

Write a program for registration of new customers of online banking system. customers data

Unit IV

Dynamic documents with Javascript

Positioning Elements

- i) CSS - P (Cascading style sheet - positioning) - Supported by all browsers.
- ii) It is used to position any element anywhere in the display of a document.
- iii) There are 3 possible values for the 'position' property
 - a) absolute
 - b) relative
 - c) static. → default

1. Absolute positioning

It is used to place an element at a ~~specific~~ specific place in the document display without regard to the position of other elements

Q. Write a program to display ^{some} ~~the~~ text using absolute positioning

```
<html>
<head> some
  <style type="text/css">
    .regtext { font-family font-family:
    .text.abs {
      position: 'absolute';
      top: 25px;
      left: 50px;
    }
  </style>
</head>
```

<body>

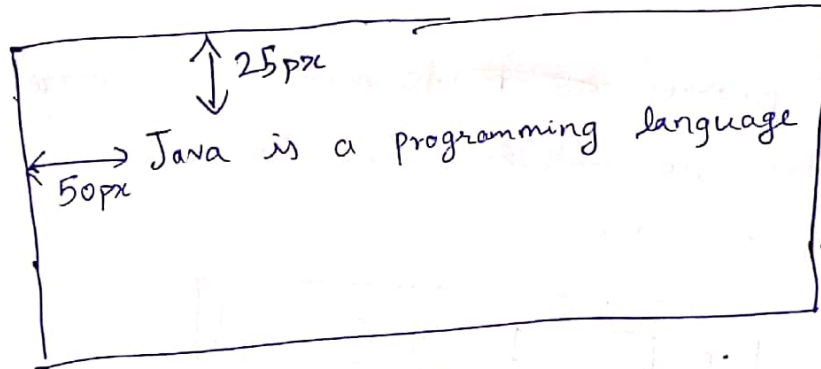
<p class="text-abs">

Java is a programming language </p>

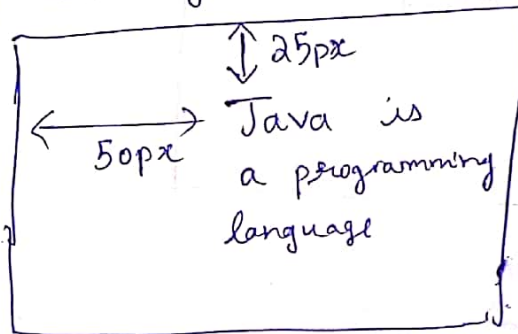
</body>

</html>

Output



If width of page is lesser,



2. Relative positioning

Moves an element relative to its original position.

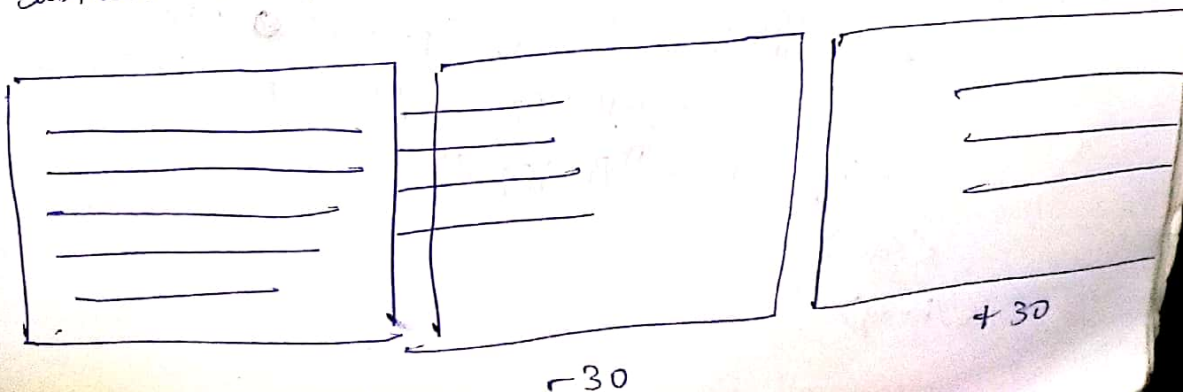
.text-rel {

position: 'relative';

left: -30px;

}

Subtracts 30 pixels from element's original left position



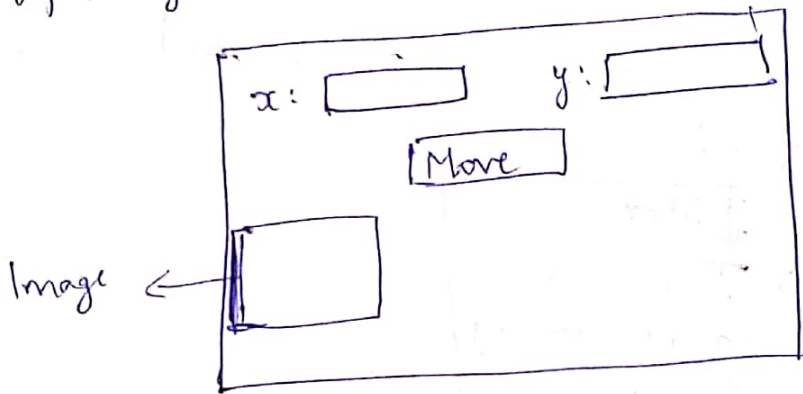


3. Static Positioning

Default value of positioning property

Cannot be displaced from its normal position and it cannot be moved from that position later

Q. Write a program ~~to~~ to move an image from one place to another. Take the position values as input from user



```
<html>
```

```
<head>  
<body>
```

```
<form>
```

```
x: <input type="text" id="x" />
```

```
y: <input type="text" id="y" />
```

```
<input type="button" onclick="f1('divid', document.getElementById  
document.getElementById('x').value,  
document.getElementById('y').value)"/>
```

```
<div id="divid" style="position: static  
left: 0px, top: 25px />
```

```

```

```
</div>
```

```
</body>
```


</head>

<script type="text/javascript">

function f1 (divid, val1, val2) {

dom = document.getElementById ("divid").style ;

dom.top = val1 + "px" ; //100px

dom.left = val2 + "px" ; //200px

}

</script>

</head>

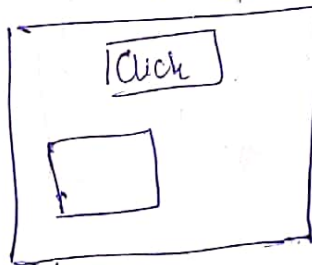
Elements visibility

visible } values
hidden

Property :

Visibility

Q. Change the visibility of the image when button is clicked



<body>

<form action=" " >

<input type="button" id="xyz" value="click" onclick="f1()" >

</form>

<div id="divid" style="position: 'static' left: 20px top: 25px >

</div>

</body>

<head>

<script type="text/javascript">

function f1(){

dom = document.getElementById("divid").style;

if (dom.visibility == "visible")

dom.visibility = "hidden";

else

dom.visibility = "visible";

}

</script>

</head>

Changing Colors

Write a program to dynamically change the foreground and background colors on button click.

Bcolor :	<input type="text" value="blue"/>
Fcolor :	<input type="text" value="red"/>
<input type="button" value="change"/>	

<html>

<body>

<form>

Bcolor : <input type="text" id="bg" />

Fcolor : <input type="text" id="fg" />

<input type="button" value="change" />

onclick = "f1()" />

</form>

</body>

</head>

<script type="text/javascript">

function f1() {

var c1 = document.getElementById("bg").value;

var c2 = document.getElementById("fg").value;

document.body.style.backgroundColor = c1;

document.body.style.color = c2;

}
</script>

</head>

Q. Write a program to change font color & style of some text when mouse is placed over it and also change back to original form when mouse out event is triggered

Java prog language

<html>

<body>

<p onmouseout="f1()" onmouseover="f2()" id="para">
Java prog language </p>

</body>

<head>

<script>

function f1() {

var p = document.getElementById("para");

p.style.color = "Blue";

p.style.font = "24pt Arial";

}

function f2() {

var p = document.getElementById("para");

p.style.color = "Red";

p.style.font = "30pt Times New Roman";

}

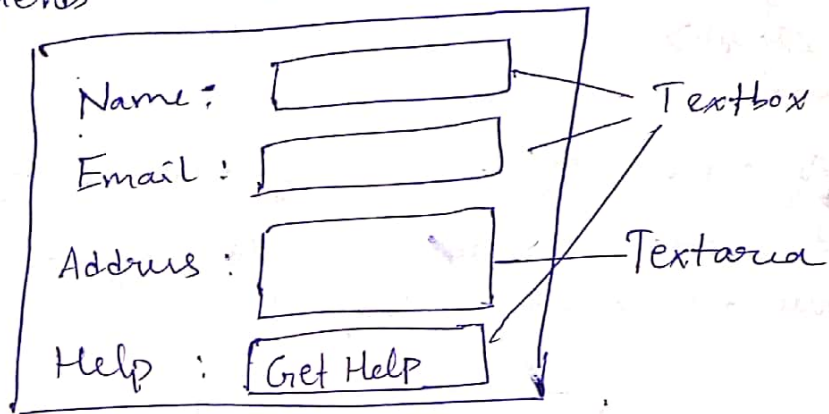

```

</script>
</head>
</html>

```

Dynamic contents

Q. Write a program to change the contents of collection of text fields



On mouse over - display the rules for the input

```

<head>
  <script type = "text/javascript" >
    function f1(i) {
      var arr = ["Enter your name", "Enter
        your Email id", "Enter your address",
        "Get help"];
      document.form1.help-text.value = arr[i];
    }
  </script>

```

```

</head>

```

```

<body>

```

```

  <form name = "form1" >

```

```

    Name: <input type="text" onmouseover = "f1(0)"
      onmouseout = "f1(3)" />

```

Email: `<input type="text" onmouseover="f1(1)"
onmouseout="f1(3)" />`

Address: `<textarea id onmouseover="f1(2)"
onmouseout="f1(3)" />`

Help: `<input type="text" id="help-text" />`

`</form>`
`</body>`

Locating the mouse cursor

MouseEvent is an implementation of MouseEvent interface which defines two types of properties that provide geometric coordinates of the position in the display.

1) clientX and clientY — specify position relative to client's upper left corner

2) screenX and screenY — specify position relative to client's computer screen.

Q. Write a program to implement these properties when mouse is clicked.

| | |
|---|----------------------|
| X1: | <input type="text"/> |
| X2: | <input type="text"/> |
| X3: | <input type="text"/> |
| Y2: | <input type="text"/> |
| Sample program in Java | |
| Sample program in JavaScript | |


```
<body onclick = f1(event) >
```

```
<form id = "f1" >
```

```
x1: <input type = "text" id = "xcoord1" value = "" />
```

```
y1: <input type = "text" id = "ycoord1" value = "" />
```

```
x2: <input type = "text" id = "xcoord2" value = "" />
```

```
y2: <input type = "text" id = "ycoord2" value = "" />
```

```
</form>
```

```
<p> Java prog lang <br />
```

```
Scripting language <p>
```

```
</body>
```

```
<head>
```

```
<script type = "text/javascript" >
```

```
function f1(evt) {
```

```
document.getElementById("xcoord1").value = evt.clientX;
```

```
document.getElementById("ycoord1").value = evt.clientY;
```

```
document.getElementById("xcoord2").value = evt.screenX;
```

```
document.getElementById("ycoord2").value = evt.screenY;
```

```
}
```

```
</script>
```

```
</head>
```

Reacting to mouse click

~~Q~~

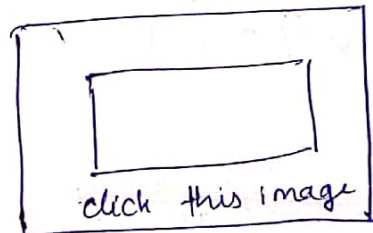
Events

~~i) mouseup~~

i) mouseup - It is triggered when the mouse button is released

ii) mousedown - Triggered when mouse button is pressed.

Q: Write a program to change the image when mouse is clicked and when mouse is released.



~~<head>~~

<html>

<body>

id="image"

~~<h3>~~

<h3> Click this image </h3>

</body>

<head>

<script>

function f1 () {
document.getElementById("image").src = "Pic2.jpg";
}

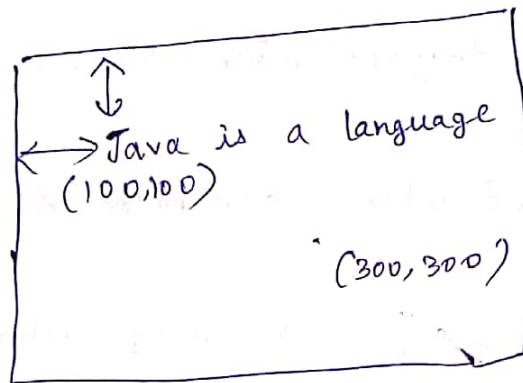
function f2 () {
document.getElementById("image").src = "Pic1.jpg";
}

</script>

</head> </html>

Slow Movements of elements

Q. Move the given text slowly from (100,100) to (300,300).



Window object

set Timeout (move(), 20)

→ 20 milliseconds

```
<body onload = "f1()">
```

```
<p id = "text" style = "position: absolute"
```

```
<div id = "text" style = "position: 'absolute'; top: 100px;  
left: 100px;">
```

```
<p> Java is a language </p>
```

```
</div>
```

```
</body>
```

```
<head>
```

```
<script type = "text/javascript">
```

```
function f1()
```

```
var dom = document.getElementById("text")
```

```
var dom, x, y, final x = 300, finally = 300;
```

```
function f1() {
```

```
dom = document.getElementById("text");
```

```
x = dom.style.left;
```

```
y = dom.style.top;
```

```
x = parseInt(x);
```

```
y = parseInt(y);
```


move(x, y);

```
function move(x, y) {  
    if (x <= finalx & y <= finaly) {  
        x++;  
        y++;  
        dom.style.left = x;  
        dom.style.top = y;  
        setTimeout(move  
        setTimeout("move(" + x + ", " + y + ")", 20);  
    }  
}
```

</script>

</head>

Stacking Elements

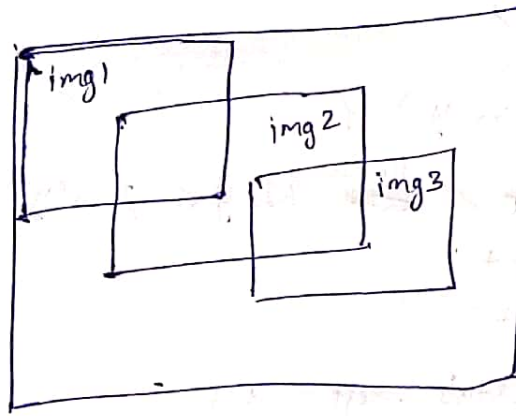
Multiple elements can occupy the same space in the document and the element can be placed anywhere in the two dimensions in the display of the document using left and top properties.

One element can be displayed on top with the effect of third dimension i.e. Z coordinate. It is controlled by Z-index attribute.

In javascript, the property associated with Z-index is zIndex.

CSS: z-index
JS: zIndex

E.g.



* On clicking an image, it comes front

(set zindex to -1 initially)

<body>

<img class = "t1" src = "Ex1.jpg" onclick = "f1('first')"
id = "first" style = "z-index: 0; top: 0px; left: 0px;" />

<img class = "t2" src = "Ex2.jpg" onclick = "f1('second')"
id = "second" style = "z-index: 1; top: 0px; left: 0px;" />

<img class = "t3" src = "Ex3.jpg" onclick = "f1('third')"
id = "third" style = "z-index: 2; top: 0px; left: 0px;" />

</body>

<head>

<script type = "text/javascript" >

var top = 'first';
function f1 (s) {

document.getElementById(s).style.zIndex = 60;

document.getElementById(top).style.zIndex = 0;

top = s;

</script>

</script>

<style type = "text/css" >

.t1 {

z-index: 60,

position: absolute,

top: 0px,

left: 0px;

}

```
.t2 {  
  z-index : 0 ;  
  position : 'absolute',  
  top : 10050px,  
  left: 110px;
```

```
}
```

```
.t3 {  
  z-index : 0 ;  
  position : 'absolute',  
  top : 100px ;  
  left : 220px ;
```

```
}
```

```
</style>
```

```
</head>
```


PHP

- Hypertext Preprocessor (earlier called personal homepage)

Eg.

<body>

<?php

\$i = 10; → variable declaration

echo \$i; → can also use print \$i;

echo "<h3>" welcome "</h3>";

?>

Comments

#

//

/*

≡

*/

} Single-line

} Multi-line

Datatypes

Integer type - long type

Double

Can specify with exponent - E or e

Boolean

True & False

* ~~""~~ " " and "0" evaluate to false

String

Can be written in single or double quotes

E.g. 'hai', "hai"

Predefined functions

```
echo floor(4.9); // 4
" ceil(4.9); // 5
min(6, 7); 5
max(6, 7);
abs(-6.8);
```

} Can pass any number of arguments

String operations

- 1) strlen
- 2) strcmp
- 3) substr

```
$str = "abc def ghi";
$sub = substr($str, 5, 1);
```

output : e

- 4) strtolower("PHP");
- 5) strtoupper("php");
- 6) trim() → remove whitespaces from left & right of string

Scalar type conversions

Explicit

- i) ~~PHP~~ \$i = 4.65; iii) settype(\$i, "integer");
\$p = (int)\$i; // 4
- ii) intval(\$i);
doubleval(\$i)
strval(\$i)

printf function (Similar to C-language)

printf(100);

Control statement

- if
- switch-case
- Looping - for, while, do-while

Q. Write a program to print numbers from 1 to 10 using a ~~for~~ while loop.

<?php>

\$i = 1;

while (\$i <= 100) {

echo "<p>" \$i "</p>" "
"

}

<?>

Arrays

Arrays in PHP are stored as key-value pairs

Creation :

\$arr1 = array(10, 20, 30, 40, 50);

\$arr2[2] = 45;

\$arr2 = array(1 => "50", 2 => "60", 3 => "80");

get keys ← \$a1 = array_keys(\$arr2); // 1 2 3

get values ← \$a2 = array_values(\$arr2); // 50 60 80

print_r(\$a1); → (print readable).

unset(\$arr[1]); → remove the element

\$len = sizeof(\$arr);

Conversion between strings & arrays

```
$s1 = "Scripting lang JS"
```

~~\$words~~

i) explode() → explodes a given string into substrings & returns an array.

```
$words = explode(" ", $s1);
```

ii) implode() → combines individual array elements into a string

```
$words = array("aa", "bb", "cc");
```

```
$str = implode(" ", $words);
```

Output: aa bb cc

Sequential access to array elements

Every array has an internal pointer that references one element of the array i.e. the current ~~element~~ pointer

~~To get access~~ Use current() function to get current pointer
Q. Write a program to print the current element in an array first, and then the subsequent elements.

```
$arr1 = array(10, 20, 30);
```

```
$a1 = currentcurrent($arr1);
```

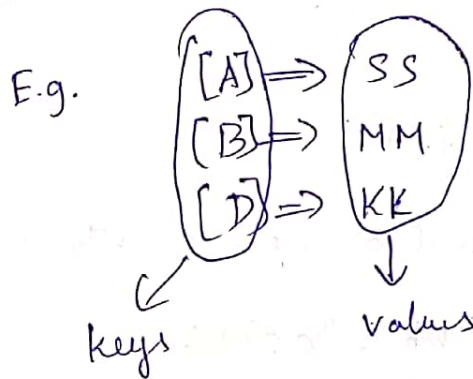
```
echo $a1;
```

```
while($a1 = next($arr1))
```

```
{ printf($a1); }
```

Sorting arrays

- Sort - based on values (in ascending) & changes even keys
asort - sorts based on values, but array keys remain same
ksort - based on keys (values are reordered)



Output

Sort :

```
[D] => KK
[B] => MM
[A] => SS
```

asort :

```
[A] => KK
[B] => MM
[D] => SS
```

ksort :

```
[A] => SS
[B] => MM
[D] => KK
```

Functions in PHP

Definition :

```
<? php  
function fl() {
```

```
    ==  
    ==  
    ==
```

```
    return $a1
```

```
}
```

```
print fl();
```

```
    ==  
    ==  
    ==
```

```
?>
```

Static variables in PHP

Similar to C; variable is initialized only once.

```
static $count = 0;
```

```
$count ++
```

Pattern matching

(Similar to Javascript)

```
if (preg_match("/gram/", "Like prog lang"))
```

```
    print "match";
```

```
else
```

```
    print "not match";
```

~~Output~~ Output

not match

→ Circumflex

^gram - starts with "gram"

lang\$ - ends with lang

E.g.

```

$text = "aa: bb: cc";
$val = preg_split ("/:/", $text);
while ($val2 = each($val1)) {
    $M1 = $val2["value"];
    print $M1;
}

```

Output

aa
bb
cc

Cookies

It is used to identify ~~the user~~ a user.
It is a small file that the ~~user~~ ~~server~~ server uploads on the user's computer.

Cookies is created using set cookie () function

E.g.

```
<?php
```

```
$cookie_name = "user";
```

```
$cookie_value = "XX";
```

```
setcookie ($cookie_name, $cookie_value, time() + (86400*30))
```

>

↓
expiration time

86400 → no. of seconds
in a day

30 → for a month

```

<html>
<body>
<?php
    if (isset($_COOKIE[$_COOKIE_NAME])) {
        echo "set";
        echo $_COOKIE_NAME;
    }
    else
        { echo. "not set "};
?>
</body>
</html>

```

returns true if cookie is set

PHP Session

A session is a way to store the information in variables that will be used across multiple pages.

E.g.

```

<?php
    session_start();
?>

```

→ Put before <html>

```

<html>
<body>
<?php
    $_SESSION["favcolor"] = "Blue";
    $_SESSION["favitem"] = "XX";
    echo "set session var";
?>
</body>
</html>

```

Show all the session variable values

```
<?php
    session_start();
?>
<html>
    <body>
        <?php
            print_r($_SESSION);
        </body>
    </html>
```

~~Remove~~

Remove all the session variables

```
session_unset();
```

Destroying the Session

```
session_destroy();
```

Files

```
<?php
```

```
$f1 = fopen("Ex1.txt", "r") or die("Unable to  
open file");
```

// if file cannot be opened die() is executed

```
echo fread($f1, filesize("Ex1.txt"));
```

↓
max no. of bytes
to read

```
fclose($f1);
```

```
?>
```

File modes (use indicators)

r

rt

w

wt

a

at

fgets()

To read a single line

```
echo fgets ($f1);
```

```
echo fgets ($f1, 100) → 100 - number of bytes  
to read
```

feof()

```
while (! feof ($f1)) {
```

```
    echo fgets ($f1);
```

```
}
```

fgetc

To read one character

```
echo fgetc ($f1)
```


PHP form handling

$\$$ -GET } Global variables in PHP
 $\$$ -POST }
→ sends data as part of URL

```
<html>
  <body>
    <form action = "Ex.php" method = "get" >
      Name: <input type = "text">
      Email: <input type = "text" />
      <input type = "submit" >
    </form>
  </body>
</html>
```

Ex. php

```
<html>
  <body>
    <?php
      echo $_GET["name"];
      echo $_GET["email"];
    ?>
  </body>
</html>
```

XX
YY

- Q Write a program to compute the sum and average of numbers from 1 to 10
- Q Write a php script to display squares & cubes of numbers from 1 to 10.
- Q. Write a php program to store page views count in session, increment count on ~~def~~ each refresh and show the count on webpage.

```
<? php
```

```
session - start();
```

```
if (isset ($_SESSION ['views']))
```

```
$_SESSION ['views'] = $_SESSION ['views'] + 1;
```

```
else
```

```
$_SESSION ['views'] = 1;
```

```
?>
```

```
<html>
```

```
<body>
```

```
<? php
```

```
echo "views: " . $_SESSION ['views'];
```