

Web Design



New HTML5 Features, Structure & HTML Form

Third Stage/Semester 1

Lecture

3

©Copyright

Lecturer: Dezheen Hussein Abdulazeez

Email: Dezheen.abdulazeez@uod.ac

Computer science Dept_UOD

2021-22

Outlines

- New Semantic Elements
- New Multimedia Elements
- HTML Form Elements.
 - HTML Input Types.
 - New HTML5 Input Types.
- New HTML5 Form Elements.
- HTML Attributes.
- New HTML5 Attributes.

New Features in HTML5

- **New Semantic Elements:** HTML5 provides new semantic elements to build different parts of a web page. For instance: <header>, <footer>, <section> and others semantic elements.
- **New multimedia Elements:** They let you to embed audio or video into web pages without plugin like windows media player and Adobe Flash.
- **New Forms Element and Attribute :** New elements and attributes are provided with HTML5 which makes the web forms more interactive.

New HTML5 Semantic/Structural Elements

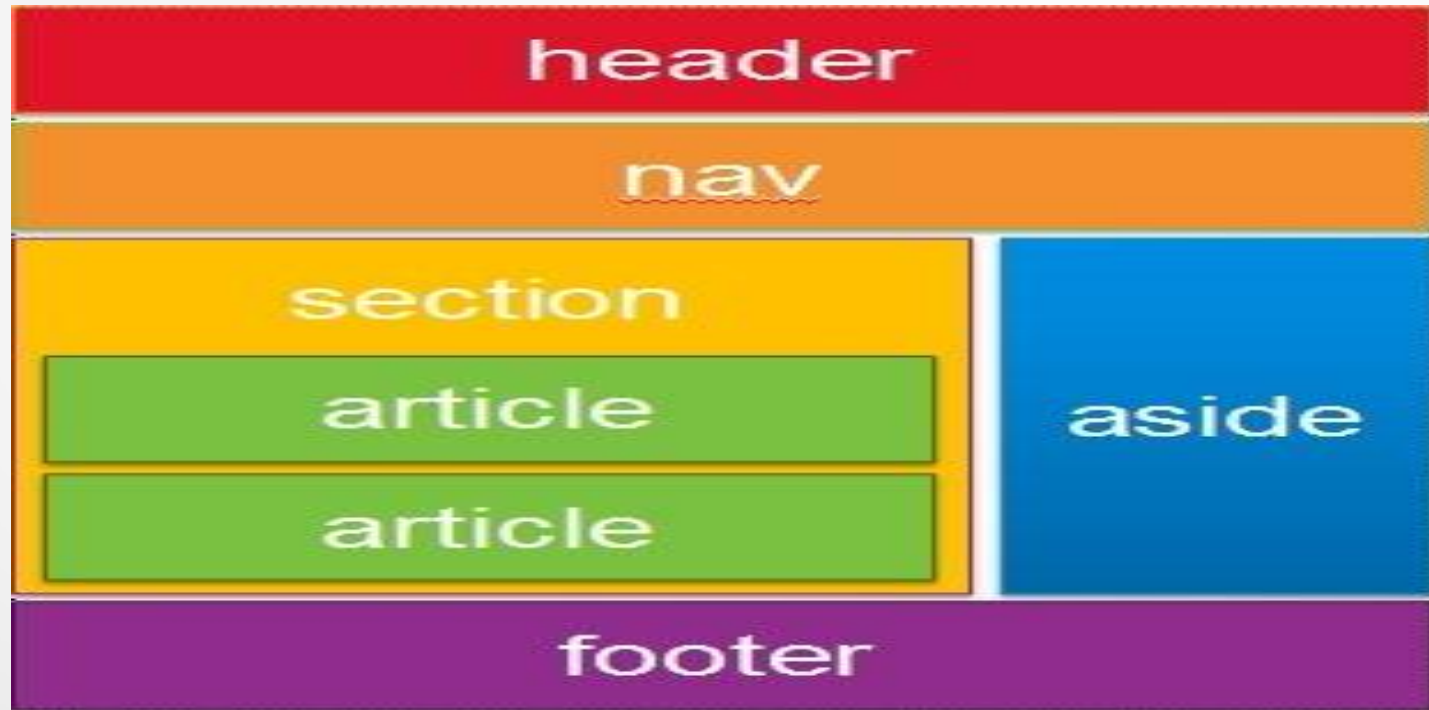


Figure 1: HTML5 Semantic Elements

HTML5 Multimedia Elements

- The HTML5 `<audio>` and `<video>` tag define a standard way to add audio and video into a web page without a plug-in (like Adobe flash).
- The text between `<audio>` and `</audio>`, `<video>` and `</video>` will be displayed in browsers when the browser does not support them.

HTML5 Multimedia Elements

- The **<audio>** tag specifies sound, such as music or other audio streams.
- Currently, the following file formats are supported by the <audio> element: **MP3**, **Wav**, and **Ogg**.
- The **<video>** tag specifies video, such as a movie or other video streams.
- Currently, the following file formats are supported by the <video> element: **MP4**, **WebM**, and **Ogg**.

Example1: Audio element

<body>

<audio width="320" height="240" controls>

<source src="001.mp3" type="audio/mp3">

<source src="001.ogg" type="audio/ogg">

Your browser does not support the audio tag.

</audio>

</body>

Example2: Video element

<body>

<video width="320" height="240" controls>

<source src="002.mp4" type="video/mp4">

<source src="002.ogg" type="video/ogg">

Your browser does not support the video tag.

</video>

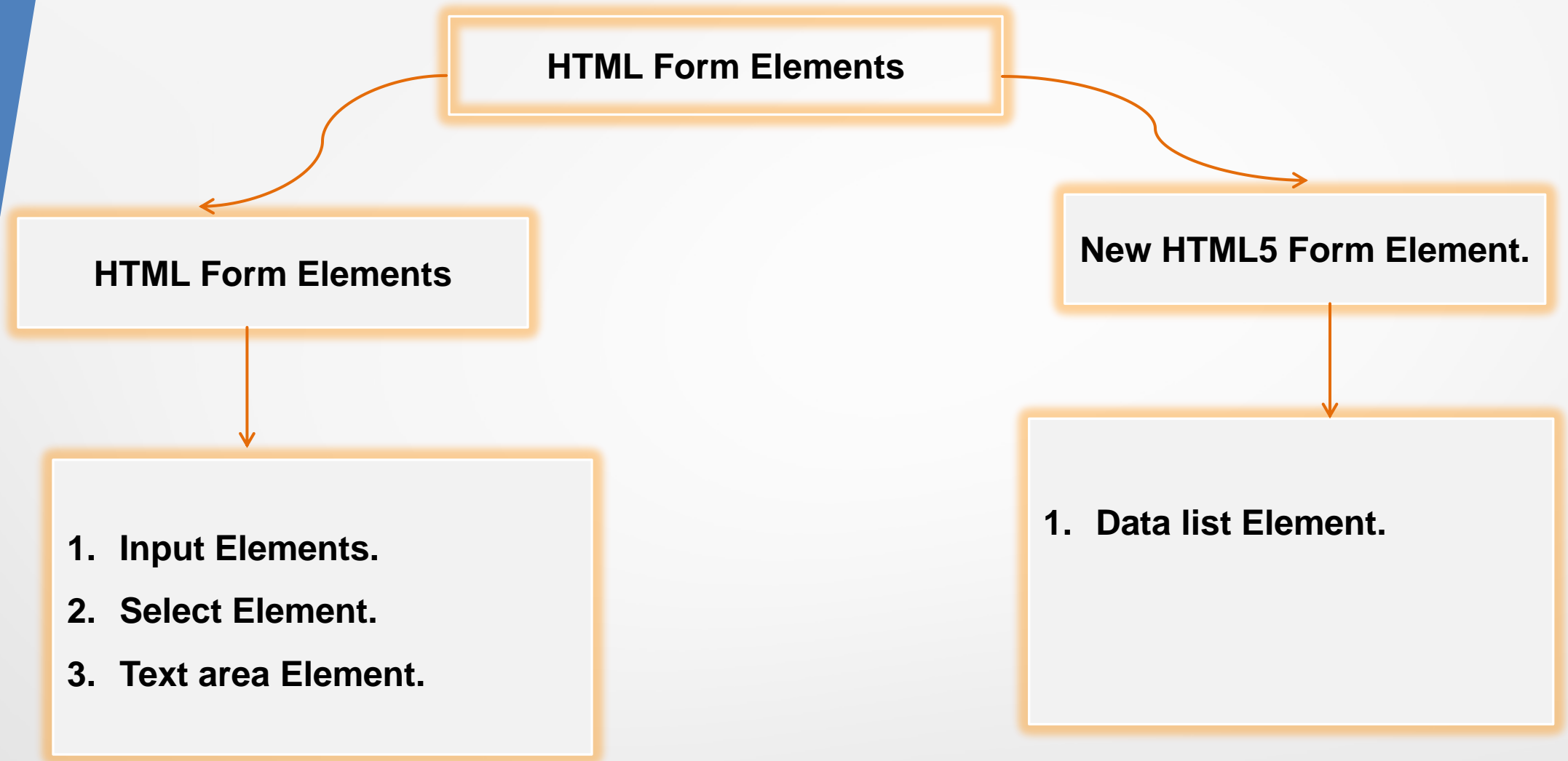
</body>

Audio and video Attributes

- The **Controls** attribute inserts the audio(video) controls and it contains play, pause, seeking, and volume.
- Inside audio (video) element we can define a multiple **source elements** which allows us to specify multiple audio(video) file types. The browser will use the first recognized format.

HTML Web Forms

- It is used to collect data from the user.
- For example:
 - Login.
 - Comments.
 - Contact Form.
 - Updating your status on social media(such as Facebook and blog).
 - Creating email.
- `<form>...</form>` element is used to create a web form.



Digram1: HTML Form Elements

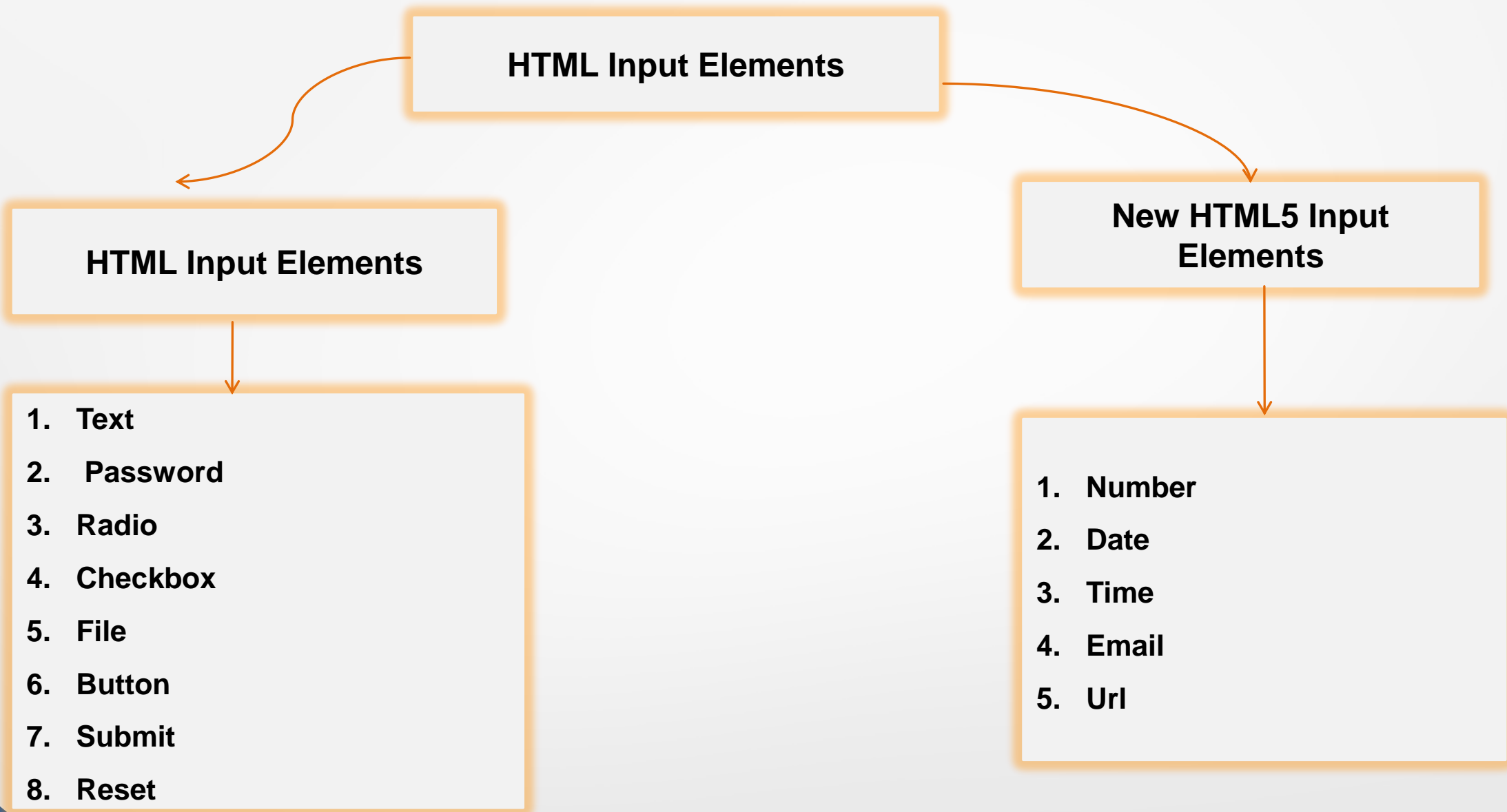


Diagram2: HTML Input Elements

HTML Form Elements

- Input Elements.
- Select Element.
- Text Area Element.

HTML Input Types

- Text
- Password
- Radio
- Checkbox
- File
- Button
- Submit
- Reset

Text Input Type

- It is used to enter a normal text.

- ## Example1: Text Input Type

Name

First	Last
-------	------

<label for="firstname">Name</label>

<p>

```
<input type="text" name="firstname" id="firstname">
```

```
<input type="text" name="lastname" >
```

</p>

Password Input Type

- It is used to enter a password.
- **Example2: Password Input Type**



```
<label for="password"> Password </label>
```

```
<p> <input type=" password" name=" password" id="password" > /p>
```


Radio Input Type

- It is used to select one item from a list of items.
- **Example3: Radio Input Type**

Gender

☒ Male ☐ Female

`<label for=" gender ">Gender </label>`

<p>

`<input type="radio" name="gender" value="male" id="gender"> Male`

`<input type="radio" name="gender" value="female" id="gender"> Female`

</p>

Checkbox Input Type

➤ It is used to select several items from a list of items.

➤ **Example4: Checkbox Input Type**

Client Side Web Programming:

- ☐ HML
- ☐ PHP
- ☐ CSS

`<label for="name">Client Side Web Programming </label>`

`<p>`

`<input type="checkbox" name="WebProgram" value="html"> HTML
`

`<input type="checkbox" name="WebProgram" value="php"> PHP
`

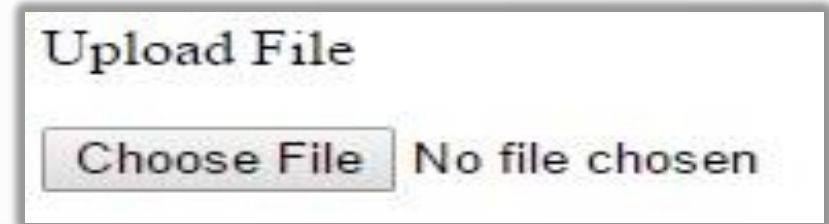
`<input type="checkbox" name="WebProgram" value="css"> CSS
`

`</p>`

File Input Type

- It is used to upload files.
- **Example5: File Input Type**

```
<label for=" File "> File </label>  
<p>  
    <input type=" file " >  
</p>
```



Button Input Type

- It is used to define a clickable button.
- **Example6: Button Input Type**



```
<label for="button">Button</label>
```

```
<p>
```

```
  <input type="button" onclick = "alert('Hello World!')" " value="Click me">
```

```
</p>
```

Submit & Reset Input Types

- Submit input field is used to send or submit data to the server and reset input field is used to return all form values to default values.
- **Example7: Submit & Reset Input Types**



<p>

```
<input type="reset" value = "Reset">
```

</p>

Fieldset & Label elements

- The `<fieldset>...</fieldset>` element is used to draw a box around the related form's elements.
- The `<legend>... </legend>` element defines a caption for the **fieldset** element.
- The `<label>...</label>` element is used to define a label for an `<input>` element.
- To create the relationships between **label** element and **input** elements: the **for** attribute of the **label** element must match the **id** attribute of the **input** element.

The Output of HTML Input Elements

HTML Input Types: —

Name

Password

Gender

☒ Male ☐ Female

Client Side Web Programming:

☐ HML
☐ PHP
☐ CSS

Upload File

No file chosen

Button

Figure1: HTML Input Elements

New HTML5 Input Types



➤ Number

➤ Date

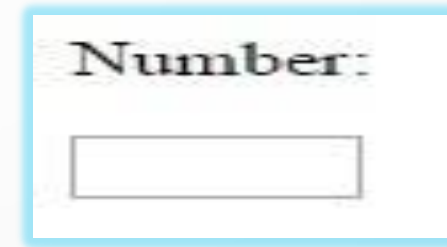
➤ Time

➤ Email

➤ Url

Number Input Type

- It is used for input fields that should contain a numeric value.
- **Example1: Number Input Type**



```
<label for="number">Number:</label>
```

```
<p>
```

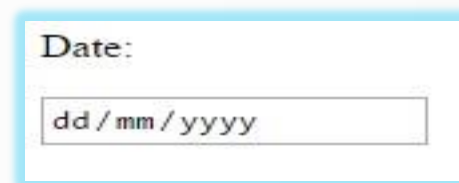
```
<input type="number" name="number" id="number">
```

```
</p>
```

Date Input Type

➤ It is used for input fields that should contain a date.

➤ **Example2: Date Input Type**



```
<label for="date">Date:</label>
```

```
<p>
```

```
<input type="date" name="date" >
```

```
</p>
```

Time Input Type

➤ It is used for input fields that should contain a time.

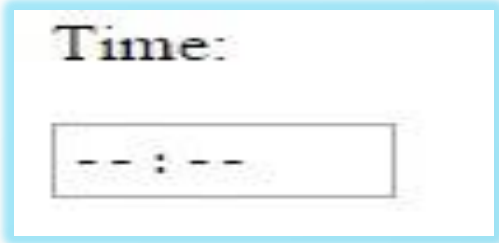
➤ **Example3: Time Input Type**

```
<label for="time">Time:</label>
```

```
<p>
```

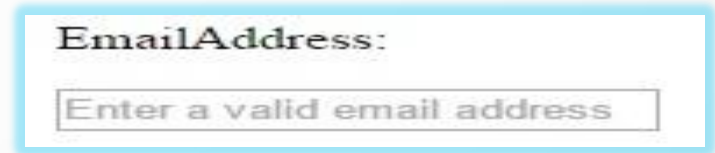
```
<input type="time" name="time" >
```

```
</p>
```



Email Input Type

- It is used for input fields that should contain an e-mail address.
- **Example4: Email Input Type**



```
<label for="Email">EmailAddress:</label>
```

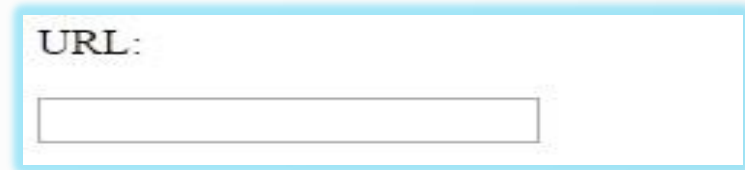
```
<p>
```

```
<input type="Email" name="Email" id="Email">
```

```
</p>
```

URL Input Type

- It is used for input fields that should contain a URL address.
- **Example5: URL Input Type**



```
<label for="url">URL:</label>
```

```
<p>
```

```
<input type="url" name="url" id="url">
```

```
</p>
```

The Output of New HTML5 Input Elements

New HTML5 Input Types:

Number:

Date:

Time:

EmailAddress:

URL:

Figure2: New HTML5 Input Elements

Select Element

- The **<select>** element is used to define a drop-down list.
- The **<option>** elements define an option in a drop-down list.
- **Example1: Select Element**

```
<label for="Country"> Country:</label>
```

```
<p>
```

```
<select name="Country">
```

```
<option value="Iraq">Iraq</option>
```

```
<option value="Italy">Italy</option>
```

```
<option value="German">German</option>
```

```
</select>
```

```
</p>
```



Country:

Iraq ▼

Text Area Element

- The `<textarea>` element represents a multi-line plain-text input control.
- The size of a text area can be defined by the **cols** and **rows** attributes.

- **Example1: TextArea Element**

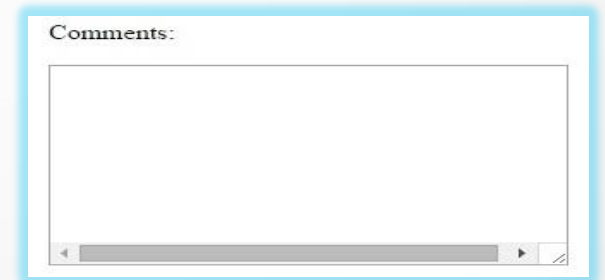
```
<label for=" Comments"> Comments:</label>
```

```
<p>
```

```
<textarea name=" Comments " rows="10" cols="40">
```

```
</textarea>
```

```
</p>
```



Select & TextArea Elements Output

HTML Elements:

Name:

First Last

Country:

Comments:

Figure3: Select & TextArea Elements

New HTML5 Form Element

- Datalist Element.

Data List Element

- The **<datalist>** element is used to specify a drop-down list of pre-defined options as they input data.
- The list attribute of the <input> element, must refer to the id attribute of the <datalist> element.
- **Example1: DataList Element**

```
<label> Mobile:</label>
```

```
<p> <input list="Mobile">
```

```
  <datalist id="Mobile">
```

```
    <option value="Iphone">Iphone</option>
```

```
    <option value="HTC">HTC</option>
```

```
    <option value="Samsung">Samsung</option>
```

```
  </datalist>
```

```
</p>
```

Data List Element Output

Mobile:

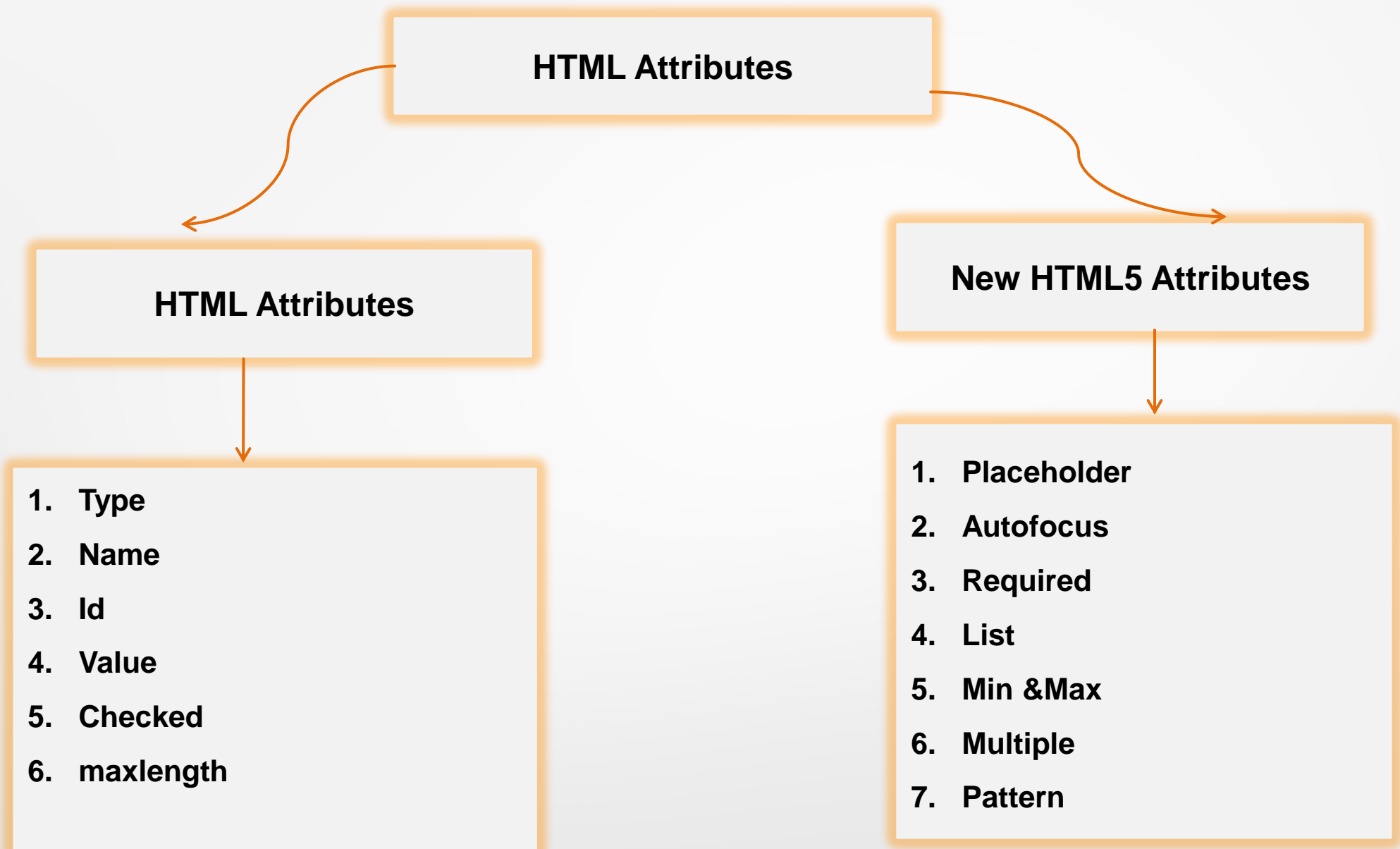
▼

iphone

HTC

Samsung

Figure4: Data List Element



Digram3: HTML Attributes

HTML Attributes

- **Type**: defines input field type.
- **Name**: defines the input field name.
- **Id**: defines the input field Id.
- **Value**: an initial value.
- **Checked**: checks a checkbox or radio input elements.
- **Maxlength**: specifies the maximum allowed length for the input field. `<input`
`type="text" name="firstname" maxlength="10">`

New HTML5 Attributes

- **Placeholder**: it provides a hint to the user about what's expected value(format) to be entered in the input field.

Ex1: `<input type="text" name="firstname" placeholder="Fist name">`

- **Autofocus**: set focus to the input text field when the page loads.

Ex2: `<input type="text" name="firstname" autofocus >`

New HTML5 Attributes

➤ **Required:** it indicates that an input field must be entered.

Ex3: `<input type="text" name="firstname" required>`

➤ **List:** it creates association with the id attribute of the <datalist> element.

Ex4: `<input list="Mobile">`
`<datalist id="Mobile">`
`</datalist>`

New HTML5 Attributes

- **Min & Max**: they specify the minimum and maximum value for an <input> field.

Ex5: `<input type="number" name="number" min="1" max="5" >`

- **Multiple**: it specifies that the user is allowed to enter more than one value in the <input> element.

Ex6: `<input type="file" name="chooseFile" multiple>`

New HTML5 Attributes

- **Pattern**: The pattern attribute specifies a regular expression that the <input> element's value is checked against.

Ex7: `<input type="text" name="pw" pattern="(?=.*\d)(?=.*[a-z])(?=.*[A-Z]).{8,}"`

`title="Must contain at least one number and one uppercase and lowercase letter, and at least 8 or more characters">`