> clothes < /!> < /h₂ >



① < h₂ > < !> Electronics < /!> < /h₂ >

< table >

table row < tr >

< td > < /td >

< td > < /td >

width and height internal CSS and float gives the width and height on height no width applying

Table ↗

`<td> </td>`

`<td><img src = " "`

`<td> </td>`

40 4
height width

width height
width height
width height

internal
CSS
width height

width height
width height
width height
width height

width height
width height
width height

① CSS → inline



use only one tag

(2) internal → html tag ~~or~~ or.

no tag so use
style.

use inline css

`<h1 style="color: blue;">Product List </h1>`

web page nice

use internal css → ~~not~~ head tag or page no.

`<h1> Product List </h1>`

`<h1> Product List </h1>.`

`<h1> Product List </h1>.`

external → ~~data sans-serif~~
style.css → open with CSS.
`h1 {color: blue}`

one html file and open a file

```
<html>
  <head>
    <title>
      <link href="style.css" />
    </head>
    <body>
      <h1> Product List </h1>
      <h1> Product List </h1>
      <h1> abc </h1>
    </body>
</html>
```

Java Script tutorial
inside the <script> by NC 09-06-2023

Java Script - Tutorial

```
<html>
  <head> </head>
  <body>    onclick = "buttonclick()"
    <button> Button </button>

    <script>
      function buttonclick() {
        window.alert("This is a alert")
      }
    </script>
  </body>
</html>
```

load an JS control code
window.on^{load} = Page on load in JS

```
<script>
  window.onload = function() {
    show()
  }

  function show() {
    window.alert("This is a alert")
  }
</script>
```

② User input and output

window.prompt("Input your name").

get 5 marks, we can get 5 prompts or string inputs

<script>

window.onload = function() {

for (var i = 1; i <= 5; i++) {

window.prompt("Enter your marks")

}

total = 0

for (var i = 1; i <= 5; i++) {

var mark = window.prompt("Enter your marks for " + i);

total = total + mark;

}

has to show the web page

innerHTML

document.write(total);

Converst into the integers

total = total + present(mark);

problem

using for loop we can get total.

get average

```
document.write("Total: " + total);  
document.write("Average: " + total / s);
```

output:

16. 06. 2023 -

");

file und
edit save
old...

* JavaScript Obj. is a part of script tag inside html.

• < message box and alert

use of output and input \Rightarrow prompt

window.onload \Rightarrow as html page code or obj of obj

window.onload = function() {
 getMarks();
};

function called.

Intra script void run of function will do.

```
function getMarks() {  
    window.prompt("Enter marks: ");  
}  
  
User to display a msg  
msg var -
```

message box 5 of 7th bus, loop used for -

```
* function getMarks() {  
    for (var i=0; i<5; i++) {  
        window.prompt("Enter marks : ");  
    }  
}
```

* marks are stored as ^{marks} & _{a variable used}

```
var marks = window.prompt("Enter marks");
```

* so until the strings you want .(window.prompt as string you want)

do not use parseInt here

```
function getMarks() {
```

```
    var total = 0;
```

```
    for (var i=0; i<5; i++) {
```

```
        var marks = parseInt(window.prompt("
```

```
            total += marks;  
        "));
```

Cylinder test-tube - $\pi r^2 h = \text{Volume}$

$\pi = 3.14$ & $r = 1\text{cm}$ -

$$3.14 \times 1^2 \times 50$$

$$3.14 \times 1 \times 1 \times 50$$

$$3.14 \times 1 \times 1 \times 50$$

Spherical water - $\frac{4}{3} \pi r^3$ (Surface area)

$$\frac{4}{3} \pi r^3$$

Spherical water (Surface area) $\frac{4}{3} \pi r^3$

1. By the top surface has small area.

2. πr^2 (Surface area).

3. put in all water and small
(bottom)

4. All water, bottom part by small area.

5. Spherical water (Surface area).

Water surface area

πr^2

πr^2

6. Water surface - Spherical water (Surface area).

7. Water surface - Spherical water (Surface area).

```
button.innerHTML = "GRADE";
```

button click on alert no not v3.

```
# button.onclick = function() {  
};
```

button ~~and~~ click ~~now~~, ~~so~~ add 'onclick'

~~if~~ var average

```
if (average > 30) {  
    window.alert("congratulations!");  
} else {  
    window.alert("better luck next time!");  
}
```

};

don't use double
code. It's
not a

```
document.body.appendChild(button);  
};
```

webpage ~~and~~ ~~so~~ display add

button-visible name ~~and~~ ~~so~~ msg,

卷之三

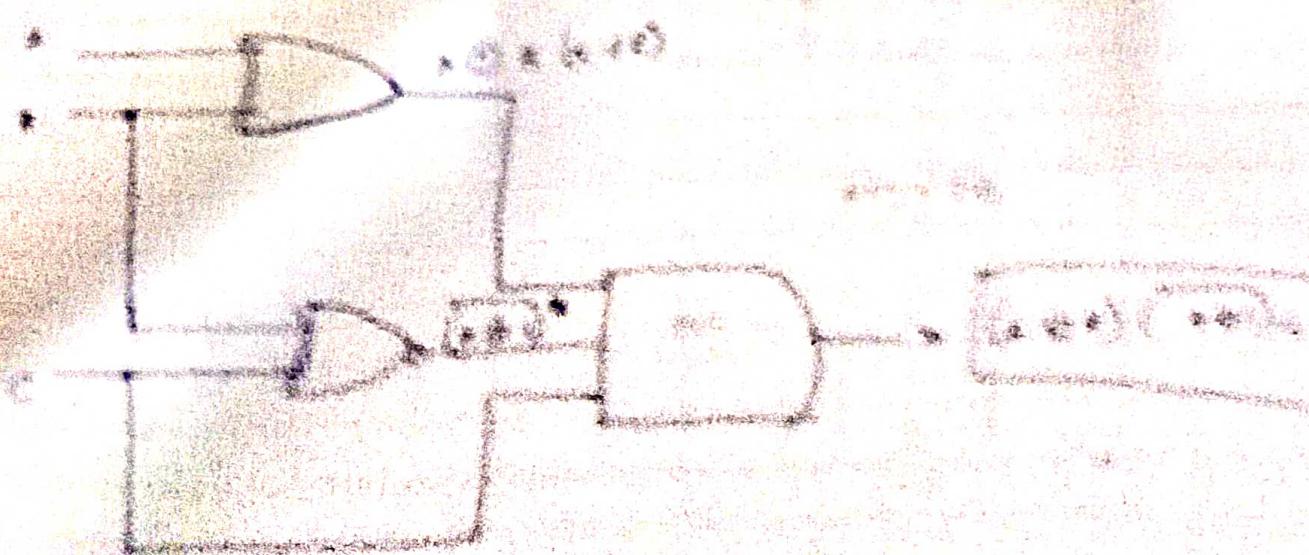
www.DrakeBooks.com/DrakeBooks

卷之三

卷之三

卷之三

卷之三



pushers

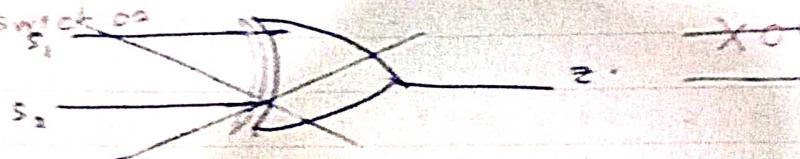
$$\text{range } 2^2 = 4$$

(e)

| s_1 | $s_2(F)$ | out | put |
|-------|----------|-----|-----|
| 0 | 0 | 0 | |
| 0 | 1 | 1 | |
| 1 | 0 | 1 | |
| 1 | 1 | 0 | |

s_1 = switch off

s_2 = switch on



$$2^2 = 4$$

$$2^3 = 8$$

$$2^4 = 16$$

XOR

(e) (a)

| A | B | C | D | AB | CD |
|---|---|---|---|----|----|
| 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 1 | 0 | 0 |
| 0 | 0 | 1 | 0 | 0 | 0 |
| 0 | 0 | 1 | 1 | 0 | 1 |
| 0 | 1 | 0 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | 0 | 0 |
| 0 | 1 | 1 | 0 | 0 | 0 |
| 0 | 1 | 1 | 1 | 0 | 1 |
| 1 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 1 | 0 | 0 |
| 1 | 0 | 1 | 0 | 0 | 0 |
| 1 | 0 | 1 | 1 | 0 | 1 |
| 1 | 1 | 0 | 0 | 1 | 0 |
| 1 | 1 | 0 | 1 | 1 | 0 |
| 1 | 1 | 1 | 0 | 1 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 |

(b) (b)

(c)

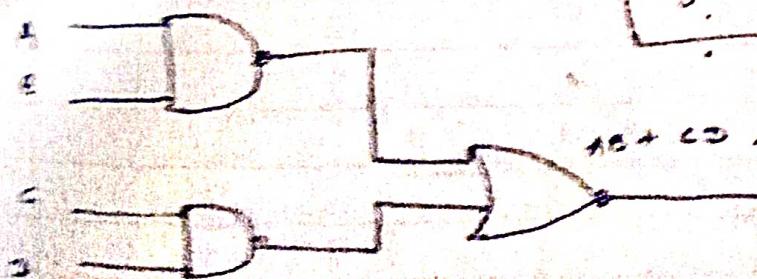
(d)

$$y = AB + CD$$

$$y = \overline{A} \cdot \overline{B} + \overline{C} \cdot \overline{D}$$

$$\Rightarrow -y = \overline{AB} + \overline{CD}$$

$$y = (\overline{AB}) \cdot (\overline{CD})$$



$\text{B} = \text{B} + \text{B}^T$ $\text{B} = \text{B}$

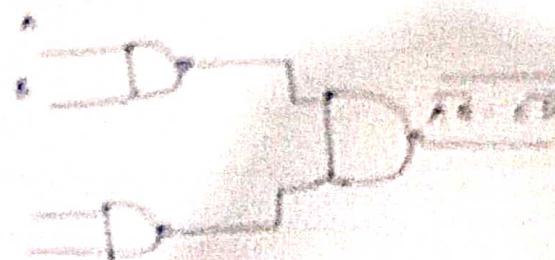
$(\text{C} \otimes \text{I}) \cdot \text{B} = \text{C}$

$\text{C} \otimes (\text{I} \otimes \text{B})$

$\gamma_1 = \text{B} + \text{B}^T$

$= \text{B} + \text{B}$

$= \text{B} + \text{B}$

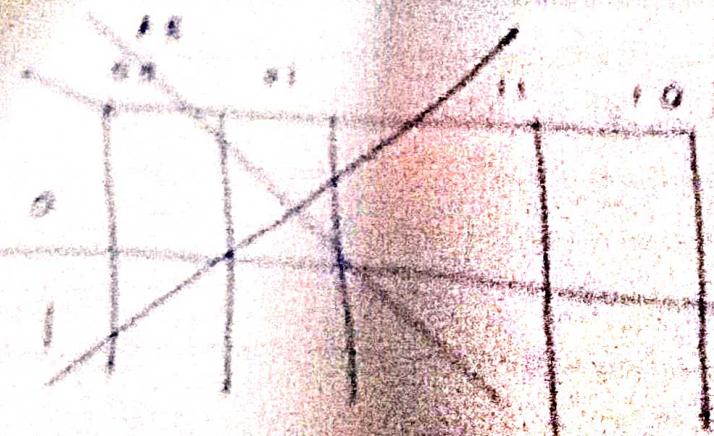


$\text{B} = \text{B} + \text{B}^T$

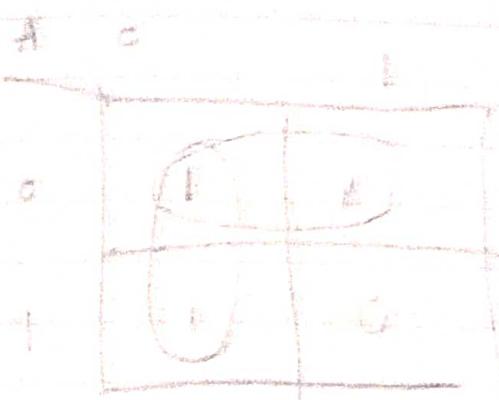
①

| A | B | C |
|---|---|---|
| D | E | F |
| G | H | I |
| L | J | K |
| M | N | O |

$\text{B} = \text{B} + \text{B}^T$

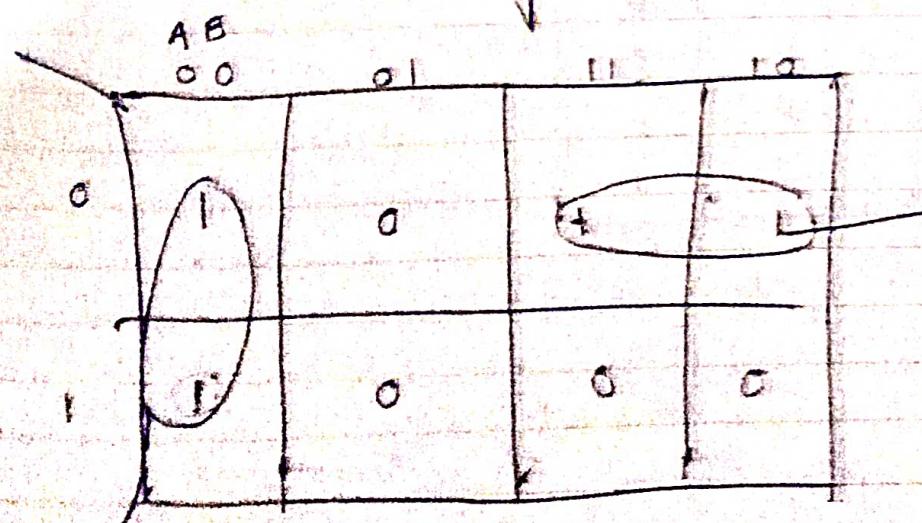


$$F = \bar{A}\bar{B} + \bar{A}B + A\bar{B}$$



$$F = \bar{B} + \bar{A}$$

| ② | A | B | C | F |
|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 1 | 1 | 1 |
| 0 | 1 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | 0 |
| 1 | 0 | 0 | 0 | 1 |
| 1 | 0 | 1 | 0 | 0 |
| 1 | 1 | 0 | 0 | 1 |
| 1 | 1 | 0 | 1 | 0 |



$$F = ABC + A'BC + AB'C + A'BC' = AC$$

$$F = \bar{A}B$$

$$F = \underline{\bar{AB}} + \underline{AC}$$

$$F = \bar{A}\bar{B}\bar{C} + \bar{A}\bar{B}C + A\bar{B}C + AB\bar{C}$$

on 872.

③

| A | B | C | D | out |
|---|---|---|---|-----|
| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 1 | 0 |
| 0 | 1 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | 1 |
| 0 | 1 | 1 | 0 | 0 |
| 0 | 1 | 1 | 1 | 0 |
| 1 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 1 | 1 |
| 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 1 | 1 | 0 |
| 1 | 1 | 0 | 0 | 1 |
| 1 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 |

$$\rightarrow F = \bar{A}\bar{B}\bar{C}\bar{D} + \bar{A}\bar{B}\bar{C}D + A\bar{B}\bar{C}D \\ + A\bar{B}C\bar{D} + \bar{A}B\bar{C}D + AB\bar{C}D \\ + ABC\bar{D}$$

exhibit 1 for group 60
419 @ 916

Exhibit 1 for group 60

419 @ 916

419 @ 916

| AB | CD | 00 | 01 | 11 | 10 |
|----|----|----|----|----|----|
| 00 | 0 | 1 | | 0 | 0 |
| 01 | 0 | 1 | | 0 | 0 |
| 11 | 0 | 1 | | 0 | |
| 10 | 0 | 1 | | 0 | 1 |

$$1 \rightarrow CDAB$$

$$1 \rightarrow CD\bar{A}\bar{B}$$

$$\bar{C}D\bar{A}$$

$$1 \rightarrow \bar{C}DAB$$

$$1 \rightarrow \bar{C}D\bar{A}\bar{B}$$

↓

$$CA$$

$$1 \rightarrow \bar{C}D\bar{A}\bar{B}$$

$$1 \rightarrow \bar{C}D\bar{A}B$$

$$1 \rightarrow \bar{C}DAB \Rightarrow \bar{C}D$$

$$1 \rightarrow \bar{C}DAB$$

$$F = \underline{\bar{C}D + CA + C\bar{D}}$$

02-06-2023,

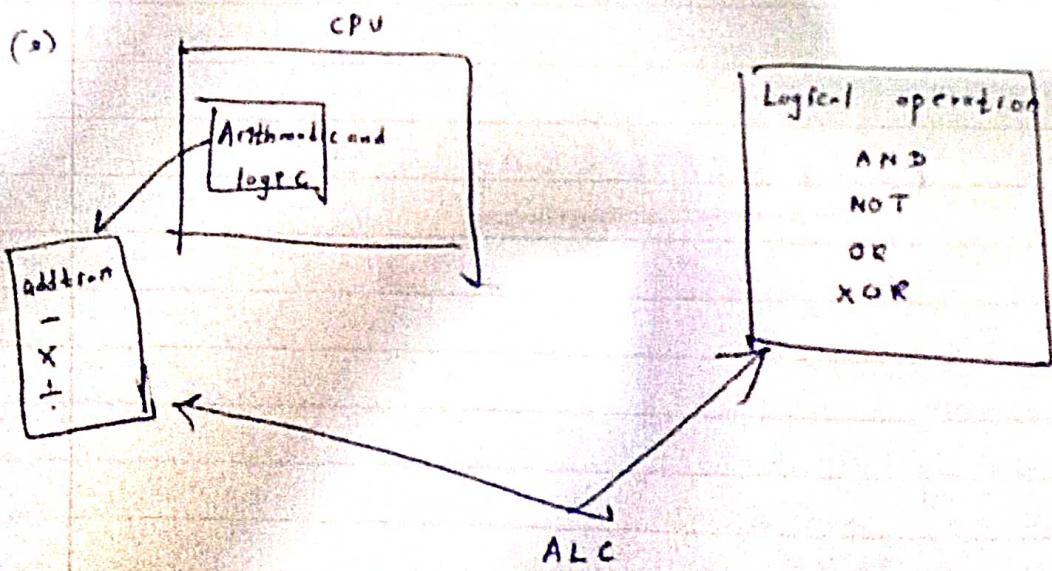
Register - To store data storage + temporary data storage. Very fast but
Small
Inside the CPU



delay & latency

Key characteristics (register).

(1) Speed ↑ (nano seconds).



Arithmetic and logical expressions.

(2) small

(3) 8 - 64 bit store.

(4) 32 - 64 normal register, bits

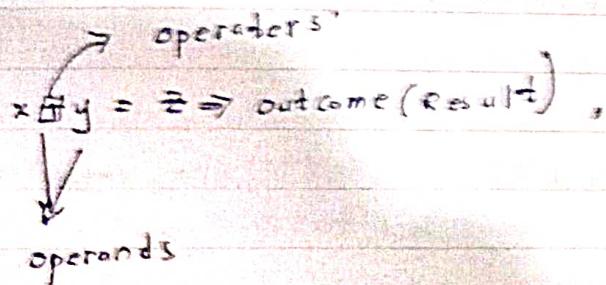
(5) register

Purpose



main purpose due to storing

use to operands.



General

* Intermediate result produced

+ int count = 0;

loop parameters

Void

* function parameter int x & int y

stored

Special purpose

designated task.

specific functions (CPU or operations control)

+ program counter (address of the current executing).

+ stack registers. (They manage exec. stack)

- A) ~~flag~~ flag is false
✓
status
Registers

Data movement:

data from processor to memory are via registers.

The data is

Memory and data of CPU register or register to CPU
is preferred than data memory word CPU.

method registers used:

- A) process address memory and data get out from CPU and one data
and use the by CPU and various registers can be used.

Questions

- ① What is the primary purpose of registers in a CPU?
A) To store and manipulate data during instruction execution.
- ② Which type of register is used to store flags indicating the outcome of previous operations?
A) status registers ✓ (flag).

Q) What is the typical range of sizes for registers in a computer system?

* 32 to 64 bits

(Q) How do registers contribute to the performance of a computer system?

- * By storing intermediate results during arithmetic operations.
- b) by minimizing the impact of memory latency.

(Q) Which component of the CPU contains registers?

* Arithmetic logic unit (ALU).

(Q) What is the purpose of general-purpose registers in computer architecture and how are they typically used?

- * used for either memory address or data whenever needed.

(Q) How does the program counter register contribute to the execution of a program in a CPU?

09.06.2023

lecture
noteBasic Electricity And Diodes

Date

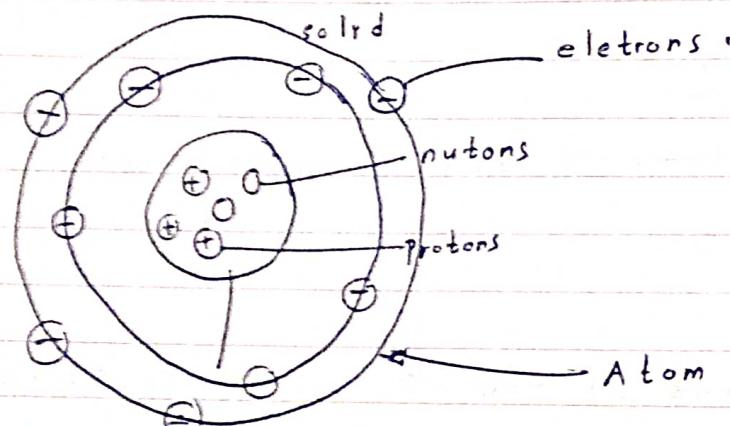
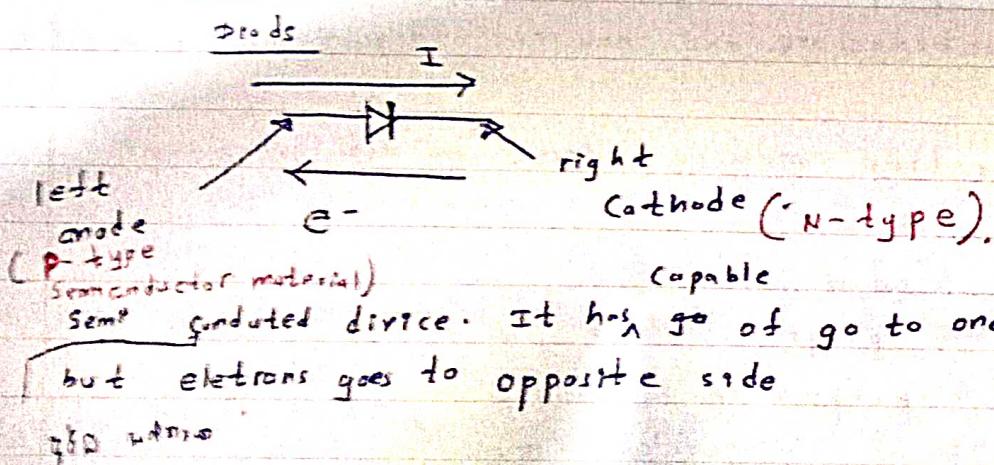
No.

basic unit of matter .

Matter - has mass and app occupied space

Matter \Rightarrow air

liquid

Protons + neutrons \Rightarrow nucleons.electricity \Rightarrow is a form of energy !

Common terms

① V is voltage (Volts : V);

voltage electrical potential difference between two points in a circuit

② I is current (amps : A);

electric charge passes -

The rate of flow of electric charge thru a conductor.

③ R is resistance (ohms : Ω);

is the

Resistance of the opposition of a body to the flow of electric current in circuit.

④ C is capacitance (farads : F);

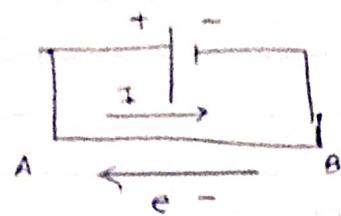
The ability of a capacitor to store and electric current.

When a voltage is apply

⑤ P is power (watt : W)

Power is the rate at which energy is transferred, in an electrical circuit.

Electric Current



$$I \Rightarrow 1 C$$

- Electric Current is the "rate of flow of electric charge".
- The unit used to measure the charge is Coulomb(C).
- One coulomb of negative charge is the charge of 6.24×10^{18} electrons.
- rate of flow - one coulomb per second is called, $\frac{1C}{\text{seconds}} = A$.

Potential Difference (V) = $\frac{\text{Work done (J)}}{\text{charge (c)}}$

$$V = \frac{1J}{1C}$$

Ohm's Law

$$V = IR$$

$$\frac{V}{R} = I$$

$$\frac{V}{I} = R$$

Power

$$P = IV$$

$$P = IV$$

$$P = \frac{V \times V}{R}$$

$$P = I \times I R$$

$$P = \frac{V^2}{R}$$

$$P = I^2 R$$

(1) A circuit has a resistance of 10 ohms and current of 2 amperes. What is the voltage across the circuit?

$$R = 10$$

* $V = IR$

$$I = R$$

$$V = IR$$

$$= 10 \times 2$$

$$= \underline{\underline{20 \text{ V}}}$$



(2) If a power supply provides a voltage of 12 volts and the circuit has a resistance of 4 ohms, what is the current flowing through the circuit?

$$* V = 12$$

$$R = 4$$

$$V = IR$$

$$\frac{V}{R} = I$$

$$\checkmark \frac{12}{4} = I$$

$$\underline{\underline{3 \text{ A} = I}}$$

(3) A light bulb has a resistance of 50 ohms and operates at a voltage of 120 volts. How much current does it draw?

$$* R = 50$$

$$V = 120$$

$$V = IR$$

$$\frac{V}{R} = I$$

$$\checkmark \frac{120}{50} = I$$

$$\underline{\underline{2.5 \text{ A} = I}}$$

- (1) A current of 8 amperes flows through a parallel
circuit with what is the resistance of the circuit?

$I = 6A$

$V = 80V$

$V = 8V$

$I = R$

$\frac{80V}{R} = 8A$

$6A$

$R = V/I$

- (2) A resistor dissipates power at a rate of 18 watts when
a current of 3 amperes passes through it. What is the
resistance of the resistor?

*

$P = 6V$

$I = 2A$

$P = 12$

$P = VI$

$\frac{P}{I} = V$

$\frac{18}{3} = 6$

6 volts

- (3) A circuit has a resistance of 8 ohms and draws a current
of 3 amperes. What is the power dissipated by the
circuit?

*

$R = 8\Omega$

$I = 3A$

$P = VI$

$18W$

$18W$

$18W$

- (7) A power supply delivers a current of 2 amperes to a circuit with a resistance of 15 ohms. What is the power supplied by the source?

$$\begin{aligned} \text{Given: } & I = 2 \text{ A} \\ & R = 15 \Omega \\ \text{Required: } & P = ? \\ \text{Solution: } & P = I^2 R \\ & = 2^2 \times 15 \\ & = \underline{\underline{60 \text{ W}}} \end{aligned}$$

- (8) A device operates at a power of 60 watts, and has a voltage of 120 volts. What is the current consumed by the device?

$$\begin{aligned} \text{Given: } & P = 60 \text{ W} \\ & V = 120 \text{ V} \\ \text{Required: } & I = ? \\ \text{Solution: } & P = IV \\ & \frac{P}{V} = I \\ & \frac{60}{120} = I \\ & \underline{\underline{0.5 \text{ A} = I}} \end{aligned}$$

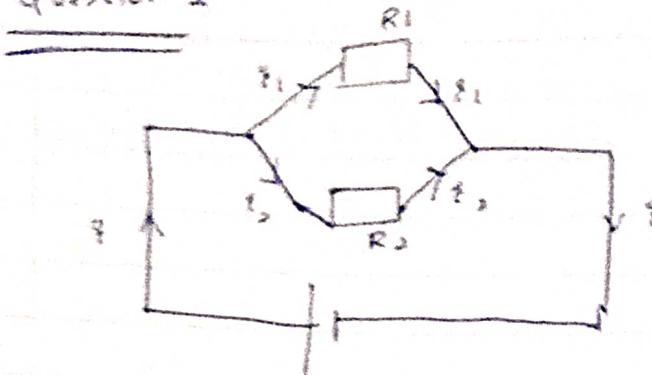
Question

$$\begin{aligned} \text{Given: } & R_1 = 6 \Omega, R_2 = 12 \Omega \\ \text{Required: } & R_{\text{total}} = ? \\ \text{Solution: } & R_{\text{total}} = R_1 + R_2 \\ & = 6 \Omega + 12 \Omega \\ & = \underline{\underline{18 \Omega}} \end{aligned}$$

$$\begin{aligned} \text{Given: } & I = 1 \text{ A} \\ & R = 18 \Omega \\ \text{Required: } & V = ? \\ \text{Solution: } & V = IR \\ & = 1 \times 18 \\ & = \underline{\underline{18 \text{ V}}} \end{aligned}$$

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Question 2



$$R_1 = 6\Omega$$

$$R_2 = 12\Omega$$

$$I = 1A$$

$$\frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2}$$

$$= \frac{1}{6} + \frac{1}{12}$$

$$= \frac{2+1}{12}$$

$$= \frac{3}{12} \Omega$$

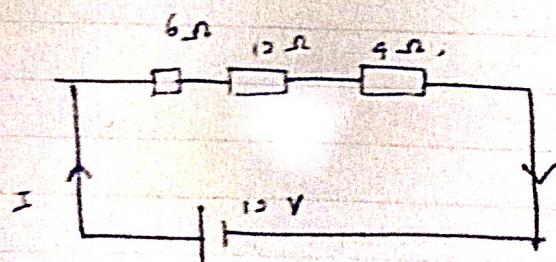
$$R = \underline{\underline{4\Omega}}$$

$$V = IR$$

$$= 1 \times 4$$

$$= \underline{\underline{4V}}$$

(i)



$$6\Omega, 12\Omega, 4\Omega$$

$$12V$$

(ii)

$$R = R_1 + R_2 + R_3$$

$$= 6 + 12 + 4$$

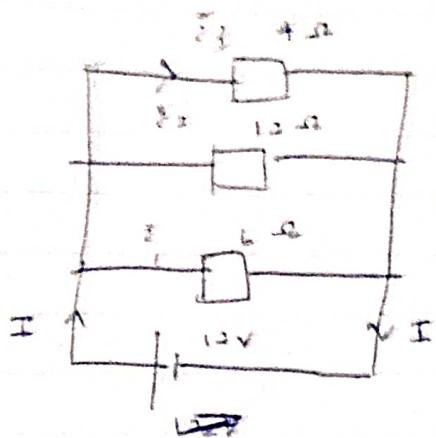
$$= \underline{\underline{22\Omega}}$$

(iii)

$$V = IR \Rightarrow \frac{V}{R} = I \Rightarrow \frac{12V}{22\Omega} = I \Rightarrow \underline{\underline{\frac{1}{22}A}}$$

series circuit

(i) The resistors are parallel



$$\text{resistance (total)} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} = \frac{1}{R}$$

$$\frac{1}{4} + \frac{1}{12} + \frac{1}{6} = \frac{1}{R}$$

$$\frac{3 + 1 + 2}{12} = \frac{1}{R}$$

$$\frac{6}{12} = \frac{1}{R}$$

$$\frac{12}{6} = R$$

$$R = 2 \Omega$$

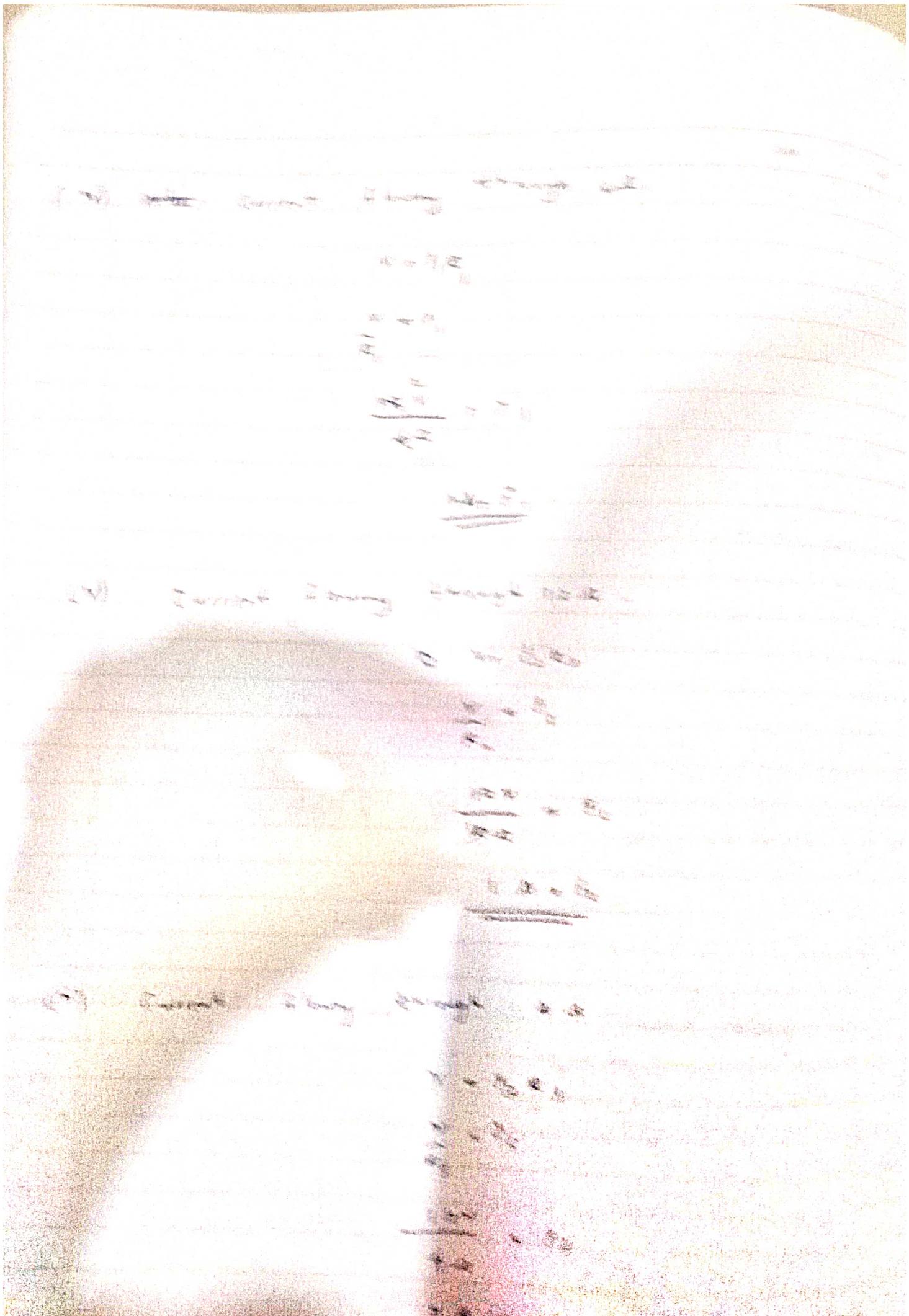
(ii) what current is gained from the electric supply,

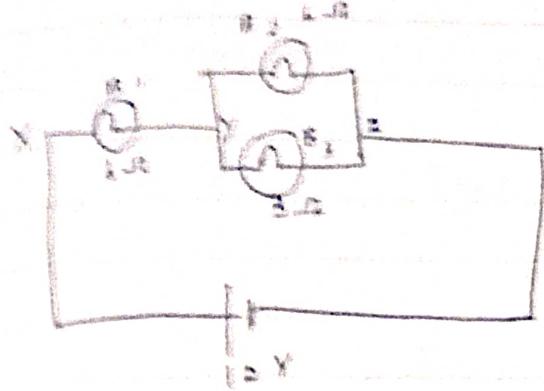
$$V = IR$$

$$I = \frac{V}{R} = 2$$

$$= \frac{12}{2}$$

$$I = 6 A$$





~~total resistance~~
6Ω v.M.

total resistance the two bulbs B_2 and B_3 (bet ween Y and Z)

$$\frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2}$$

$$\frac{1}{R} = \frac{1}{6} + \frac{1}{3}$$

$$\frac{1}{R} = \frac{1+2}{6}$$

$$\frac{1}{R} = \frac{3}{6}$$

$$R = \underline{\underline{2\Omega}}$$

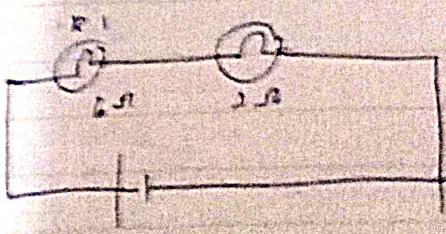
$$R = 2\Omega$$

~~E~~ Total resistance between the two points X and Z

$$R = R_1 + R_2$$

$$= 6 + 2$$

$$= \underline{\underline{8\Omega}}$$



(ii)

What is the current gained from the electric supply

$$V = IR$$

$$I = \frac{V}{R}$$

12 over 8

$$I = \frac{12}{8} A = 1.5 A$$

✓ =

(iv)

do potential difference between X and Y

V

$$V = IR$$

$$\frac{12}{8} \times 3$$

$$=\underline{\underline{9V}}$$

(v)

calculate the potential difference between Y and Z

$$V = IR$$

$$= \frac{12}{8} \times 2$$

$$=\underline{\underline{3V}}$$

Current through the bulb

$$V = IR$$

$$I = \frac{V}{R}$$

$$I = \frac{V}{R_1 + R_2}$$

$$\checkmark I = \frac{V}{R_1 + R_2} = 0.5A$$

Current through the bulb R_3

$$I = \frac{V}{R}$$

$$I = \frac{V}{R_1 + R_2}$$

$$\checkmark I = \frac{V}{R}$$

$$I = 3A$$

Q: What will be the current going through the bulb from the electric supply

$$V = IR$$

$$V = IR$$

$$\frac{V}{R} = I$$

$$\frac{12V}{12\Omega} = I$$

$$\checkmark I = 1A$$