



Web Technologies and Programming

Lecture 14

Page Layout

Summary of the previous lecture

- **Font properties**
 - font-family
 - font-size
 - font-weight
 - font-style
 - font-variant
- **Controlling text with CSS**
 - word-spacing
 - letter-spacing
 - line-height
 - text-align
 - vertical-align
 - text-indent
 - text-decoration
 - text-transformation

Summary of the previous lecture

- **Styling links**
- **Styling background**
 - **background-color**
 - **background-image**
 - **background-repeat**
 - **background-position**
- **Styling tables**
 - **text and font**
 - **vertical – align**
 - **width**
 - **height**
 - **background - color**
 - **background - image**

Outline

- **The process to design a page layout**
- **div tag**
- **Coding a page using divs and CSS**
- **Styling divs and positioning it.**

Consider a web application to develop

- **CONNECTIONS:** a smaller version of **social web**
- Users can **register** themselves
- After registration they can **send a text message** to anybody who is registered with the website
- User's can **view** the received messages

1. The process

- Determine the **requirements** of the site
- **Group** the required information
- Make a **site map**
- **Identify** key elements for each page
- Decide about the **arrangement** of information on each page
- **Translate** the design into code

1.1 Determining requirements

- Understanding the audience
- **Who?** Who will visit the site?
 - You can create **fictional visitors**
 - Men and women of 20 to 50 years of age
- **Why?** Why have they come to your site?
 - Send messages
 - View received messages

1.1 Determining requirements...

- **What?** What does a visitor need to achieve a goal?
 - Will they be **familiar** with your product?
- **How often?** How often can you realistically expect them to visit?
 - In-order to make changes

1.1 Determining requirements...

- Things You Want the Site to Do
- Determining the requirement of the **owner of the site** which are not already listed
 - User must **register** themselves in-order to send and receive messages

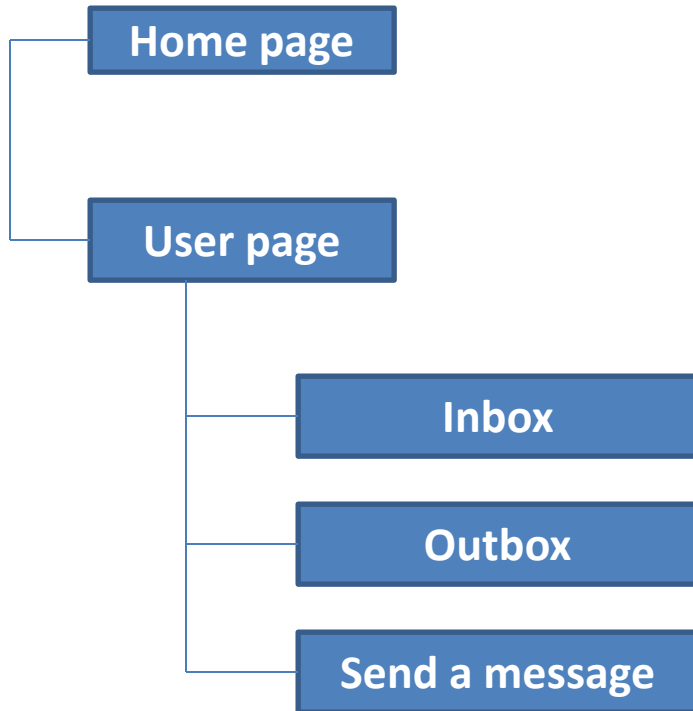
1.2 Grouping and categorization

- **Group related information/sections**
 - **Home page:** login form, registration form
 - **User page:** user's information, recent messages
 - **Inbox:** Received messages
 - **Outbox:** Sent messages
 - **Send a message:** Send message form

1.3 Make a site map...

- Site map shows how **many** pages you need and how they **relate**
- Usually look like either a **family tree** or **folder list**

1.3 Make a site map



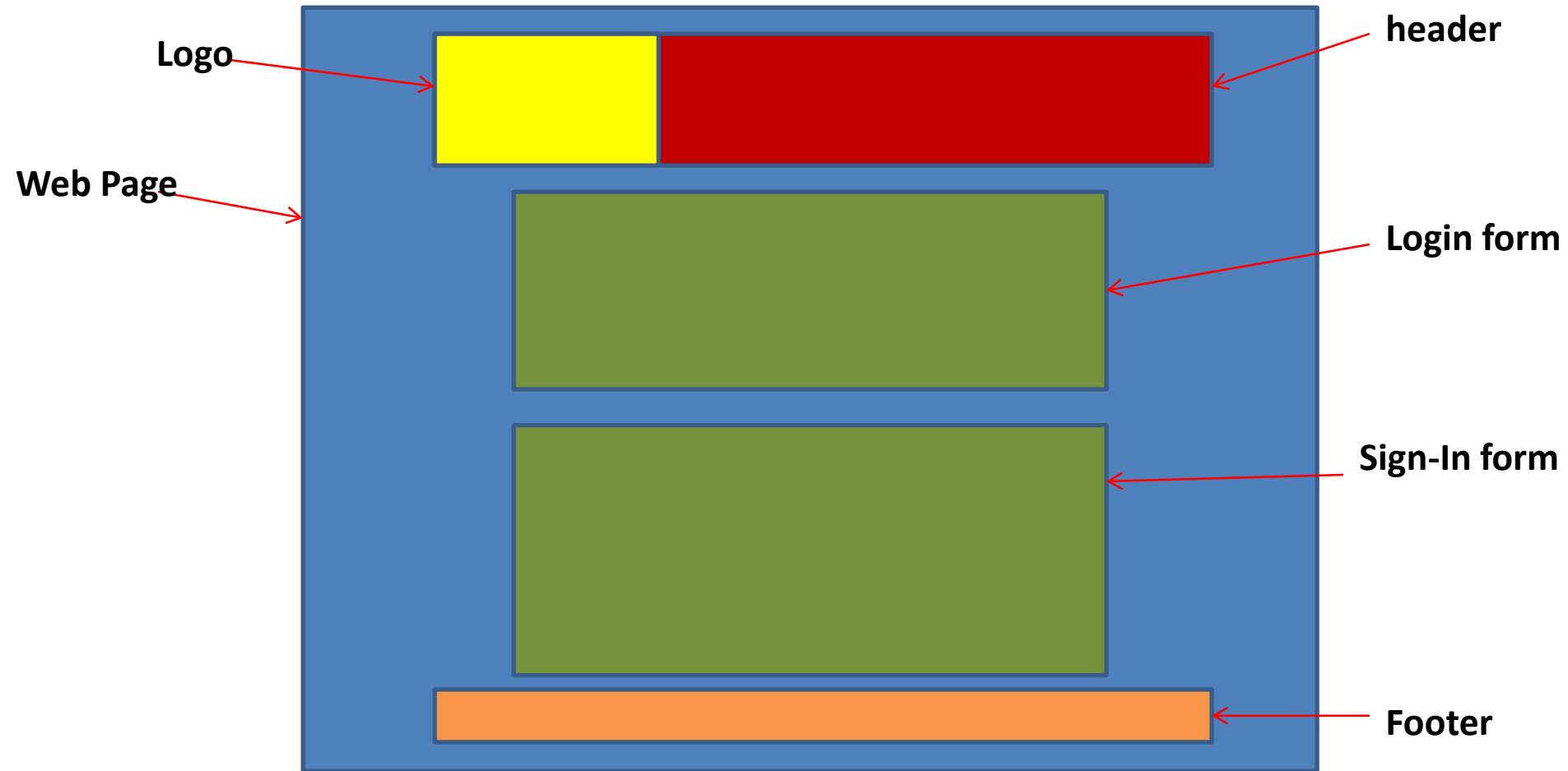
1.4 Key element for each page

- **Common sections** (header, navigation, footer etc.)
- **Page specific** sections
- **Common Sections** (header, footer)
- **Page specific** sections
- **Home page:** login form, registration form
- **User page:** user's information, recent messages

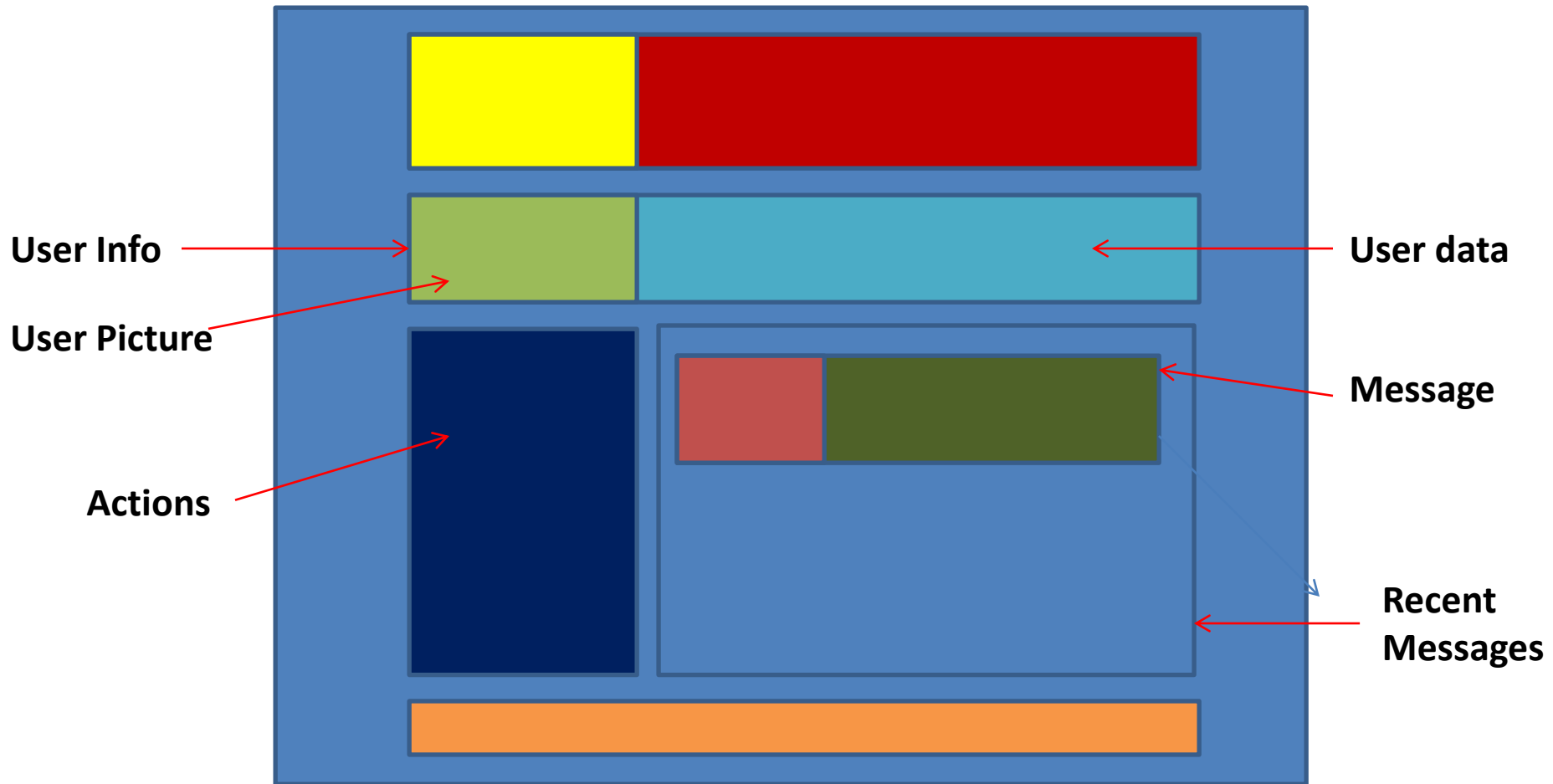
1.4 Key element for each page...

- **Inbox page:** received messages
- **Outbox page:** messages sent by the user
- **Send message page:** form to send a message

1.5 Arranging elements on pages



1.5 Arranging elements on pages...



2. Translating design into code

- **Liquid vs Fixed design**
- **The Div tag**
- **Coding the design**

2.1 Liquid vs Fixed design

- **Liquid Design**
 - designs **automatically** fits to the screen
 - Use **percentage** values to declare height and width of sections
- **Fixed design**
 - Designs remain **fixed** width
 - Use **fixed** values to declare height and width of sections

2.2 The <div> Tag

- **Use DIVs to create the skeleton of the page.**
- **There should be no display-specific information in the XHTML**
- **The Goal:** separate the information from the layout / presentation of the page
- **Layout is entirely controlled by CSS**

2.2 The <div> Tag

- The <div> tag defines a division or a section in an HTML document.
- The <div> tag is used to group block-elements to format them with CSS.
- **Tip:** The <div> element is very often used together with CSS, to layout a web page.
- **Note:** By default, browsers always place a line break before and after the <div> element. However, this can be changed with CSS.

2.2 The <div> Tag

- **Identify major sections of the page**
 - Masthead (Logo and Title)
 - Menu
 - Content
 - Search
 - Footer
- **Don't overuse the DIVs!**
- **Don't worry about positioning in the XHTML!**

2.2 The <div> tag

- Defines a **division or section** in an HTML document
- Visually, allows us to make **containers** that can be formatted
- **Does not format by itself**
- **Used to logically group a sequence of block level tags**
 - Don't try to use it to use it to group tags that are not block level, like
- Can be declared as
 - **<div>.....</div>**

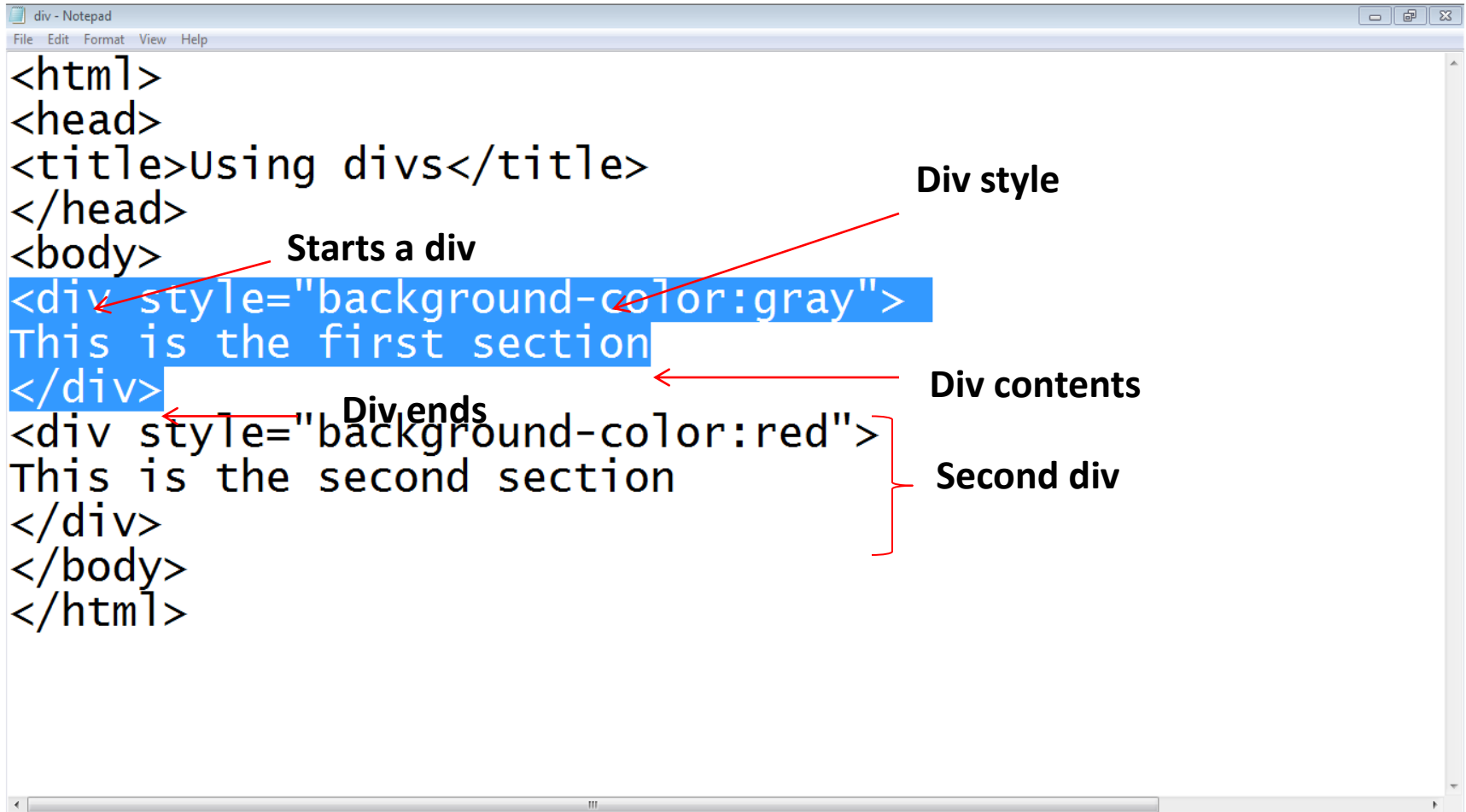
2.2 The <div> tag

- Any **block level tag** can have its width and height set
 - Be careful especially with height because if text exceeds the size of the area allocated unpredictable things might occur
- **Example:** Keep the <body> to 75% of the width of the browser window
 - `body {width:75%}`

2.2 The <div> tag

- **Use the float attribute:**
 - **float:right | left**
 - Text is aligned around the block level tag
 - **clear:right | left | both**
 - Prevents a floating element from appearing alongside a block level element

2.2 The <div> tag (Example)



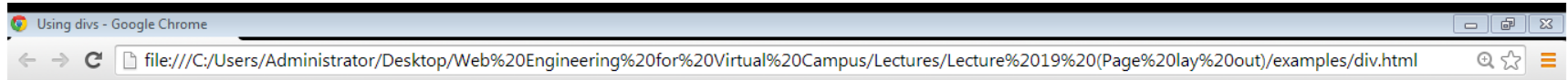
The image shows a Notepad window titled "div - Notepad" with the following HTML code:

```
<html>
<head>
<title>Using divs</title>
</head>
<body>
<div style="background-color:gray">
This is the first section
</div>
<div style="background-color:red">
This is the second section
</div>
</body>
</html>
```

Annotations with red arrows point to specific parts of the code:

- Starts a div**: Points to the opening `<div` tag of the first section.
- Div style**: Points to the `style="background-color:gray"` attribute of the first section.
- Div contents**: Points to the text `This is the first section` inside the first `<div>`.
- Div ends**: Points to the closing `</div>` tag of the first section.
- Second div**: A bracket points to the entire second `<div>` block, including its opening tag, content, and closing tag.

2.2 The <div> tag (Example)



This is the first section

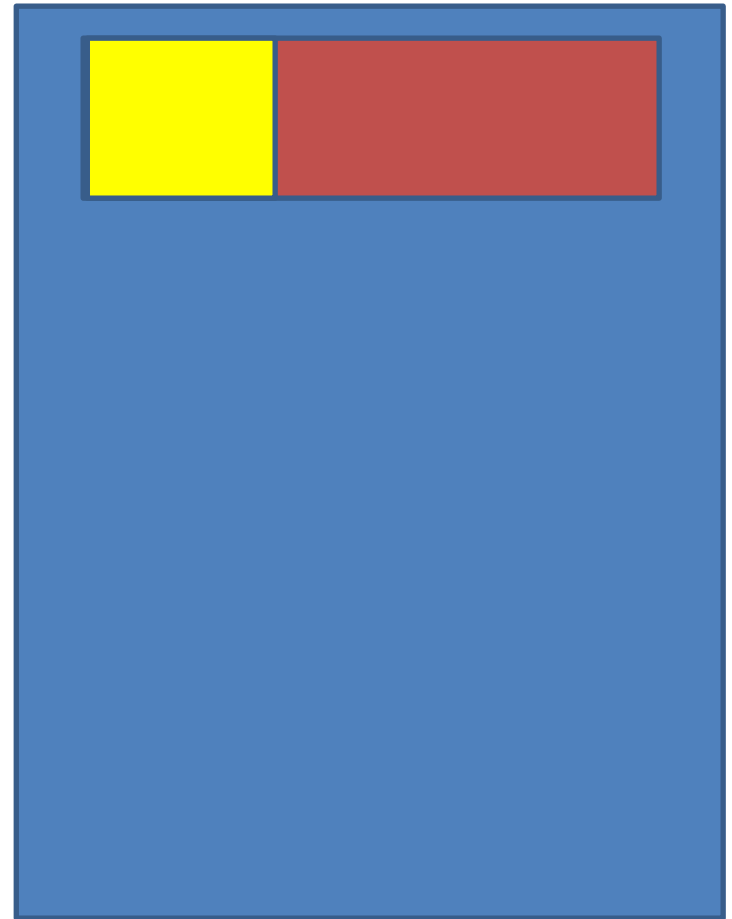
This is the second section

First div

Second div

2.3 Coding the design

```
<div id="container">  
<div id="header">  
<div id="logo"></div>  
</div> //header div ends  
</div> //container div ends
```



2.3 Coding the design...

```
<div id="container">
```

Header and logo divs

```
<div id="center-content">
```

```
<div id="form-containter">
```

```
<div class="form-heading">
```

Heading text </div>

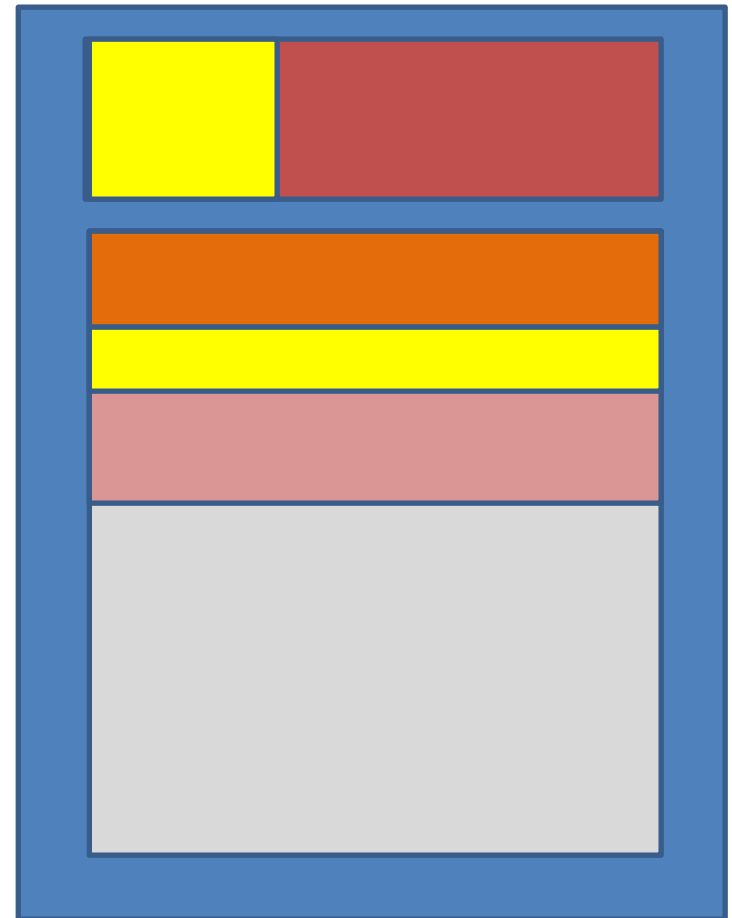
```
<div class="form-rows">
```

Form element </div>

```
</div> //form container ends
```

```
</div> //end of center content
```

```
</div> //container div ends
```



2.3 Coding the design...

`<div id="container">`

Header and logo divs

`<div id="center-content">`

Login form div's

`<div id="form-containter">`

`<div class="form-heading">`

Heading text `</div>`

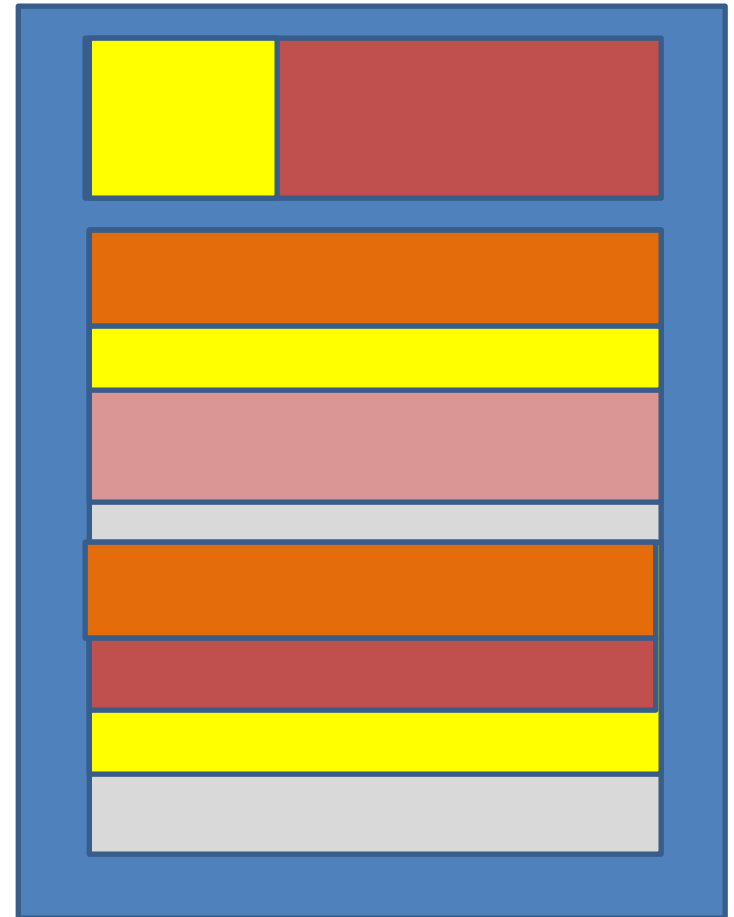
`<div class="form-rows">`

Form element `</div>`

`</div> //form container ends`

`</div> //end of center content`

`</div> //container div ends`



2.3 Coding the design...

`<div id="container">`

Header and logo divs

`<div id="center-content">`

Login form div's

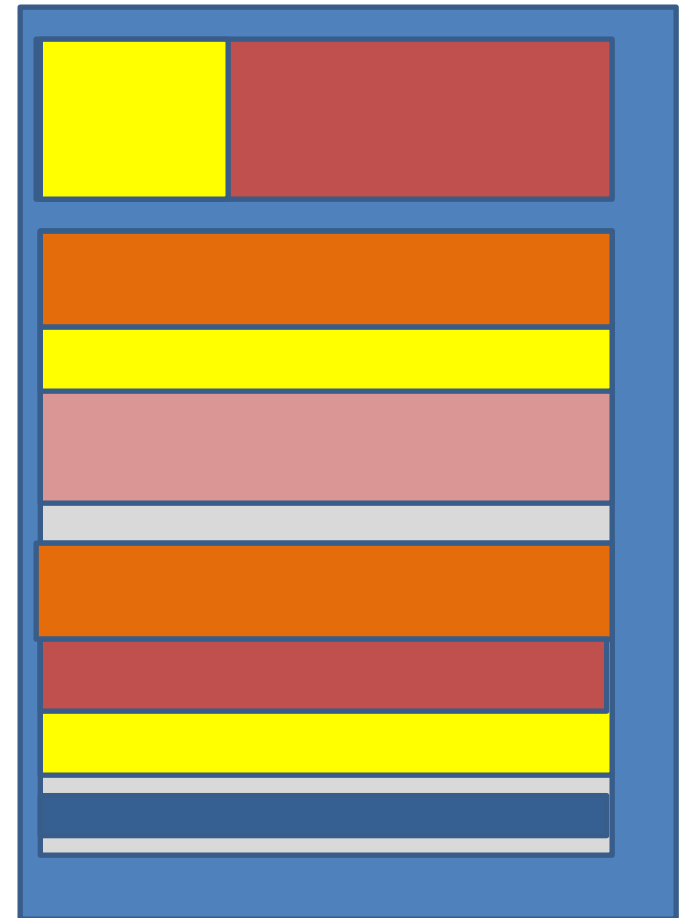
Registration form div's

`</div> //end of center content`

`<div id="footer">`

`</div>`

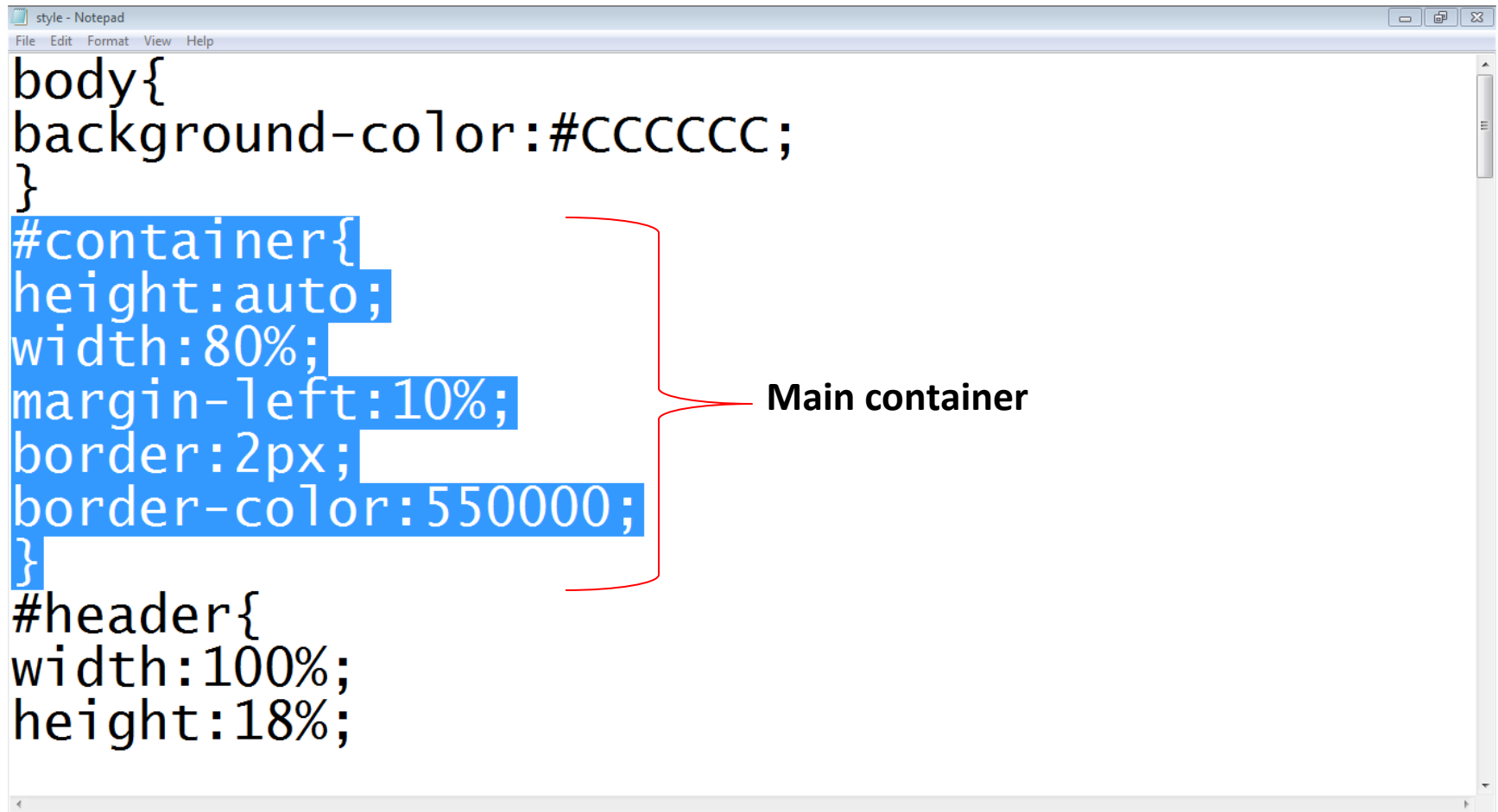
`</div> //container div ends`



2.3 Coding the design...

- **Divs required to make the structure:**
 - Main container
 - Header
 - Logo
 - Center container
 - Form container
 - Form heading
 - Form row

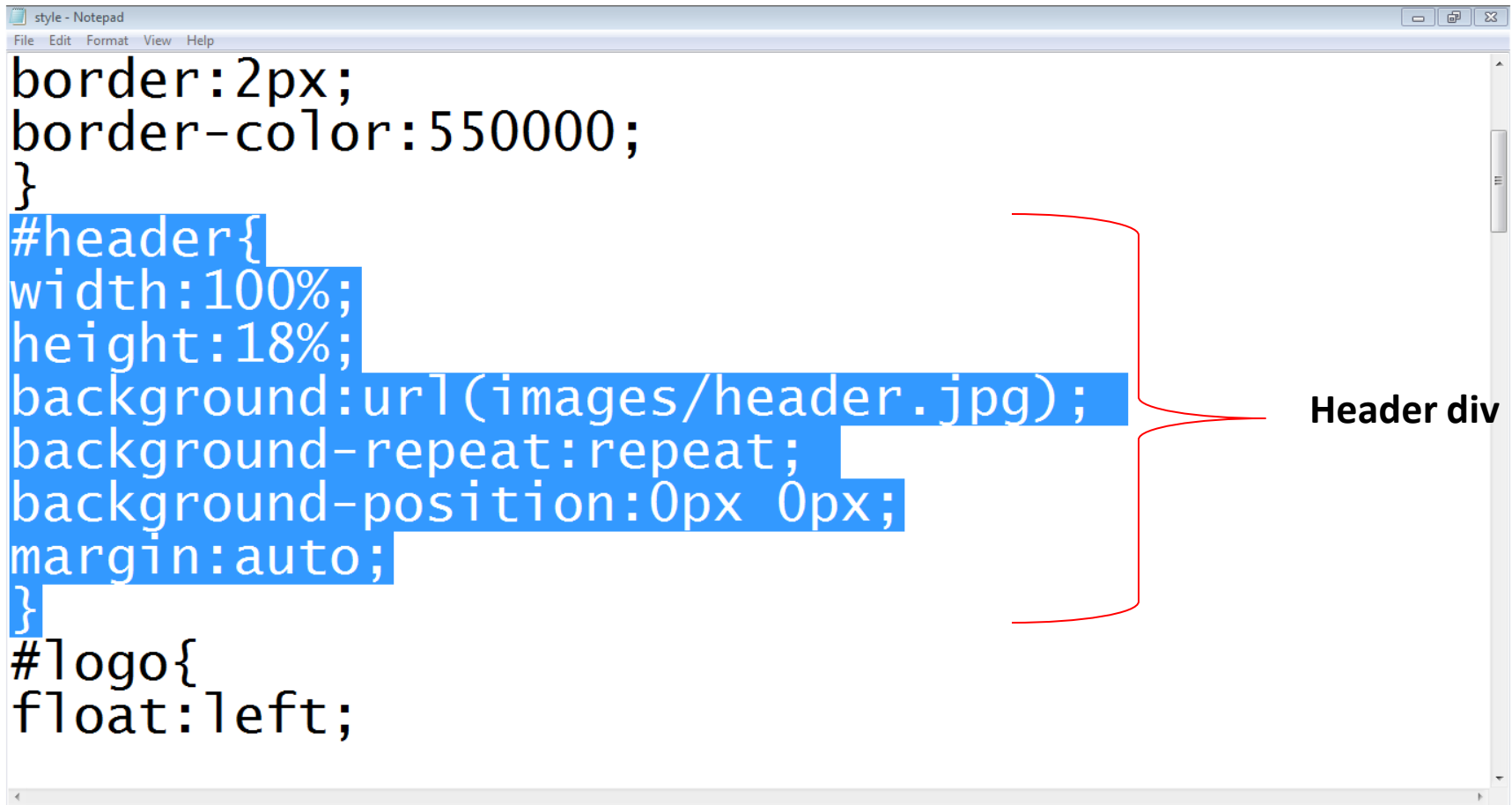
2.3 Coding the design...



```
style - Notepad
File Edit Format View Help
body{
background-color:#CCCCCC;
}
#container{
height:auto;
width:80%;
margin-left:10%;
border:2px;
border-color:550000;
}
#header{
width:100%;
height:18%;
}
```

Main container

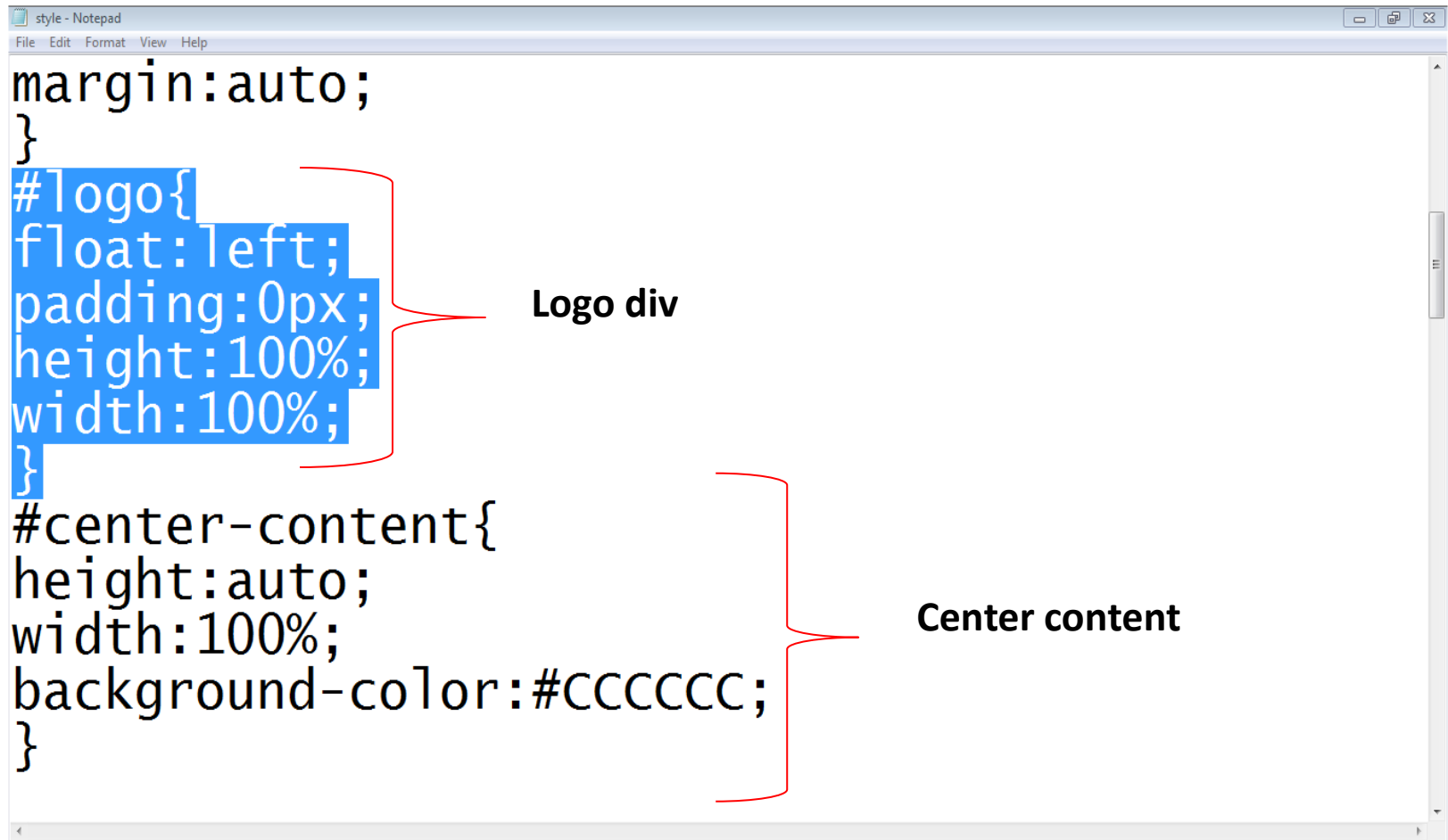
2.3 Coding the design...



```
style - Notepad
File Edit Format View Help
border:2px;
border-color:550000;
}
#header{
width:100%;
height:18%;
background:url(images/header.jpg);
background-repeat:repeat;
background-position:0px 0px;
margin:auto;
}
#logo{
float:left;
```

Header div

2.3 Coding the design...



```
style - Notepad
File Edit Format View Help
margin:auto;
}
#logo{
float:left;
padding:0px;
height:100%;
width:100%;
}
#center-content{
height:auto;
width:100%;
background-color:#CCCCCC;
}
```

Logo div

Center content

2.3 Coding the design...

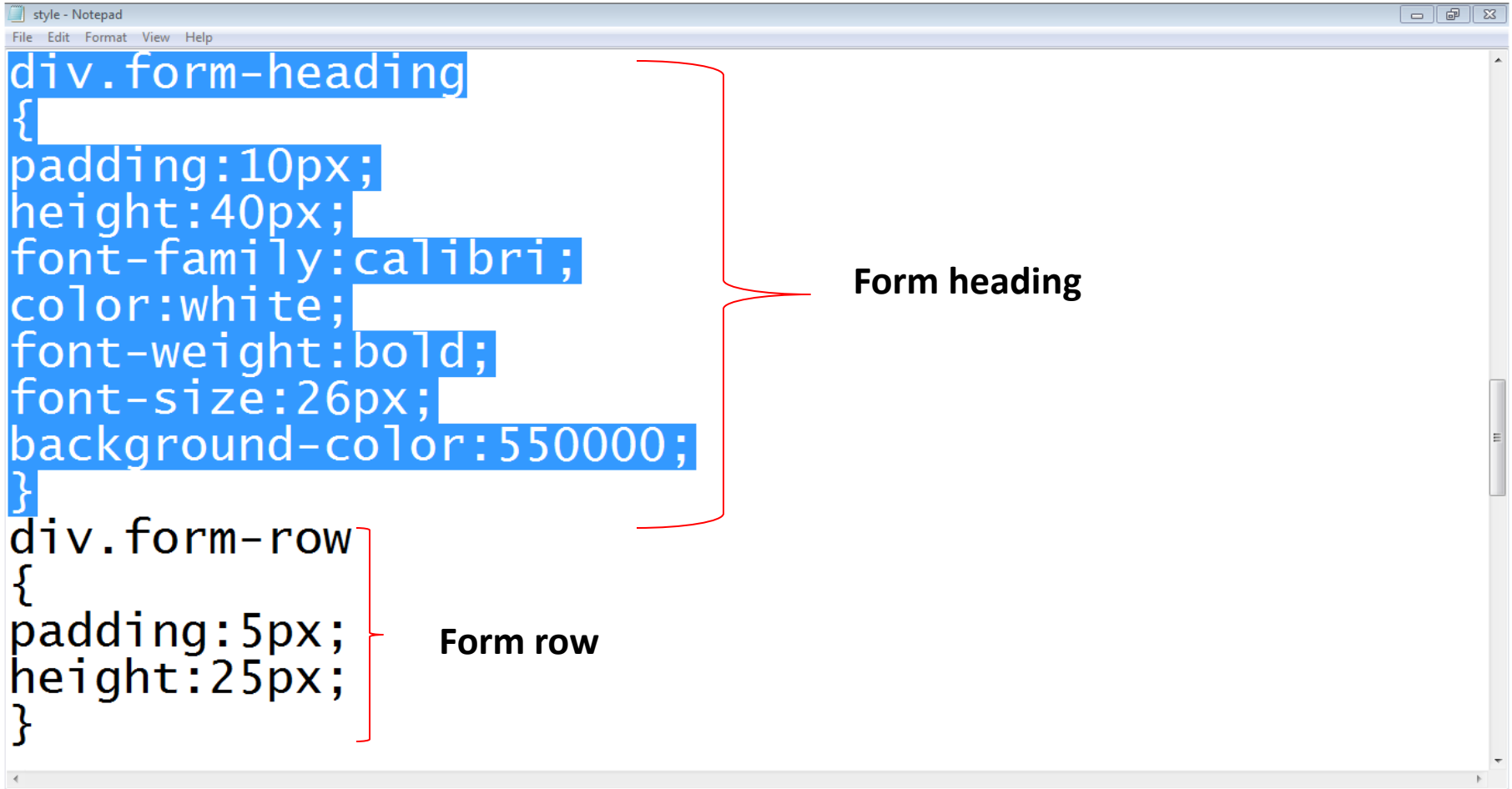
The image shows a Notepad window titled 'style - Notepad' with a menu bar (File, Edit, Format, View, Help). The code is as follows:

```
div.center-content{  
height:auto;  
width:100%;  
background-color:#CCCCCC;  
}  
  
div.form-container  
{  
margin-left:25%;  
margin-right:25%;  
margin-top:10px;  
height:auto;  
width:auto;  
border:2px;  
border-style:solid;  
}
```

Red brackets are used to group the code into two sections:

- A bracket on the right side groups the first four lines of code (the `div.center-content` block) and is labeled **Center content**.
- A bracket on the right side groups the remaining lines of code (the `div.form-container` block) and is labeled **Form container**.

2.3 Coding the design...



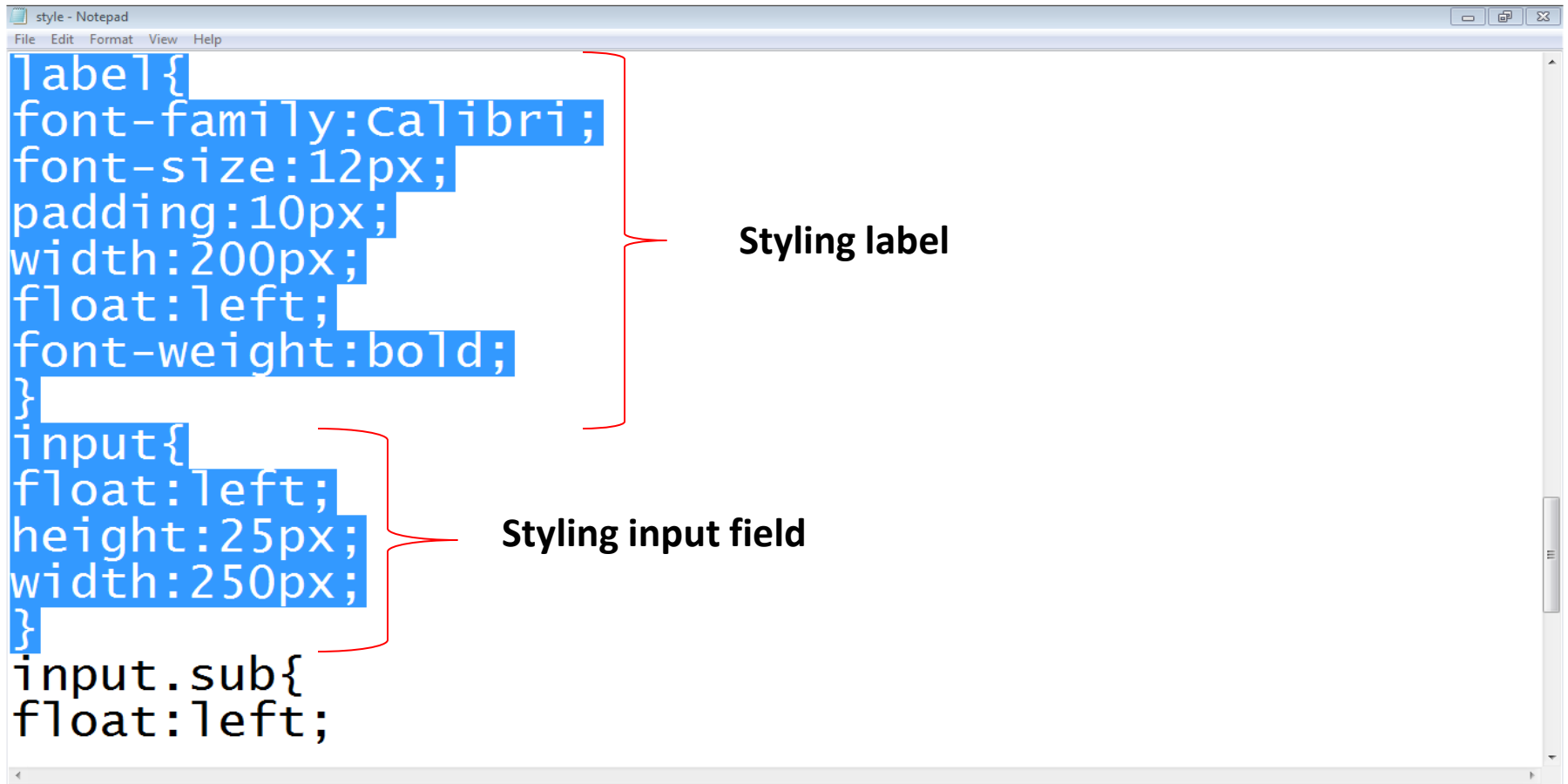
```
div.form-heading
{
padding:10px;
height:40px;
font-family:calibri;
color:white;
font-weight:bold;
font-size:26px;
background-color:550000;
}

div.form-row
{
padding:5px;
height:25px;
}
```

Form heading

Form row

2.3 Coding the design...

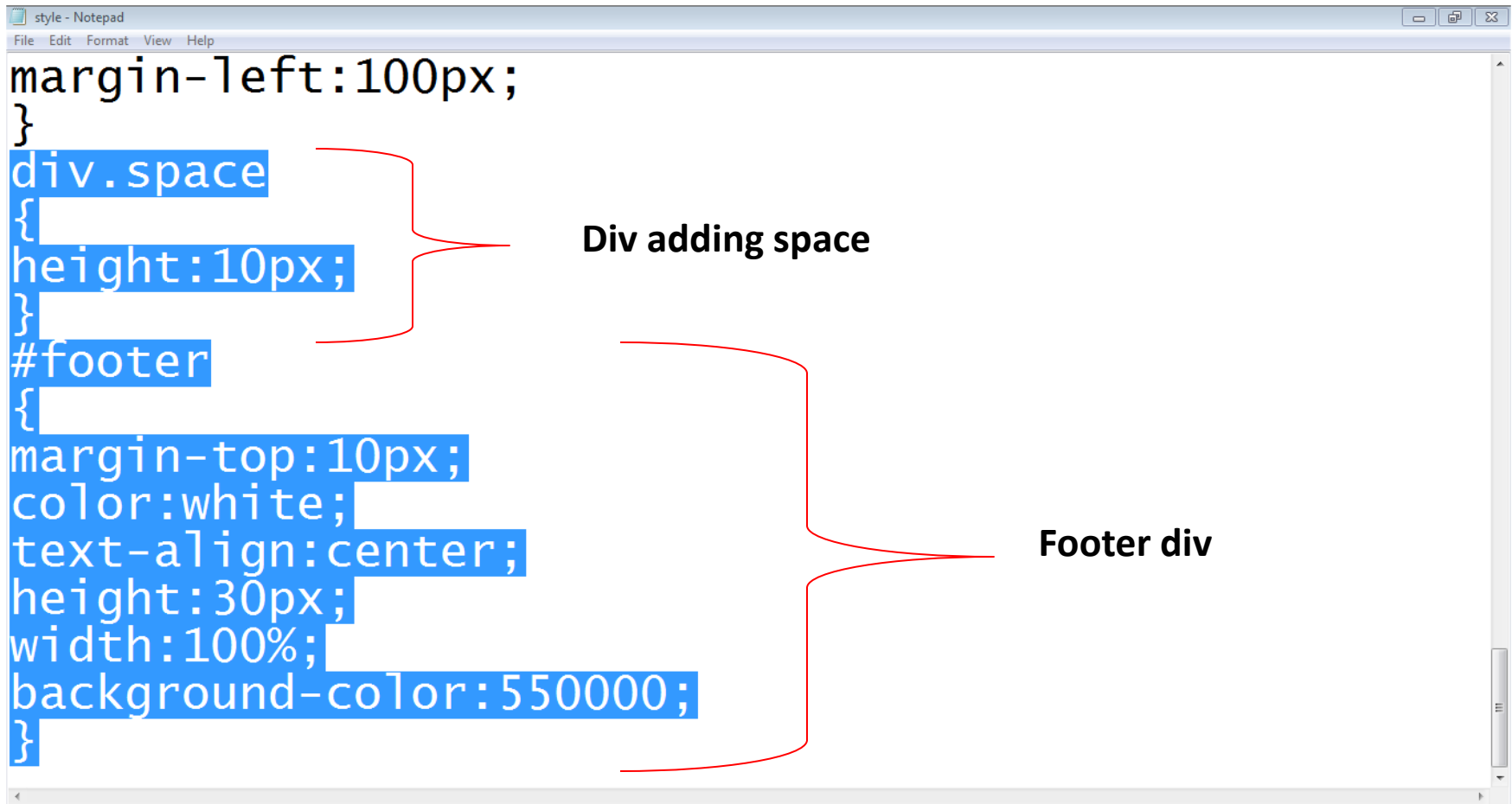


```
style - Notepad
File Edit Format View Help
label{
font-family:calibri;
font-size:12px;
padding:10px;
width:200px;
float:left;
font-weight:bold;
}
input{
float:left;
height:25px;
width:250px;
}
input.sub{
float:left;
```

Styling label

Styling input field

2.3 Coding the design...



The image shows a Notepad window titled 'style - Notepad' with a menu bar (File, Edit, Format, View, Help). The code inside is as follows:

```
margin-left:100px;
}
div.space
{
height:10px;
}
#footer
{
margin-top:10px;
color:white;
text-align:center;
height:30px;
width:100%;
background-color:550000;
}
```

Annotations with red lines pointing to the code:

- Div adding space**: Points to the `div.space` selector and its `height:10px;` rule.
- Footer div**: Points to the `#footer` selector and its entire block of rules.

2.3 Coding the design...

```
index - Notepad
File Edit Format View Help
<head>
<title> Connection Home Page!</title>
<link href="style.css" rel="stylesheet"
type="text/css">
</head>
<body>
<div id="container">
<div id="header">
<div id="logo"></div>
</div>
</div>
</body>
```

Container div

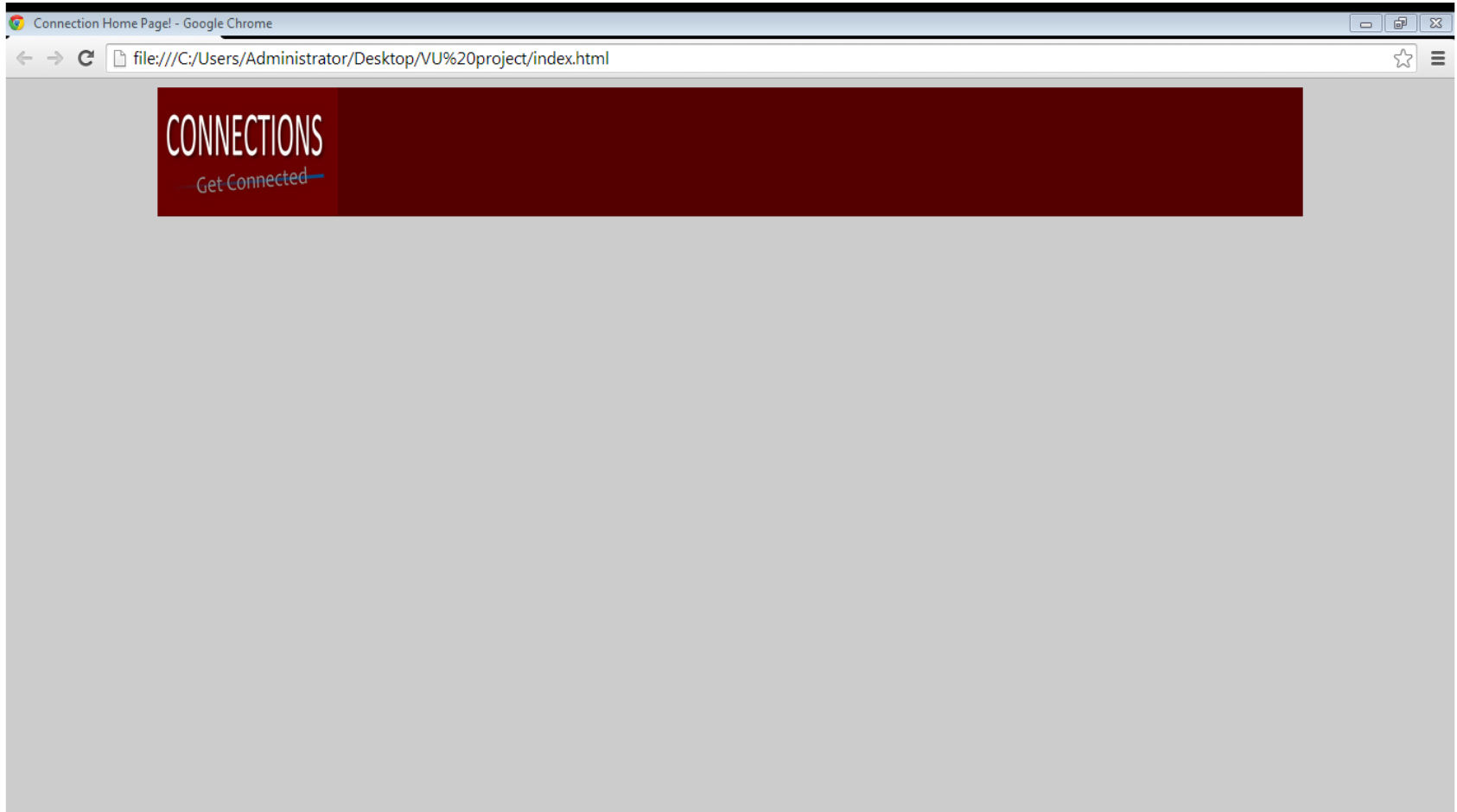
Header div

Header ends

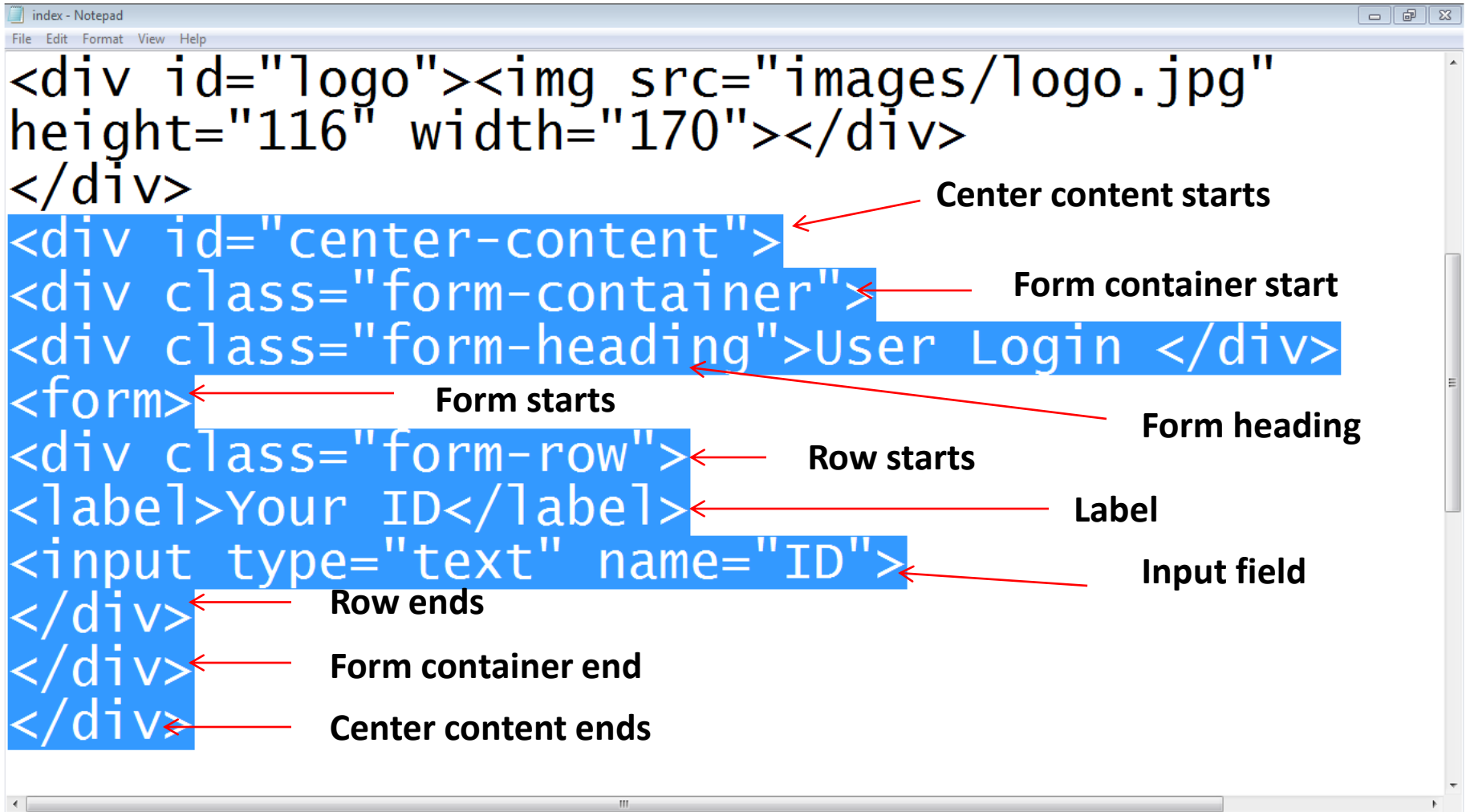
Logo div

Container ends

2.3 Coding the design...



2.3 Coding the design...



```
index - Notepad
File Edit Format View Help

<div id="logo"></div>
</div>
<div id="center-content">
<div class="form-container">
<div class="form-heading">User Login </div>
<form>
<div class="form-row">
<label>Your ID</label>
<input type="text" name="ID">
</div>
</div>
</div>
```

Center content starts

Form container start

Form heading

Form starts

Row starts

Label

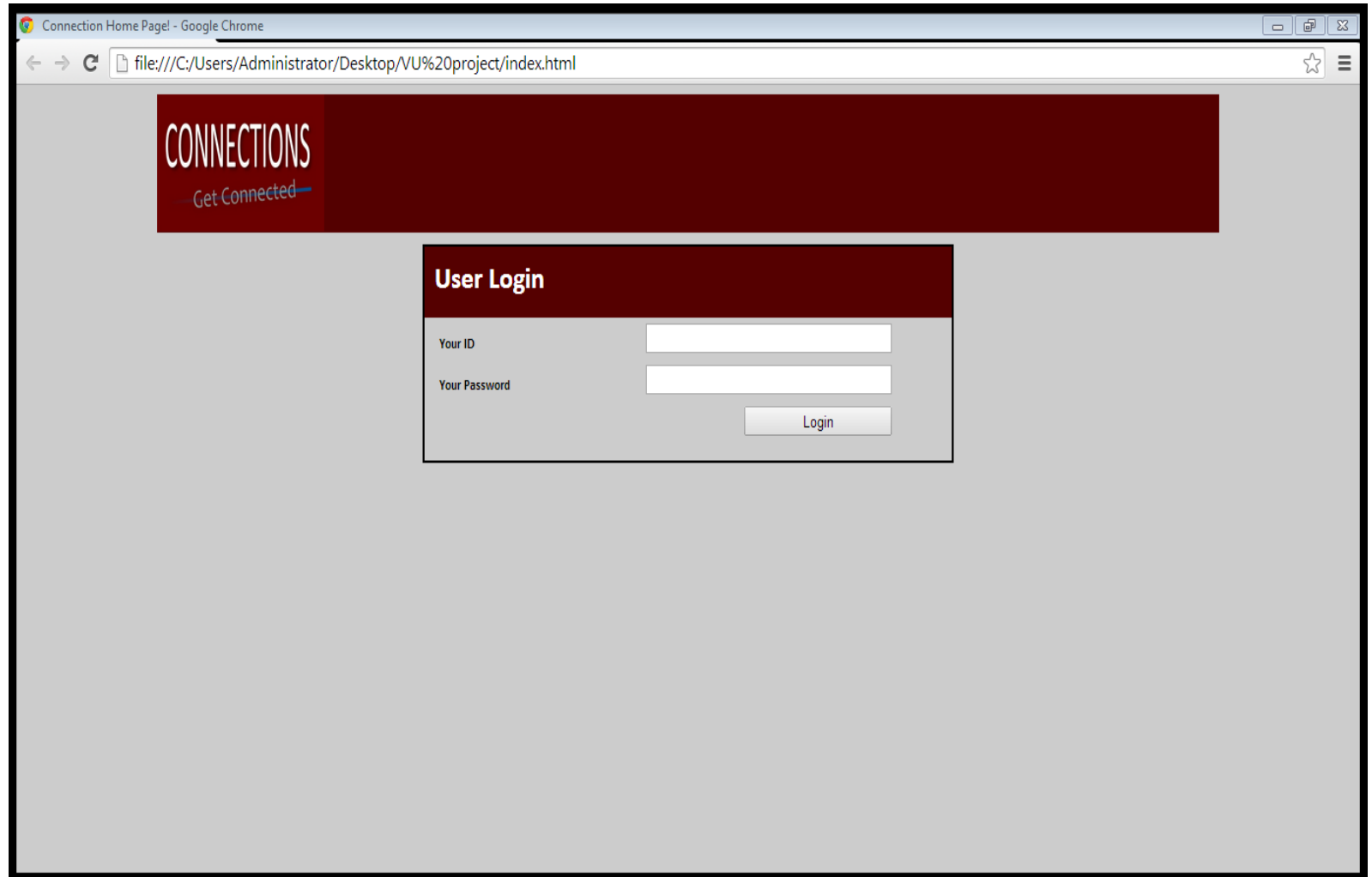
Input field

Row ends

Form container end

Center content ends

2.3 Coding the design...



2.3 Coding the design...

```
index - Notepad
File Edit Format View Help
</div>
<div class="space"> </div>
<div class="form-container">
<div class="form-heading">User Registration </div>
<form>
<div class="form-row">
<label>Your Full Name:</label>
<input type="text" name="name">
</div>
<div class="form-row">
<label>Your Email Address:</label>
<input type="text" name="email">
</div>
```

Space is added

Form container

heading

Form row

Second row

2.3 Coding the design...

Connection Home Page! - Google Chrome

file:///C:/Users/Administrator/Desktop/VU%20project/index.html

CONNECTIONS
Get Connected

User Login

Your ID

Your Password

Login

User Registration

Your Full Name:

Your Email Address:

Your Password:

Your Picture: No file chosen

Register

2.3 Coding the design...

```
index - Notepad
File Edit Format View Help
<div class="form-row">
<label>Your Picture:</label>
<input type="file" name="pic">
</div>
<div class="form-row">
<label></label>
<input class="sub" type="submit" value="Register">
</div>
</div>
</div>
<div id="footer">&copy; all rights reserved
</div>
</div>
```

Footer div

2.3 Coding the design...

Connection Home Page! - Google Chrome

file:///C:/Users/Administrator/Desktop/VU%20project/index.html

CONNECTIONS
Get Connected

User Login

Your ID

Your Password

Login

User Registration

Your Full Name:

Your Email Address:

Your Password:

Your Picture: No file chosen

Register

© all rights reserved

Summary

- **The process to design a page layout**
 - Determining requirements
 - Grouping and categorization
- **Key element for each page**
- **Translating design into code**
 - Liquid vs Fixed design
 - The Div tag
 - Coding the design
- **Coding a page using divs and CSS**
- **Positioning and resizing divs.**

THANK YOU
