

# Pre-Course Study Module

Tech Karo Web Development Program 2021







# Instructions

- You have **7-days** to complete the Pre-Course Study Module.
- After each chapter, make sure to submit the **Quiz**.
- Chapter 2 & 3 also include a **project**. Make sure to submit them before **28th March 11:00 AM**.
- We understand that this can be challenging — but don't worry! Join our [\*\*Facebook group\*\*](#) to take help from our teaching assistants.



# Instructions

**To complete the Pre-Course Study Module you must...**

7 days	
Watch videos	
Complete Chapter 1 Quiz	
Complete Chapter 2 Quiz	
Complete Chapter 2 Project	
Complete Chapter 3 Quiz	
Complete Chapter 3 Project	

# Tips

- To complete the module on time, we **highly recommend** you give a minimum of **3-4 hours per day**.
- If any video is unclear, feel free to watch the same **video twice**.
- Be active on our [Facebook group](#) as we will be there to support you.
- Look at the **additional resources** provided to help you with your projects.



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# Introduction

Tech Karo is a 5-month front-end Web Development program, offered by CIRCLE Women Pakistan and sponsored by Engro Vopak. The course is aimed at talented youth of Pakistan. Our goal is to empower young people, and mainly women, in technology and help them generate income through their web development skills.

Tech Karo brings basic tech skills combined with life skills (discipline, resilience, problem solving, financial planning) to young women and men to enable them to increase their livelihood and generate a positive impact for their families and communities.



# What is the Pre-Course Study Module?

The **Pre-Course Study Module** is a **7 day module** that gives you a very basic introduction to programming to help you develop the right skills for the Tech Karo program. It covers three main chapters, where you will be given videos to watch. After each chapter you will have to take a short quiz on what you have learned. At the end of chapter 2 and 3, you will have to submit two short technical projects. If you successfully complete this within the 7 day time period, you will then have to give a final interview with the Tech Karo team.

## Important Notes:

- We will be using **Google Chrome** for this Pre-Course Study Module: [Click to install Google Chrome](#)
- We will be using **VS Code** for this Pre-Course Study Module: [Click to install VS Code](#)

If you have any questions or concerns, you can contact us on the [Facebook group](#).

# Web Development Introduction

Most of us will have used tools such as Google, Facebook or Gmail - they are called websites or web applications. Basically everything that you open on a browser (Google Chrome or Internet Explorer) is known as a Website.

Web Development refers to building and creating websites. Just how we interact with humans in English and Urdu, we use different languages such as **HTML, CSS and Javascript** to communicate with the browser to make a website.

In this Pre-Course Study Module, we will learn a bit about website pages and HTML.



# Chapter 1:

**Understanding the Components and  
Structure of a Website**

# Chapter 1: Understanding the Components and Structure of a Website

## 1.1 HTML files & Images

A website is comprised of HTML files and images that can be viewed through a web browser i.e. Google Chrome, Firefox, Internet Explorer etc. Watch this [Video](#) to learn more.



Spend 2 hours on Chapter 1

# Chapter 1: Understanding the Components and Structure of a Website

## 1.2 Tooling - Browsers and Text Editor

Before you can get started with Web Development, you will need some tools to make a website. Watch this [Video](#) to learn more about these tools.



Spend 2 hours on Chapter 1

# Chapter 1: Understanding the Components and Structure of a Website

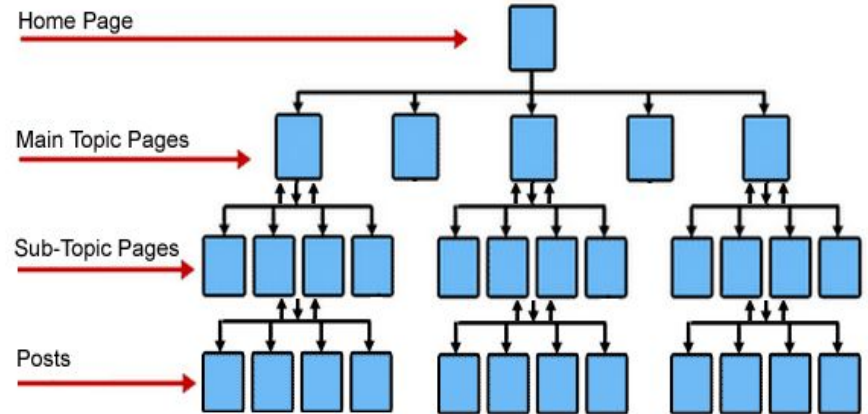
## 1.3 Structure of a Website

**Home Page:** The main page of a website is known as the home page or index page. Other pages are linked through the main page.

**Main Topic Pages:** The home page/index page connects to the main topic pages which is also known as site index.

**Sub Topic Pages:** Main Topic page leads to Sub Topic page where the content is placed.

**Posts:** Each Sub Topic page has a post having the content related to that post.



Spend 2 hours on Chapter 1

# Chapter 1: Quiz

**Please complete the end-of-chapter 1 quiz [here](#).**

# Chapter 2:

## HTML Basics - Creating A Basic Website

# Chapter 2: HTML Basics - Creating A Basic Website

## 2.1 Layers of Webpage

A web page is made of 3 layers – HTML, CSS and JavaScript. It might sound confusing, but this [Video](#) will clear everything up.



Spend 8 hours on Chapter 2

# Chapter 2: HTML Basics - Creating A Basic Website

## 2.2 File Naming Conventions

There are some common practices that are followed when naming a file. Using these conventions is not a rule, but it's recommended that you use them.

Watch this [Video](#) to learn more.



Spend 8 hours on Chapter 2



# Chapter 2: HTML Basics - Creating A Basic Website

## 2.3 Basic HTML Elements

Let's now come to one of the layers of a webpage – HTML. To know exactly what HTML is, watch this [Video](#).



Spend 8 hours on Chapter 2

# Chapter 2: HTML Basics - Creating A Basic Website

## 2.4 Create Your First HTML Page

You will now learn the basics of creating your very first HTML page. Watch this [Video](#) to learn more.



Spend 8 hours on Chapter 2

# Chapter 2: HTML Basics - Creating A Basic Website

## 2.5 Self-Closing Elements

There are some elements that don't have content and a closing tag, which will be explained in this [Video](#).



Spend 8 hours on Chapter 2

# Chapter 2: HTML Basics - Creating A Basic Website

## 2.6 HTML Attributes

HTML attributes are used to give additional information to an HTML tag. You can learn more about this by watching this [Video](#).



Spend 8 hours on Chapter 2

# Chapter 2: HTML Basics - Creating A Basic Website

## 2.7 Block vs Inline

There are two types of HTML elements: block and inline. To learn about these types and how you can use them, watch this [Video](#).



Spend 8 hours on Chapter 2

# Chapter 2: HTML Basics - Creating A Basic Website

## 2.8 DOM Tree

A DOM Tree defines the relationship between HTML elements. You can learn more about it in this [Video](#).



Spend 8 hours on Chapter 2

# Chapter 2: HTML Basics - Creating A Basic Website

## 2.9 Indentation

Indentation is important to make your code readable. In this [Video](#), you will learn the most popular indentation style followed.



Spend 8 hours on Chapter 2

# Chapter 2: HTML Basics - Creating A Basic Website

## 2.10 Semantic HTML Elements

Semantic HTML elements are elements with meaning. They clearly describe their purpose that can be understood by both humans and browsers. Watch this [Video](#) to learn more.



Spend 8 hours on Chapter 2



# Chapter 2: HTML Basics - Creating A Basic Website

## 2.11 Absolute vs Relative Path

There are two ways to tell the address of a file: with an absolute path and with a relative path. Learn more about the difference between these two ways and their purposes in this [Video](#).



Spend 8 hours on Chapter 2

# Chapter 2: HTML Basics - Creating A Basic Website

## 2.12 Image Tag

The image tag (<img /> tag) is a self-closing element used to show images on the web page. You can learn more about it in this [Video](#).



Spend 8 hours on Chapter 2

# Chapter 2: HTML Basics - Creating A Basic Website

## 2.13 HTML Text Formatting Elements

Formatting elements were designed to display special types of text:

- `<b>` - Bold text
- `<strong>` - Important text
- `<i>` - Italic text
- `<em>` - Emphasized text
- `<mark>` - Marked text
- `<small>` - Smaller text
- `<del>` - Deleted text
- `<ins>` - Inserted text
- `<sub>` - Subscript text
- `<sup>` - Superscript text



Spend 8 hours on Chapter 2

# Chapter 2: Quiz

**Please complete the end-of-chapter 2 quiz [here](#).**

## Chapter 2: Additional Resources

These are some resources of HTML topics which you have already studied while watching the videos, but do study these topics from the following resources as it will help you a lot in your Chapter 2 Project.

- [HTML Introduction](#)
- [HTML Editors](#)
- [HTML Headings](#)
- [HTML Paragraphs](#)
- [HTML Attributes](#)
- [HTML Basics](#)
- [HTML Elements](#)
- [HTML Images](#)

## Chapter 2: HTML Project

Well done on completing the Chapter 2! It's time for the project.

In this project, you have to create a HTML websites using the tags you have learnt in the Chapter 1.

### **Instructions:**

- The website will have 2 pages (Home Page & Contact Us Page). Home Page will be first page and Contact Us will be linked to that page.
- The project should look similar to pictures provided in the next slides.
- The images that are used in the website can be found [here](#)
- The text used in the website is provided in the next slides.
- It is compulsory to use heading, paragraph, image tags and attributes.
- Additional tags can also be used

## Chapter 2: HTML Project Submission

After completing the project, It should look like the pictures shared [here](#)

Once you are happy with your project, submit it using the link given below. Best of Luck!

**Link for Submission:**

<https://forms.gle/GNW74FtVPq3UeBoj8>

## Chapter 2: HTML Project - Home Page

**Text:** The **#TechKaro** program is one of **CIRCLE's** key initiatives, run in Partnership with **EngroVopak & Engro Foundation**. The project is currently training nearly 300 young people, primarily women, from underserved communities in tech-based courses such as Front-end Web Development (HTML,CSS, Java Script, React), Graphic Design, and Digital Marketing.

### CIRCLE - Tech Karo Coding

#### Tech Karo Coding Program

[About Us](#) [Contact Us](#)

The **#TechKaro** program is one of **CIRCLE's** key initiatives, run in Partnership with **EngroVopak & Engro Foundation**. The project is currently training nearly 300 young people, primarily women, from underserved communities in tech-based courses such as Front-end Web Development (HTML,CSS, Java Script, React), Graphic Design, and Digital Marketing.





## Chapter 2: HTML Project - Contact Us Page

**Text:** For queries you can connect us on [Facebook](#).

**CIRCLE - Tech Karo Coding**

**Tech Karo Coding Program**

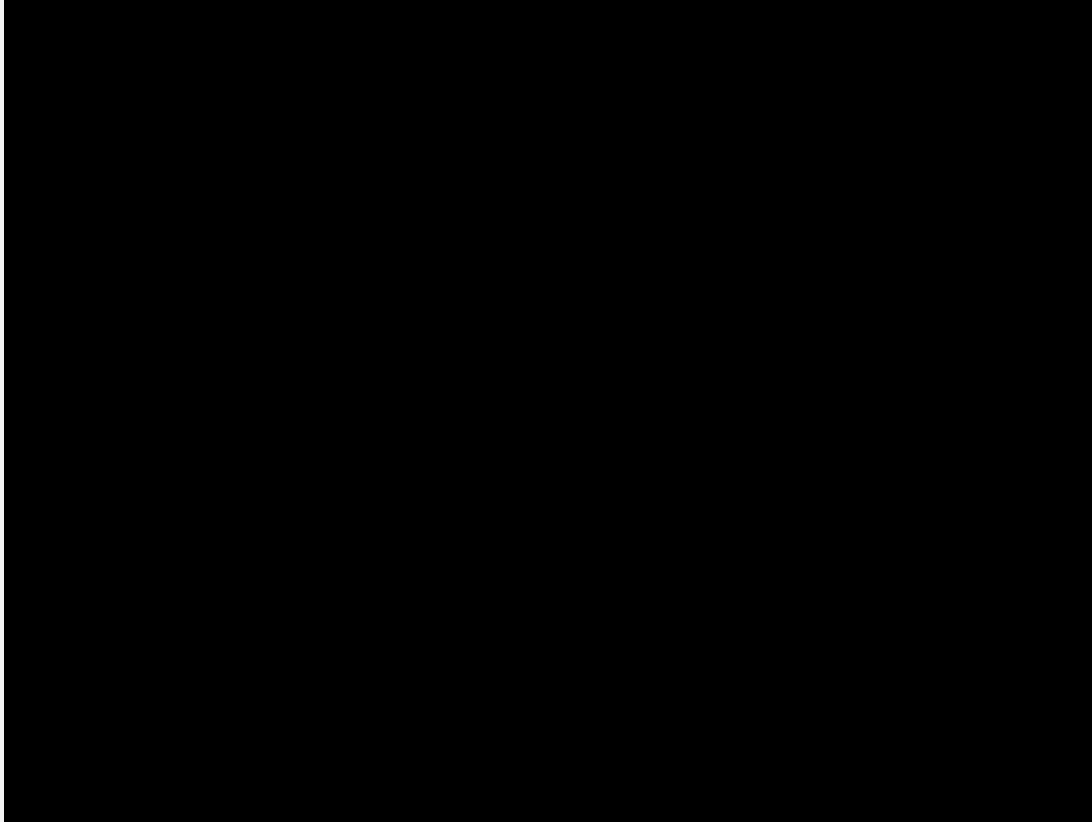
[About Us](#) [Contact Us](#)

For queries you can connect us on [Facebook](#).

The logo features the text "Tech Karo, CIRCLE" in a bold, black, sans-serif font. It is centered within a rectangular area that has a light pink background with a faint, darker pink geometric pattern of overlapping circles and lines.

**Tech Karo,  
CIRCLE**

## Chapter 2: HTML Project - Demonstration



# Chapter 3:

Introduction to CSS - Styling a Website

# Chapter 3: Introduction to CSS - Styling a Website

## 3.1 CSS Basics

CSS is used to make the website look more appealing. There are 3 ways to add CSS:

You can add CSS code directly to your HTML code as shown in this [Video](#).



Spend 10 hours on Chapter 3

# Chapter 3: Introduction to CSS - Styling a Website

## 3.1 CSS Basics

You can use style tags to prevent repetition to follow programming rule #1.

Watch this to [Video](#) learn more.



Spend 10 hours on Chapter 3

# Chapter 3: Introduction to CSS - Styling a Website

## 3.1 CSS Basics

You can add it to a separate file to follow programming rule #2 of single responsibility.

Watch this to [Video](#) learn more.



Spend 10 hours on Chapter 3

# Chapter 3: Introduction to CSS - Styling a Website

## 3.1 CSS Basics

Let's recap what we have learned about adding CSS.

Watch this [Video](#) to learn more.



Spend 10 hours on Chapter 3

# Chapter 3: Introduction to CSS - Styling a Website

## 3.2 Chrome Dev Tools for CSS

You can use Chrome Dev Tools to edit CSS quickly. Watch how you can do so in this video.

Watch this [Video](#) to learn more.



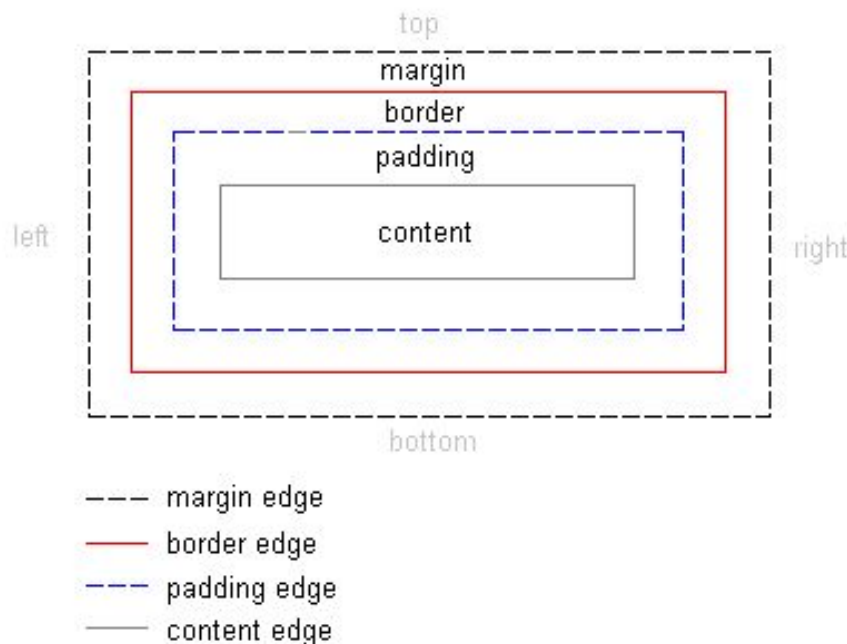
Spend 10 hours on Chapter 3



# Chapter 3: Introduction to CSS - Styling a Website

## 3.3 CSS Box Model

Every element on your webpage is enclosed in a box. There are 4 layers in this box.



Spend 10 hours on Chapter 3

# Chapter 3: Introduction to CSS - Styling a Website

## 3.3 CSS Box Model

We will talk more about that here.

We can consider all HTML elements to be boxes, the makeup of each box is the content, padding, border and margin. This is known as the **Box Model**.

Watch this [Video](#) to learn more.



Spend 10 hours on Chapter 3

# Chapter 3: Introduction to CSS - Styling a Website

## 3.4 Colours

Colours can be written in 4 ways: with their names, RGB values, hex values or HSL values. We will talk more about color names in this video.

Watch this [Video](#) to learn more.



Spend 10 hours on Chapter 3

# Chapter 3: Introduction to CSS - Styling a Website

## 3.4 Colours

RGB stands for red, green and blue.  
Any color can be made by mixing  
these three primary colours in  
different quantities.

Watch this [Video](#) to learn more.



Spend 10 hours on Chapter 3

# Chapter 3: Introduction to CSS - Styling a Website

## 3.4 Colours

Before you can learn about representing colours as hex values, you should know how to count in hexadecimal, which we will talk about in this video.

Watch this [Video](#) for more details.



Spend 10 hours on Chapter 3

# Chapter 3: Introduction to CSS - Styling a Website

## 3.4 Colours

Once you have understood how hexadecimal counting works, you can learn how it can be used to represent colours as shown in this [Video](#).



Spend 10 hours on Chapter 3

# Chapter 3: Introduction to CSS - Styling a Website

## 3.4 Colours

In both RGB and hex representation of colours, you can also specify the alpha value, which will control the transparency of the colour. You can learn more about it in this [Video](#).



Spend 10 hours on Chapter 3

# Chapter 3: Introduction to CSS - Styling a Website

## 3.5 Backgrounds and Font

The CSS background properties are used to define the background effects for elements. These are the different CSS background properties:

- background-color
- background-image
- background-repeat
- Background-attachment
- background-position

**Font selection** is very important and choosing the right font has a huge impact on how the readers experience a website.

The right font can create a strong identity for your brand. Using a font that is easy to read is important. The font adds value to your text. It is also important to choose the correct color and text size for the font.



Spend 10 hours on Chapter 3



# Chapter 3: Introduction to CSS - Styling a Website

## 3.5 Backgrounds and Font

In CSS there are five generic font families:

- **Serif fonts** have a small stroke at the edges of each letter. They create a sense of formality and elegance.
- **Sans-serif fonts** have clean lines (no small strokes attached). They create a modern and minimalistic look.
- **Cursive fonts** imitate human handwriting.
- **Monospace fonts** have all letters with the same fixed width. They create a mechanical look.
- **Fantasy fonts** are decorative/playful fonts.
- All the different font names belong to one of the generic font families.



Spend 10 hours on Chapter 3

# Chapter 3: Introduction to CSS - Styling a Website

## 3.5 Backgrounds and Font

You can learn more about backgrounds and fonts in this [Video](#).



Spend 10 hours on Chapter 3

# Chapter 3: Introduction to CSS - Styling a Website

## 3.6 CSS Positioning

There are 5 types of positions in CSS:

- Static
- Relative
- Fixed
- Absolute
- Sticky

Learn more about static positioning in this [Video](#).



Spend 10 hours on Chapter 3

# Chapter 3: Introduction to CSS - Styling a Website

## 3.6 CSS Positioning

Relative positioning is used if an object is to be placed a few pixels away from its original static position. We will go into its details and how it uses z-index in this [Video](#).



Spend 10 hours on Chapter 3

# Chapter 3: Introduction to CSS - Styling a Website

## 3.6 CSS Positioning

Absolute positioning allows the object to ignore the normal flow of the page and follow the values given. You can learn more about it in this [Video](#).



Spend 10 hours on Chapter 3

# Chapter 3: Introduction to CSS - Styling a Website

## 3.6 CSS Positioning

Fixed positioning sticks the object to the position provided, so it will not move even when scrolling. Watch this [Video](#) to learn more about it.



Spend 10 hours on Chapter 3

# Chapter 3: Introduction to CSS - Styling a Website

## 3.6 CSS Positioning

Sticky positioning allows the object to be scrolled but also fixes it at a certain position. It is a combination of fixed and absolute positioning. You can learn more about it in this [Video](#).



Spend 10 hours on Chapter 3

# Chapter 3: Quiz

**Please complete the end-of-chapter 3 quiz [here](#).**



## Chapter 3: Additional Resources

These are some resources of HTML topics which you have already studied while watching the videos, but do study these topics from the following resources as it will help you a lot in your Chapter 3 Project.

- [CSS Introduction](#)
- [CSS Background](#)
- [CSS Fonts](#)
- [CSS Box Model](#)

## Chapter 3: HTML & CSS Project

Once you've created a basic HTML page in project 1, you can use the same HTML files to style them using CSS properties you have learnt in Chapter 3. You'll be styling the following pages:

- Home Page
- Contact Us Page

### **Instructions:**

- The project should have above mentioned 2 pages (Home Page & Contact Us Page)
- The project should be similar to pictures provided in the next slides.
- The images that are used in the website can be found [here](#).
- It is compulsory to use Meta tags, external CSS, style tag, CSS box model, custom fonts and hyperlinks.
- Additional tags can be used

## Chapter 3: HTML & CSS Project Submission

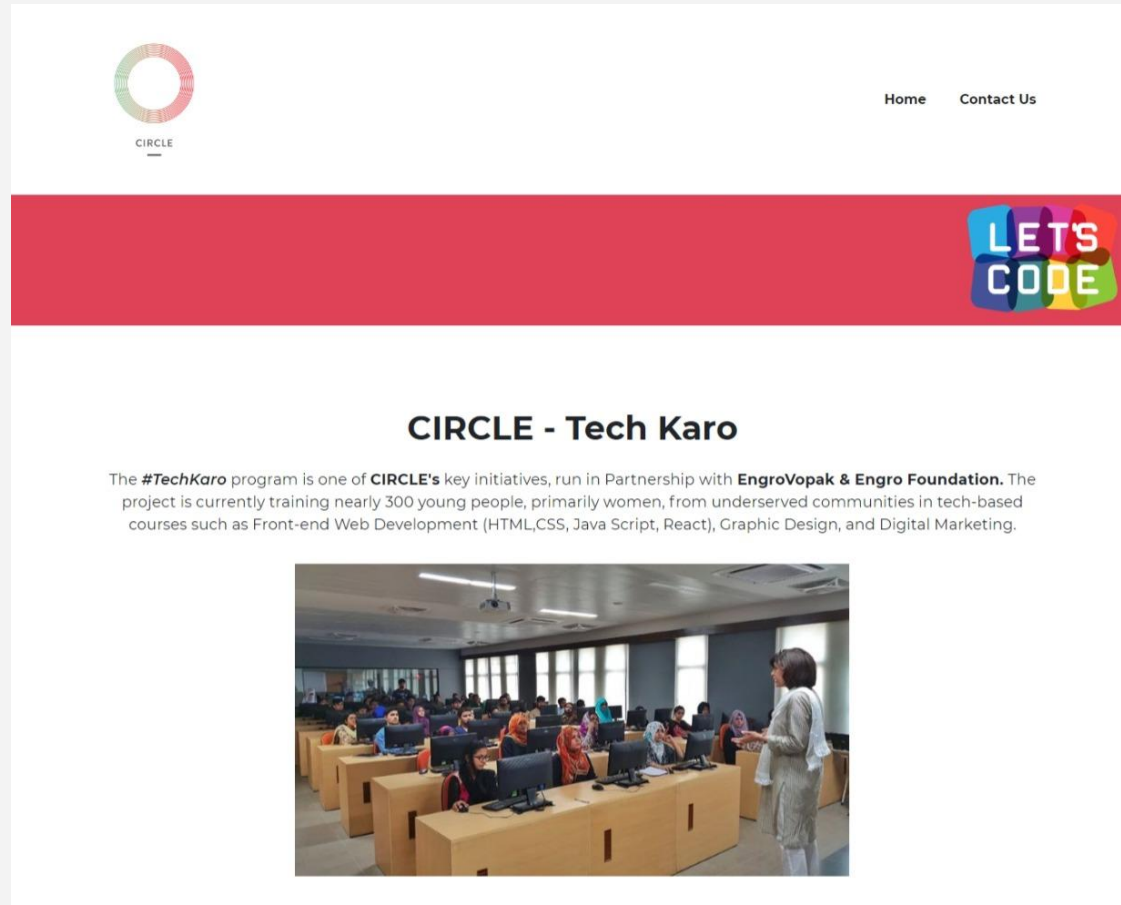
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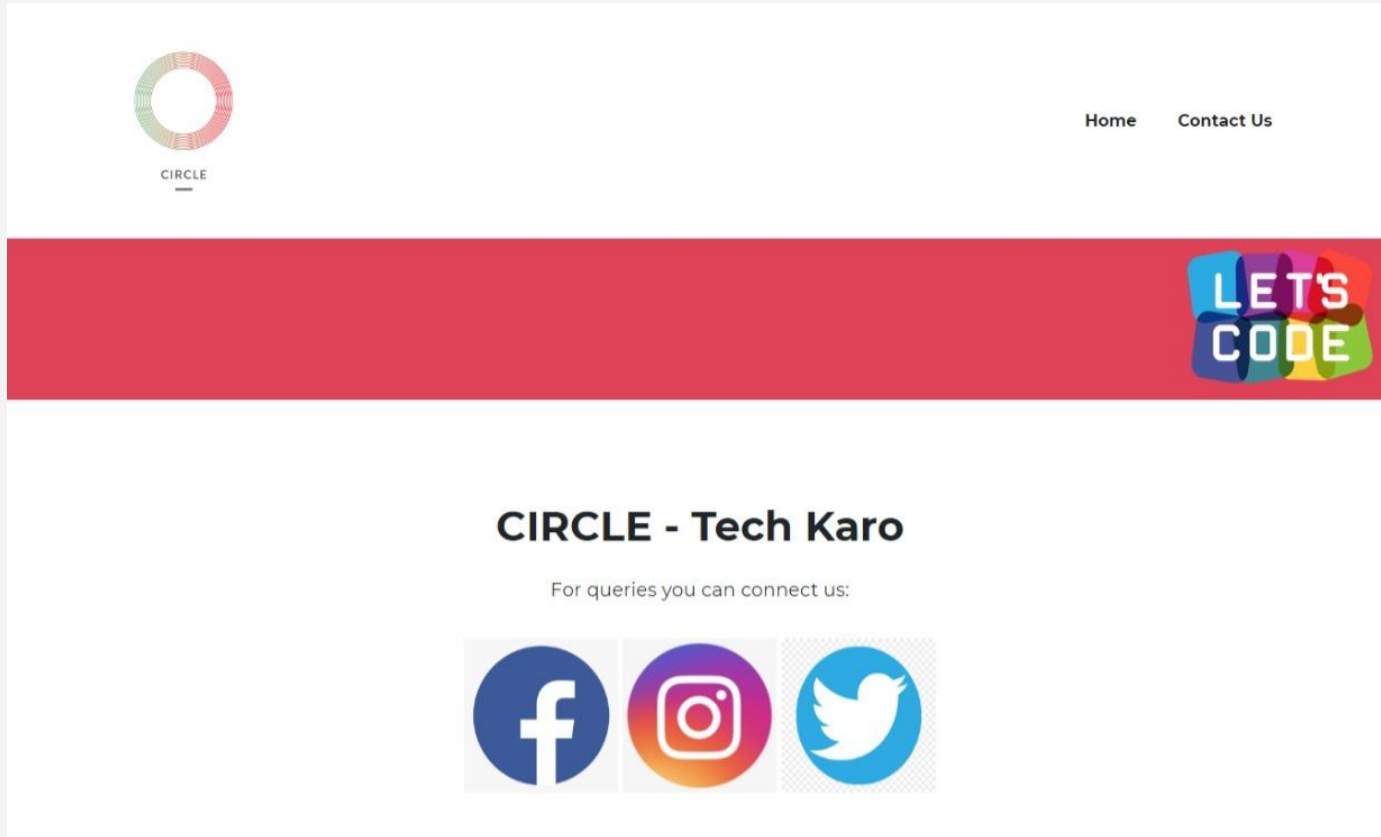
**Link for Submission:**

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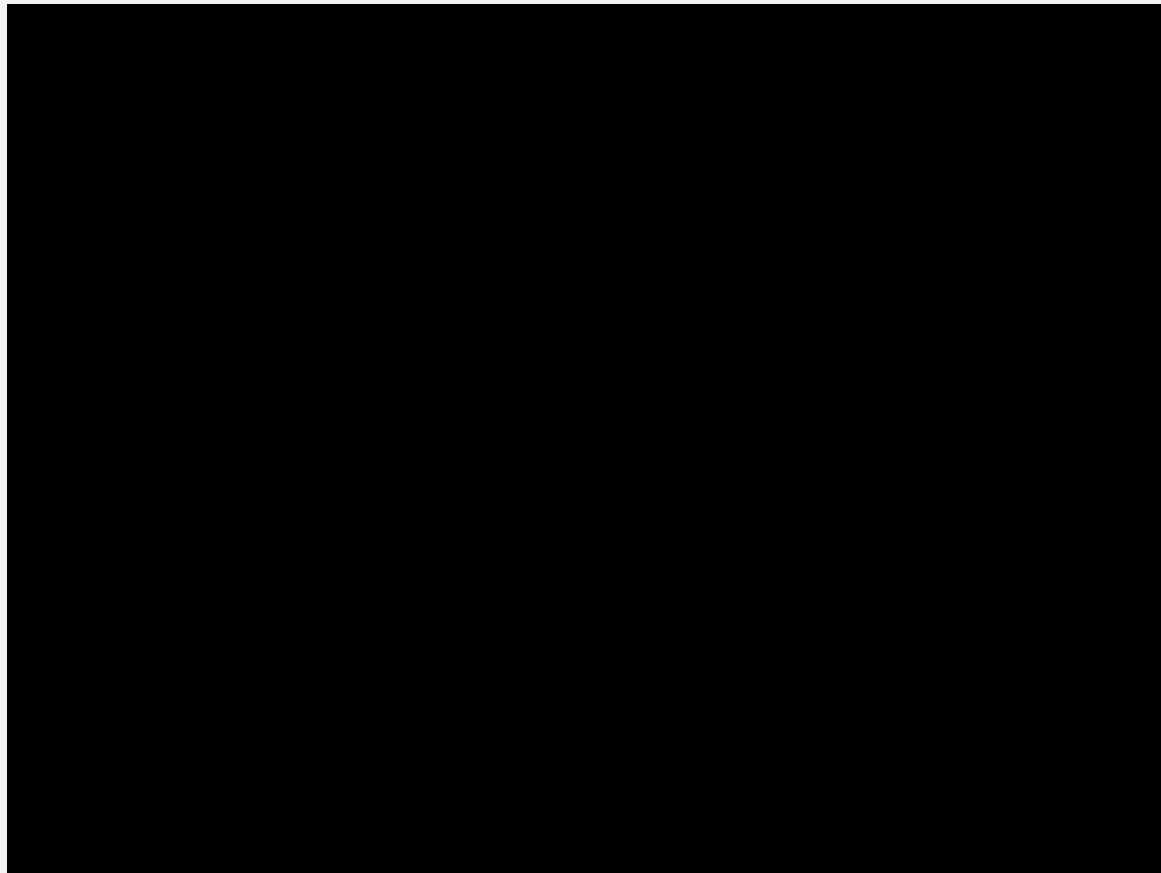
# Chapter 3: HTML & CSS Project - Home Page



## Chapter 3: HTML & CSS Project - Contact Us Page



## Chapter 3: HTML & CSS Project - Demonstration



# Best of luck!

## Tech Karo Web Development Program 2021