Front End Technologies
CSS - Day 2

Agenda

- **EXTERNAL CSS**
- **Cascading in CSS**

External CSS:

External CSS contains separate CSS file which contains only style property with the help of tag attributes. CSS property written in a separate file with .css extension and should be linked to the HTML document using **link tag**. The advantage of external stylesheets is that it can be created once and the rules applied to multiple web pages. If we need to make widespread changes to your site design, you can make a single change in the stylesheet and it will be applied to all linked pages, saving time and effort as it prevents you from having to make many code changes in each page.

Let us now understand with an example how to make use of external css. Assume we have 3 html files index.html, index1.html, index2.html and we have to apply same styling for all these files then the concept of External css comes where styling should be done in one CSS file and linked to all html files.

index.html

```
<!DOCTYPE html>
<html>
<head>
    <title>Home Page</title>
    <link rel= "stylesheet" type="text/css" href="style.css">
</head>

<body>
    <h1>Full Stack Web Development</h1>
    <p>Full stack development refers to the development of both front end(client side) and back end(server
    side) portions of web application.</p>
    <h2>Technologies related to full stack web development</h2>
    <h3>Front End Technologies</h3>
    <p>Front End is the visible part of website or web application which is responsible for user
    experience, built using HTML,CSS,JAVASCRIPT</p>
    <img src="frontend.png">
    <h3>Back End Technologies</h3>
    <p>It refers to the server-side development of web application with a primary focus on how the website
    works and is built using languages such as Python,Java,C</p>
    <img src="backend.jpg">
    <h3>Database Technologies</h3>
    <p> Database is the collection of inter-related data which helps in efficient retrieval, insertion and
    deletion of data from database and organizes the data. The technologies used are SQL,MYSQL,MONGODB</p>
    <img src="dbms.png">
</body>
</html>
```

index1.html

```
<!DOCTYPE html>
<html>

<head>
    <title>AI</title>
    <link rel= "stylesheet" type="text/css" href="style.css">
</head>

<body>
    <h1>Artificial Intelligence</h1>
    <p>The fourth industrial revolution is driven by AI</p>
    <h2>Categories of AI</h2>
    <h3>Strong AI</h3>
    <p>Strong AI is capable of thinking and acting like a human being. In short it must be able<br>
        to mimic a human being.</p>
    <img src="strongai.jpg">
    <h3>Weak AI</h3>
    <p>Weak AI is a AI which is very good at performing a single task but cannot do many things at the
    same time.<br>Its specific in nature and not generic like a human being.
    </p>
    <img src="openai.jpg">
</body>

</html>
```

index2.html

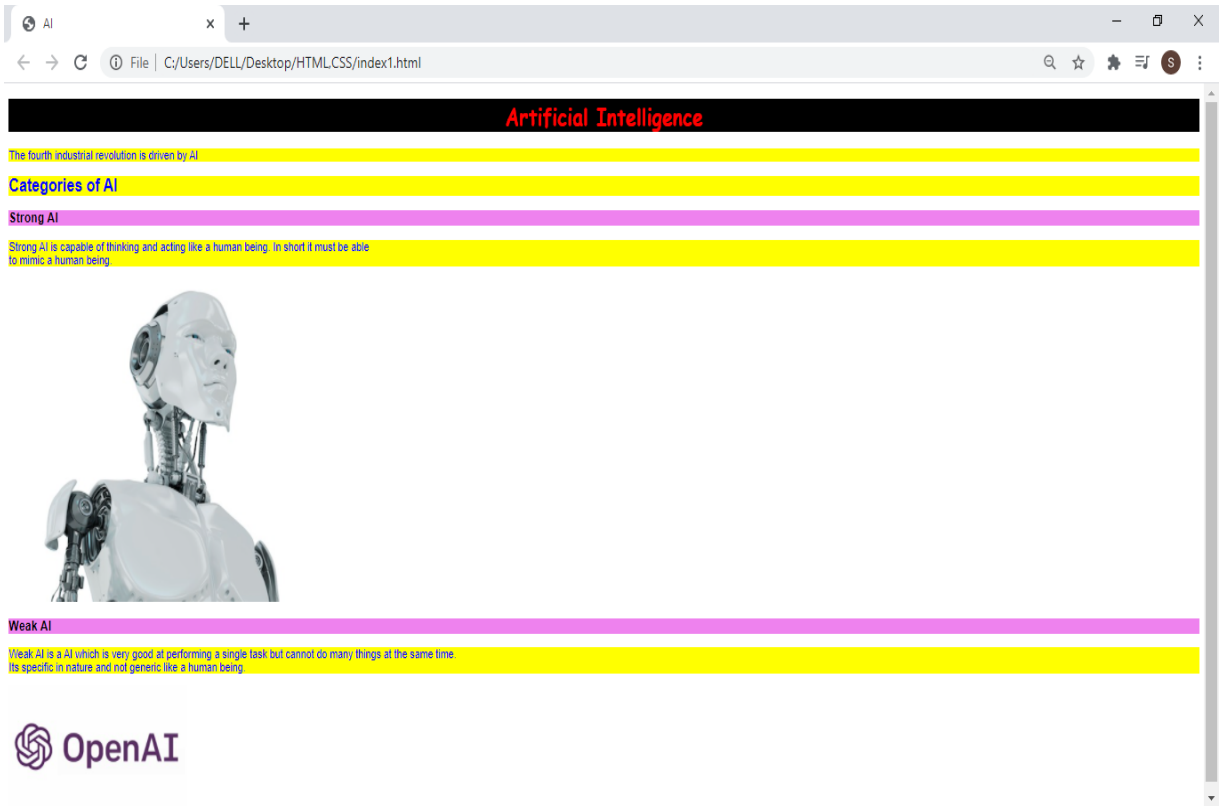
```
<!DOCTYPE html>
<html>

<head>
    <title>Testing</title>
    <link rel= "stylesheet" type="text/css" href="style.css">
</head>

<body>
    <h1>Software Testing</h1>
    <p>Software testing is a process, to evaluate the functionality of a software application with an
    intent to find whether the developed software met the specified requirements or not.</p>
    <h2>Types of testing</h2>
    <h3>Manual Testing</h3>
    <p>Manual testing is testing of the software where tests are executed manually by a QA Analyst. It is
    performed to discover bugs in software under development.</p>
    <img src="manual.jpeg">
    <h3>Automation Testing</h3>
    <p>In Automated Software Testing, testers write code/test scripts to automate test execution. Testers
    use appropriate automation tools to develop the test scripts and validate the software. </p>
    <img src="automation.jpeg">
    </p>
</body>

</html>
```

style.css

```
h1 {
        color: red;
        background-color: black;
        font-family: cursive;
        text-align: center;
    }

    p {
        color: blue;
        background-color: yellow;
        font-family: sans-serif;
    }

    h2 {
        color: blue;
        font-family: Arial;
        background-color: yellow;
    }

    h3 {
        color: black;
        font-family: Helvetica;
        background-color: violet;
    }
```

Output:


Home Page
File | C:/Users/DELL/Desktop/HTML.CSS/index.html
Full Stack Web Development
Full stack development refers to the development of both front end(client side) and back end(server side) portions of web application.
Technologies related to full stack web development
Front End Technologies
Front End is the visible part of website or web application which is responsible for user experience, built using HTML,CSS,JAVASCRIPT.
JavaScript
HTML
CSS
Back End Technologies
It refers to the server-side development of web application with a primary focus on how the website works and is built using languages such as Python,Java,C
python
Programming
Java
Database Technologies
Database is the collection of inter-related data which helps in efficient retrieval, insertion and deletion of data from database and organizes the data. The technologies used are SQL,MYSQL,MONGODB
SQL
MySQL


AI
File | C:/Users/DELL/Desktop/HTML.CSS/index1.html
Artificial Intelligence
The fourth industrial revolution is driven by AI
Categories of AI
Strong AI
Strong AI is capable of thinking and acting like a human being. In short it must be able
to mimic a human being.
Weak AI
Weak AI is a AI which is very good at performing a single task but cannot do many things at the same time.
Its specific in nature and not generic like a human being.
OpenAI

As we can see in the above output styling has been reflected to all web pages. So, by using external css it will be easy to style multiple pages at the same time. In the above example styling for index.html, index1.html and index2.html is done in the style.css file and is linked to all the html files using **<link> tag.** The **<link> tag** can be used in an HTML document to tell the browser where to find the CSS file used to style the page. It is an empty element and it lives inside the element. It should use three attributes i.e **rel, type and href**. The **rel** attribute specifies the relationship between the HTML page and the file it is linked to. The value should be stylesheet when linking to a CSS file. **type** attribute specifies the type of document being linked to. The value should be text/css. href specifies the path to the css file.

Let us now see an alternative way of using external stylesheet using @import with the same example.

index.html

```
<!DOCTYPE html>
<html>
<head>
    <title>Home Page</title>
    <style type="text/css">
        @import url(style.css)
    </style>
</head>
<body>
    <h1>Full Stack Web Development</h1>
    <p>Full stack development refers to the development of both front end(client side) and back end(server
    side) portions of web application.</p>
    <h2>Technologies related to full stack web development</h2>
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    deletion of data from database and organizes the data. The technologies used are SQL,MYSQL,MONGODB</p>
    <img src="dbms.png">
</body>
</html>
```

index1.html

```
<!DOCTYPE html>
<html>

<head>
    <title>AI</title>
    <style type="text/css">
        @import url(style.css)
    </style>
</head>

<body>
    <h1>Artificial Intelligence</h1>
    <p>The fourth industrial revolution is driven by AI</p>
    <h2>Categories of AI</h2>
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    <p>Weak AI is a AI which is very good at performing a single task but cannot do many things at the
    same time.<br>Its specific in nature and not generic like a human being.
    </p>
    <img src="openai.jpg">
</body>

</html>
```

index2.html

```
<!DOCTYPE html>
<html>

<head>
    <title>Testing</title>
    <style type="text/css">
        @import url(style.css)
    </style>
</head>

<body>
    <h1>Software Testing</h1>
    <p>Software testing is a process, to evaluate the functionality of a software application with an
    intent to find whether the developed software met the specified requirements or not.</p>
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    use appropriate automation tools to develop the test scripts and validate the software. </p>
    <img src="automation.jpeg">
    </p>
</body>

</html>
```

style.css

```
h1 {
        color: red;
        background-color: black;
        font-family: cursive;
        text-align: center;
    }

    p {
        color: blue;
        background-color: yellow;
        font-family: sans-serif;
    }

    h2 {
        color: blue;
        font-family: Arial;
        background-color: yellow;
    }

    h3 {
        color: black;
        font-family: Helvetica;
        background-color: violet;
    }
```

As we can see clearly from the above example there is no change in style.css file changes are done in html files. The @import is used to import style rules from other style sheets and <url>() representing the location of the resource to import. Certainly the output remains same you can try by yourself and cross verify by changing the styling.

Let us understand the meaning of **cascading** in CSS with an example.

index.html

```
<!DOCTYPE html>
<html>
<head>
    <title>Home Page</title>
    <link rel="stylesheet" type="text/css" href="index.css">
    <style type="text/css">
        h1{
            background-color: black;
             color: white;
            font-family: sans-serif;
        }
    </style>
</head>
<body>
    <h1 style="background-color: red; color: yellow; font-family: cursive;">Full Stack Web Development</h1>
    <p>Full stack development refers to the development of both front end(client side) and back end(server side) portions of web
    application.</p>
    <h2>Technologies related to full stack web development</h2>
    <h3>Front End Technologies</h3>
    <p>Front End is the visible part of website or web application which is responsible for user experience, built using
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    <img src="frontend.png">
    <h3>Back End Technologies</h3>
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    languages such as Python,Java,C</p>
    <img src="backend.jpg">
    <h3>Database Technologies</h3>
    <p> Database is the collection of inter-related data which helps in efficient retrieval, insertion and deletion of data from
    database and organizes the data. The technologies used are SQL,MYSQL,MONGODB</p>
    <img src="dbms.png">
</body>
</html>
```
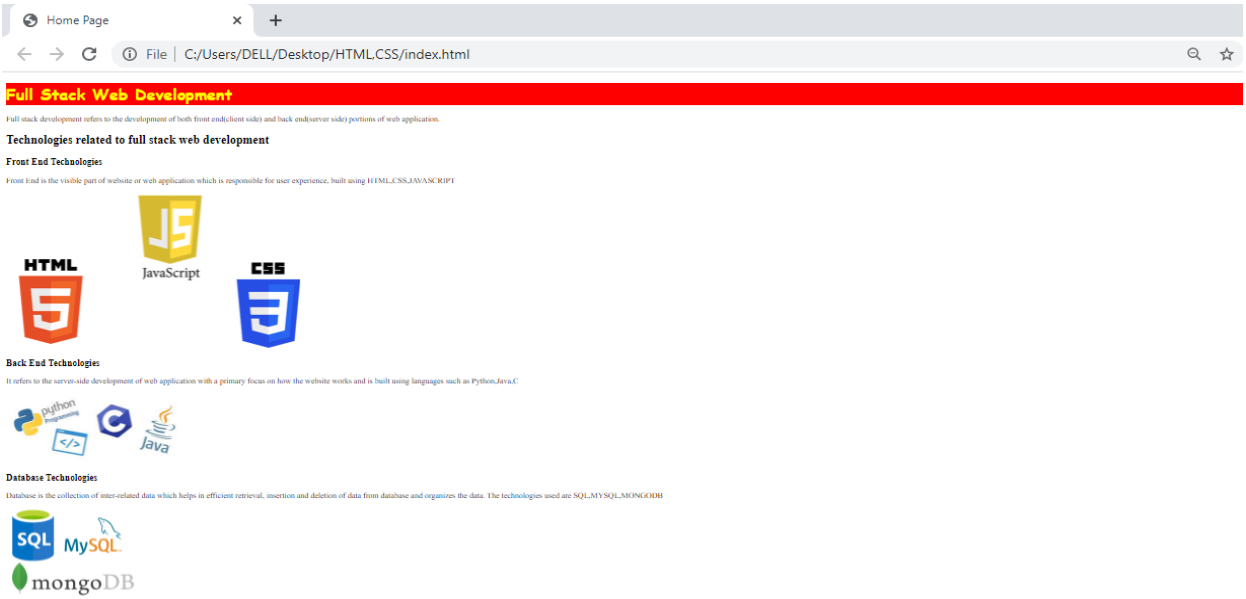

index.css

```
h1{
        background-color: pink;
         color: purple;
        font-family: monospace;
    }
```

Output:



As we can see in the above example all three ways of css is applied to h1 tag and clearly we can see in the output by default inline css has been given higher precedence compared to internal and external css.

Now we will see if we remove inline css and only internal and external css is applied which will get higher precedence.

```
<!DOCTYPE html>
<html>
<head>
    <title>Home Page</title>
    <link rel="stylesheet" type="text/css" href="index.css">
    <style type="text/css">
        h1{
            background-color: black;
             color: white;
            font-family: sans-serif;
        }
    </style>
</head>
<body>
    <h1>Full Stack Web Development</h1>
    <p>Full stack development refers to the development of both front end(client side) and back end(server side) portions of web
    application.</p>
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    database and organizes the data. The technologies used are SQL,MYSQL,MONGODB</p>
    <img src="dbms.png">
</body>
</html>
```
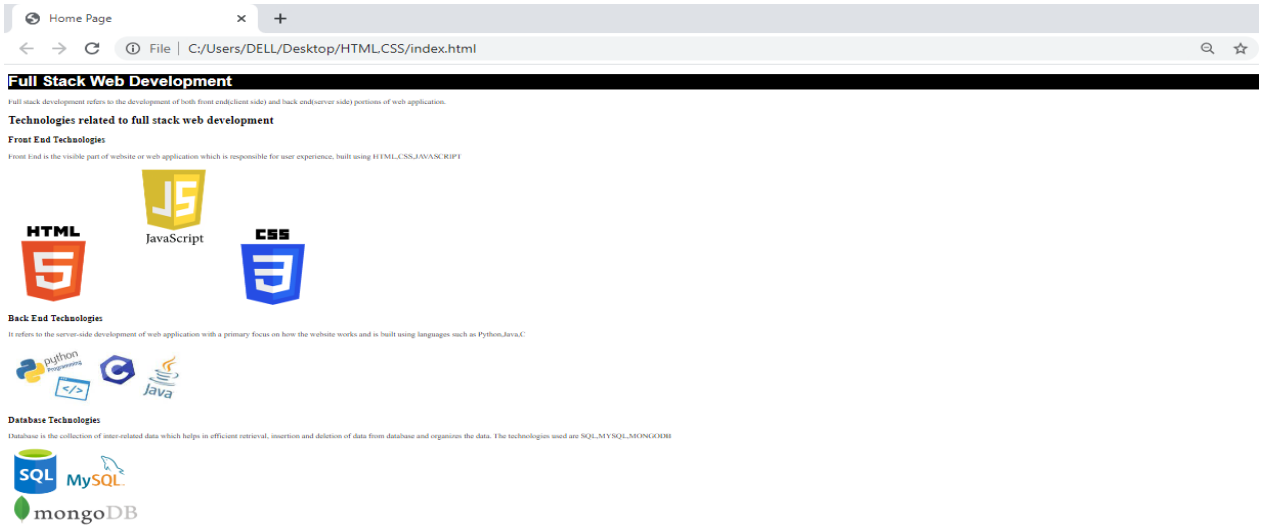

Output:



As we can clearly see from the output now precedence is given to internal css i.e it is going downwards and checking whether internal styling is there or not, going downwards is nothing but cascading. This is not the case always if inline styling is not there precedence is given to internal css, if in case external css code is placed after internal css precedence is given to external css.

Example: Without inline and internal css

```
<!DOCTYPE html>
<html>
<head>
    <title>Home Page</title>
    <link rel="stylesheet" type="text/css" href="index.css">

</head>
<body>
    <h1>Full Stack Web Development</h1>
    <p>Full stack development refers to the development of both front end(client side) and back end(server side) portions of web
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    <h2>Technologies related to full stack web development</h2>
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    database and organizes the data. The technologies used are SQL,MYSQL,MONGODB</p>
    <img src="dbms.png">
</body>
</html>
```
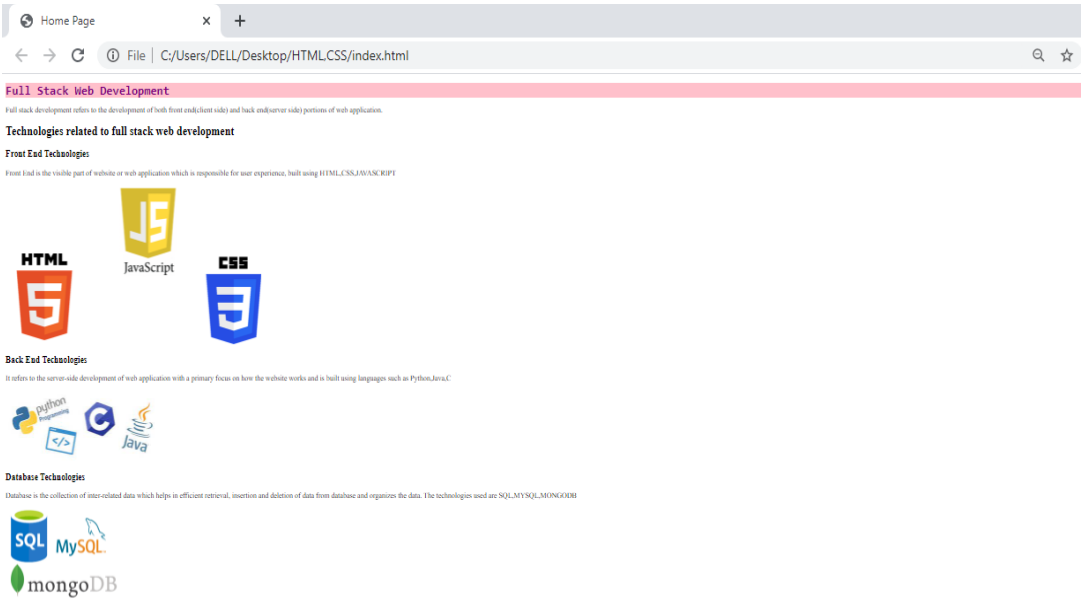

Output:



Example: External css code is placed after internal css

```
<!DOCTYPE html>
<html>
<head>
    <title>Home Page</title>
    <style type="text/css">
        h1{
            background-color: black;
             color: white;
            font-family: sans-serif;
        }
    </style>
     <link rel="stylesheet" type="text/css" href="index.css">
</head>
<body>
    <h1>Full Stack Web Development</h1>
    <p>Full stack development refers to the development of both front end(client side) and back end(server side) portions of web
    application.</p>
    <h2>Technologies related to full stack web development</h2>
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    database and organizes the data. The technologies used are SQL,MYSQL,MONGODB</p>
    <img src="dbms.png">
</body>
</html>
```
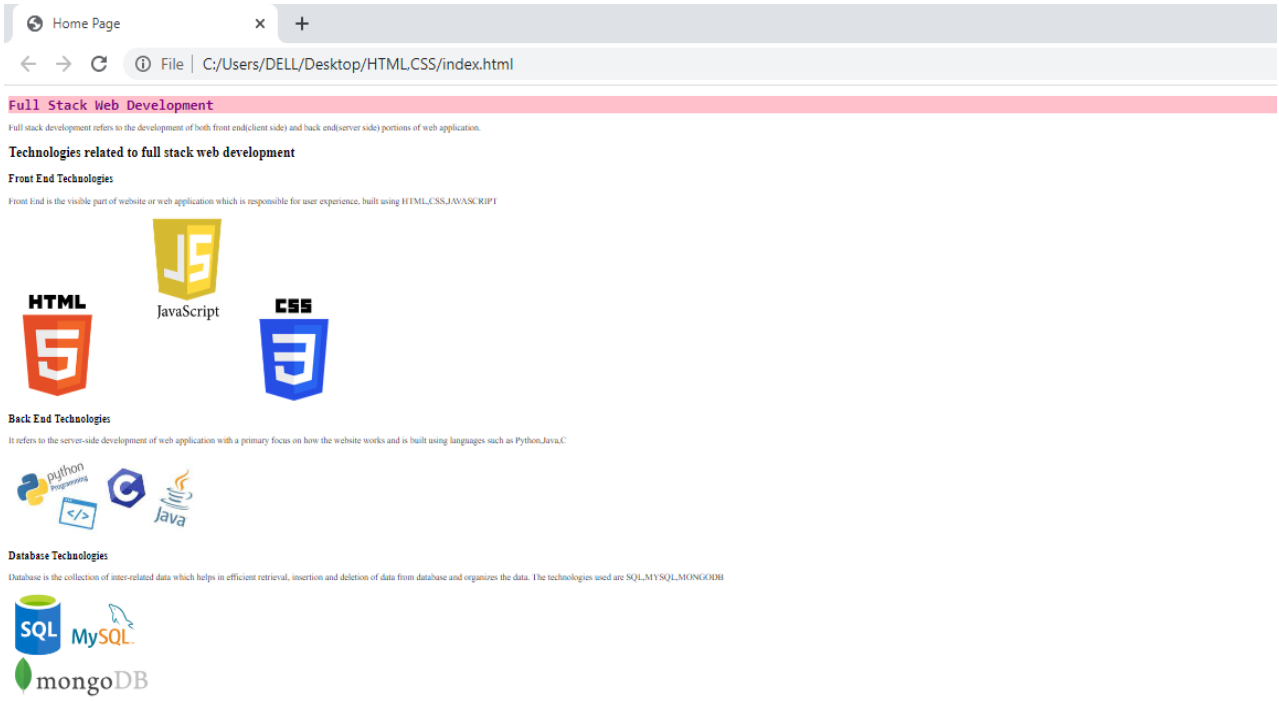

Output:


Home Page
File | C:/Users/DELL/Desktop/HTML,CSS/index.html
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Java
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Database is the collection of inter-related data which helps in efficient retrieval, insertion and deletion of data from database and organizes the data. The technologies used are SQL,MYSQL,MONGODB
SQL
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