



FPT ACADEMY INTERNATIONAL
FPT – APTECH COMPUTER EDUCATION

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AskMeMobile Ltd

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September 2020



This is to certify that:

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Has successfully Designed & Developed

ASKMEMOBILE – E project 2020

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Date of issue:

October 5th, 2020

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Contents

1	ACKNOWLEDGEMENT	1
2	SYNOPSIS.....	2
3	REVIEW 1	3
3.1	REQUIREMENT SPECIFICATION.....	4
3.2	PROBLEM DEFINITION.....	5
3.3	CUSTOMERS REQUIREMENT SPECIFICATION (CRS).....	5
3.4	ARCHITECTURE & DESIGN OF THE SYSTEM.....	7
3.5	SITEMAP.....	8
3.6	WEBSITE LAYOUT.....	9
3.6.1	HOMEPAGE.....	9
3.6.2	CONTACT US	11
3.7	TASK SHEET 1.....	13
4	REVIEW 2	14
5	PROJECT SNAPSHOTS.....	15
5.1	Home Page.....	15
5.2	Product details Page	16
5.3	Contact Us:.....	17
5.4	Footer.....	18
5.5	Responsiveness Test.....	18
6	SOURCE CODE WITH COMMENT	19
7	USER MANUAL	20
7.1	System Requirements:.....	20
7.2	Step by Step Instructions:.....	20
7.2.1	Starting Home Page:	20
7.2.2	Using Search bars & Dropdown menu	21
7.2.3	Browsing Products Gallery:.....	23
7.2.4	Product Details Page:.....	24
7.2.5	CTA Buttons – Compare & Download	26
7.2.6	CTA Buttons – Miscellaneous.....	27
7.2.7	Contact Us	28
7.2.8	Contact Us – Email & Geolocation	28
7.2.9	Footer.....	29
8	DEVELOPER'S GUIDE.....	30

8.1	Home page.....	30
8.1.1	Bootstrap layout.....	30
8.1.2	Logo Animation.....	32
8.2	Top Nav Bar.....	34
8.2.1	Hamburger Menu.....	34
8.2.2	Navbar Auto hide on scroll.....	37
8.3	Side Panel / Side navbar.....	38
8.3.1	Search Bar & Searching Algorithm.....	38
8.3.2	Drop Down Menus	42
8.3.3	Side Panel Responsiveness on smaller screen.....	46
8.4	Home Page - Hero Banner –	47
8.4.1	Header Text Animation	47
8.4.2	Changing Background Image Animation	50
8.5	Home Page - Main Section.....	52
8.5.1	Main Section – Owl Carousel.....	52
8.5.2	Main Section – Gallery with filter buttons–	56
8.5.3	Main Section - Compare & Download Modals –	58
8.6	Side Panel Call To Action Modals.....	64
8.7	Product Details Page	67
8.7.1	Youtube embedded promotional videos.	67
8.7.2	Product detail section.....	69
8.7.3	Rating page	71
8.8	Contact Us Page.....	74
8.8.1	Contact Us - Hero Banner –	74
8.8.2	Contact Us – Feedback & Inquiries –	76
8.8.3	Contact Us – Geolocation/Google Map.....	79
8.9	Footer.....	80
8.9.1	Footer – Bootstrap Layout.....	80
8.9.2	Footer – Lightbox Gallery	83
8.10	Miscellaneous CSS/Animation Modules.....	87
8.10.1	Hover.css by Ian Lunn.....	87
8.10.2	Pin Construction Animation by Nikolay Talanov	88
8.10.3	Chrome Native Lazy Load	89
9	TASK SHEET 2.....	90
10	CHECKLIST VALIDATION	91
11	REFERENCES	92

1 ACKNOWLEDGEMENT

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Our acknowledgement to several people whom also helped with: the collections of pictures samples, CSS & JS libraries, the preparation of web development, sample code snippets and tutorials and they are all thanked for their contributions. Special mentions goes to the contributors of Bootstrap 4, the contributors and admins for tutorials sites such as W3C school, Tutorialspoint.com, GeeksforGeeks, and many other learning sites.

And Lastly, to our many friends and family, you should know that your support and encouragement was worth more than we can express on paper. Thank you to our moms and dads for breakfasts, lunch and dinners – we could not have finished the project without being provided with love and daily nourishments.

2 SYNOPSIS

ASKME Ltd. Is a Multi National Company providing Information services to General People they have been providing information to people through Telephone calls which could include anything from Pin to Piano. Their major source of income comes from informing the customers about those products first for which ASKME is getting paid for.

The BOD's in their annual general meeting proposed that they should launch a website by the name CELLINFO.com where the user will get all the information about the various cell phones available in the market of any brand on a click of a Button.

You are supposed to create a website for them with the below mentioned requirement specifications: The website is to be developed to provide certain features according to specific requirements by the management.

The website is to be developed for the Windows Platform using HTML5, JavaScript and Geolocation. The site should work well in all leading browsers including Chrome, IE, Firefox etc.

3 REVIEW 1

3.1 REQUIREMENT SPECIFICATION

The Website CELLINFO.com is to be created based on the following requirements:

- 1) The Home Page should be neatly created with proper logo, menu and images.
- 2) A Menu should be created which would categorize all the information about the features provided in the Site For e.g. a Menu for Various Cell phones, a Menu for Features of Cell phones etc. etc. something like that.
- 3) The information should be categorized according to the Brand names of Mobiles like if a User wants to see only Nokia Phones then he click on Some Nokia Link/button and he will see only That Brand phones and so on.
- 4) A Brief summary of features of Individual phones should be displayed on the Web Page along with the Cell phone but detailed Features should be stored in Individual Word documents which can be downloaded or viewed by the User who wishes to see the same.
- 5) A Comparison Web Page should also be there where there is Phone comparisons done with various models of same brand or various models of various brands.
 - The Comparison information should be provided in Tabular format comparing the features of different phones.
 - This information would be for 5 Phones of similar brands and 2 phones of different brands for 1 month and then it will change so for the time being the Page should handle the above requirement.
- 6) The Colour Schemes should be soothing, more of Pastel Colours can be chosen for the same.
- 7) When a particular brand phones are being displayed the background image of the Web page should show the Logo of that brand for e.g. if Nokia Phones are being displayed then that page should have the Logo of NOKIA as the background image and the same in case of other Brands.
- 8) There should be a “Contact Us” page which will have the Address of the Company and the mail address which when clicked will invoke the local mail client from where they can send an email. Address of the Company should be displayed using GeoLocation API (eg. GoogleMaps)
- 9) The information on the mobile phones and all can be picked up from the Sites of Nokia, Samsung etc.
- 10) To avoid creation of html pages you can make use of layers, flash buttons and other components of Dreamweaver for creation of pages.
- 11) The appearance and organization of the site will carry more chances of your selection for getting the contract so both the factors are important to be considered.

3.2 PROBLEM DEFINITION

After analyzing the Queries coming in form various Customers mostly are related to information regarding Cell phones which could be one or all of the follow

- 1) What is the Cell Phone Model Number with XYZ features?
- 2) What are the Features in XYZ cell?
- 3) What is the current price of the XYZ cell phone?
- 4) How is XYZ cell phone Different from ABC phone?
- 5) What is the approximate price of XYZ phone?

And many more...

As you can see there are a lot of queries which cannot be answered online or would be very difficult for the Call executive to explain the entire features of the product which again would consume a lot of Call time of the executives as well.

Our Website should be able to solve this problem by providing an alternative mean for customers to seek out information at their own pace. The website will be referred to as self-serviced website for informational guidance and comparisons.

3.3 CUSTOMERS REQUIREMENT SPECIFICATION (CRS)

1. Client: AskMe Ltd.

2. Objectives:

- Provide a website to display information about products (Cell phones) categorizing product information according to brands and features.
- The website should have soothing color with proper logo and images. A menu to show phone category and provide clickable links. A brief summary of phone features will be show. Users who wish to compare phone features across different brands will be able to link to a comparison table in which 5 phones of the same brand and 2 of different brands will be show on the table.
- Users should be able to download information from the site to their computers. If users wish to send us an email or looking for our physical location, users should be able to do so in “Contact Us” page.
- The keywords are “logo”, “menu”, “images”, “pastel color” “Category”, “Menu for various Cell phones”, “Menu for features of Cell phones”, “Brand”, “Comparison”, “Tabular Information”, “Contact Us”, “Send email”, “Geolocation”....

3. Inputs provided by clients:

- Click on clickable links from menu, or search menu.

- Click to clickable links/images in “Products” session to link to third party websites.
- Click “Compare” buttons for comparison between different phones.
- Click “Download” buttons for downloading doc documents from CELLINFO.com .
- Click “Contact Us” link to link to “Contact Us” webpage.
- Click “send us an email” to send us email.

4. Hardware Requirement:

- A minimum computer system that will help you access all the tools in the courses is a Pentium 166 or better
- 64 Megabytes of RAM or better

5. Software Requirement:

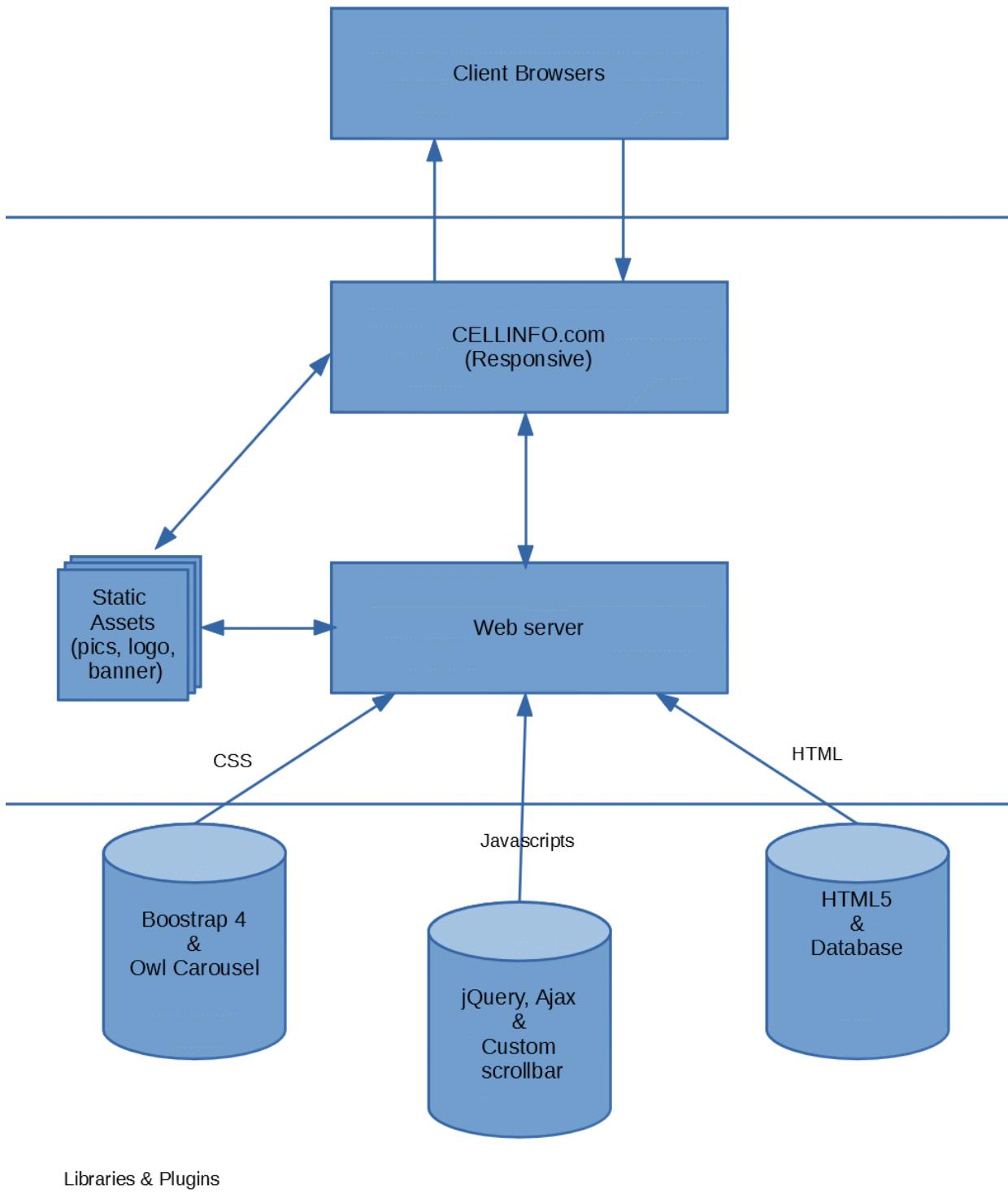
- Window 7/10 OS or higher
- HTML5/CSS/Javascript supporting browsers
- Visual Studio Code.
- Bootstrap 4
- JQuery
- Notepad editor

6. Scope of the Work (in brief):

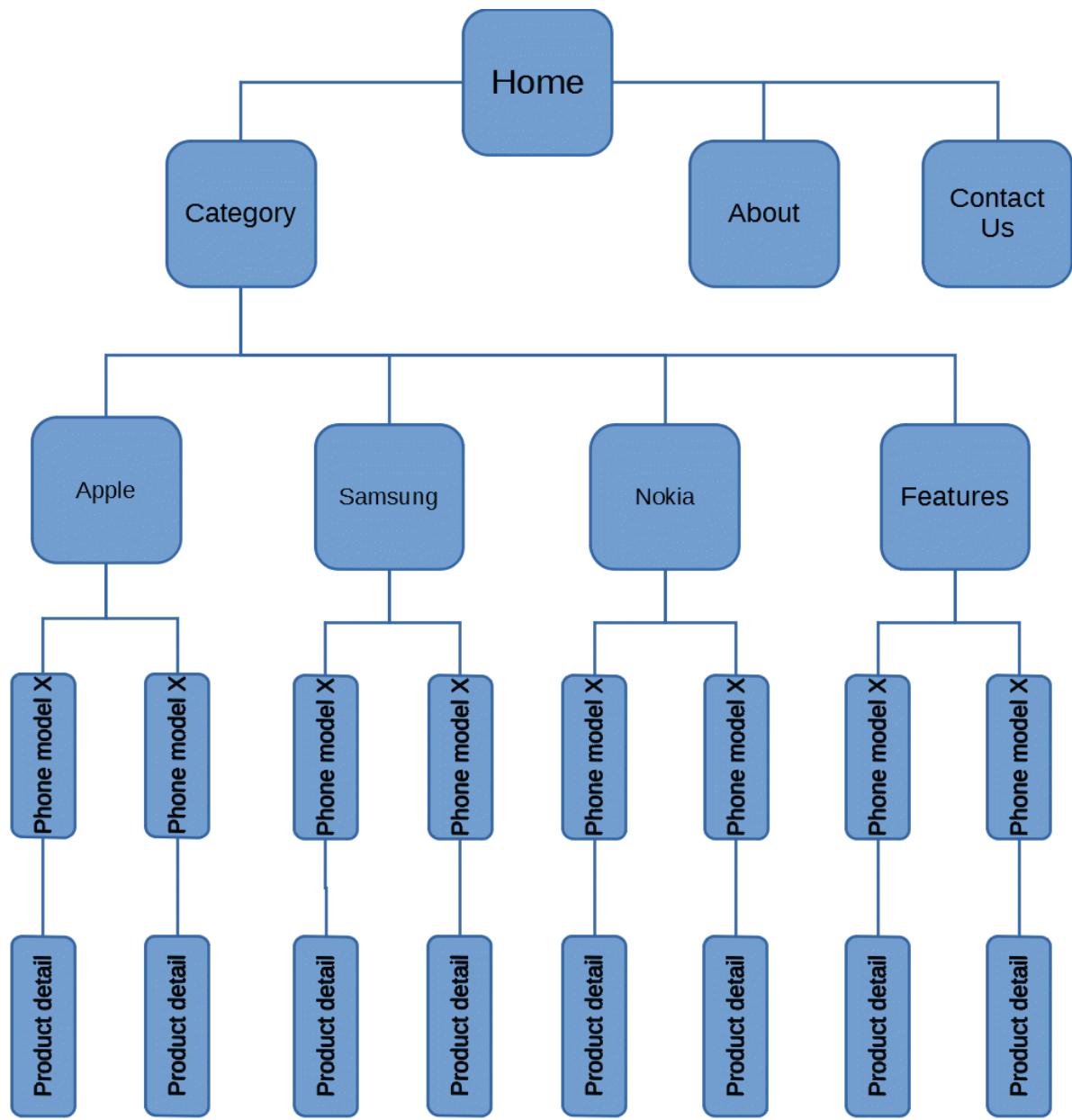
Depending on the decision taken by the management regarding the CELLINFO application, following are the requirements based on which the software needs to be developed:

- Displaying proper Logo, Images, Menu.
- A Web-based GUI to be created for displaying hyperlinks and clickable Images. The menu will stay on the left side navigation bar, it is to be closed with a toggle button. The menu will provide links according to phone brands and features. There will be links to other pages as well as clickable images to direct Users to third party websites(Apple, Samsung, Nokia).
- The users can view and visit the links to their favourite brands. When clicked, the hero banner will be changed to display the corresponding brand (Apple, Samsung, Nokia).
- There will be a modal page for comparison of features, the information will be displayed when users click “compare” button.
- There will be a “download” button where users can download doc documents from the site.
- A “Contact Us” to be created to provide link to email to users, Our office location will be displayed using Geolocation API embedded in the HTML.

3.4 ARCHITECTURE & DESIGN OF THE SYSTEM



3.5 SITEMAP



3.6 WEBSITE LAYOUT

The website layout is to be designed with a SIMPLE but ELEGANT design. Because of the objective is to QUICKLY and SYSTEMICALLY deliver information to the site visitors, the main focus of our webpage will be on the main landing page where all the information will be stored and represented. The site users will have a variety of interactions such as performing search function on a search bar, searching using dropdown menus, comparing phone features, downloading Word documents, links to third party websites.

The websites will also have a few complimentary pages such as About, Contact Us which contain introductory information about our team and our office address.

3.6.1 HOMEPAGE

This layout below describes our Home Landing Page which contains three important part:

- The Top navigation bar and Side navigation bar:

There will be two navigation bars to work in synergy. The top bar will have a Hamburger toggle button for the side menu (side panel) and Hyperlinks on the right.

When click to Hamburger button, a side menu will come out from the left screen side, the side menu is the MOST IMPORTANT part of our project since this is where Users will have the most interactions. There will be Our company's logo on top, and several dropdown menu incorporated within the side panel, a functional search bar, and buttons to link to our Website's other pages.

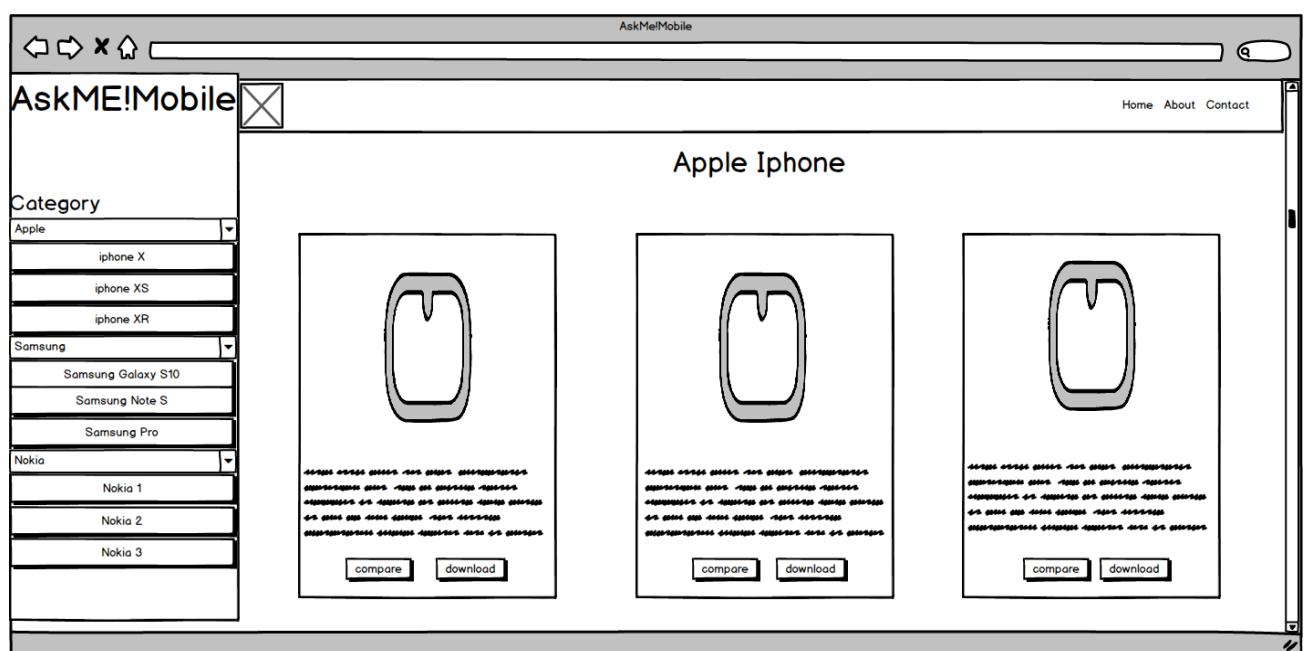
- Hero/Jumpotron:

A large Hero banner to populated in the main content area, the banner will be interactive meaning the title and small heading will be changed according to which brand the users currently be viewing.

- Main Content:

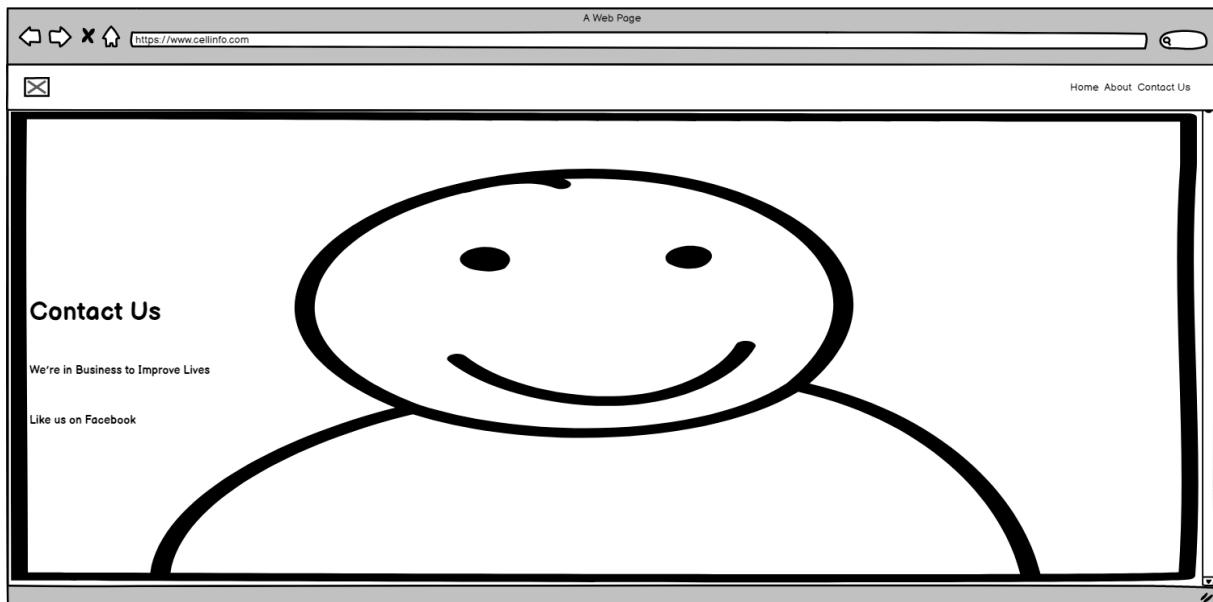
A phone brand will placed on top of the main content along with a brief description of the phone company. Next will be several carousel slide that will showcase the phone products and features. Each carousel will have several product cards which will contain a brief summary of features and hyperlink buttons.

There will be two hyperlink buttons, a “compare” button and a “download” button. The “compare” button will link to a modal table which will compare current phone with 5 phones of the same brand and 2 of another brands. The download button will provide a link to download phone features in Word Docs.



3.6.2 CONTACT US

The contact us layout will have be simple, there will be a main hero banner on top and below are the headings and email link to our office, a feedback form to be populated using Ajax, and our office address along with a geolocation API showing our office location. The topnav menu will become “Active” to show which page users are currently in.



A Web Page

https://www.cellinfo.com

Contact Us - Title

Follow Us



Send Us an email

Have abuse to report?

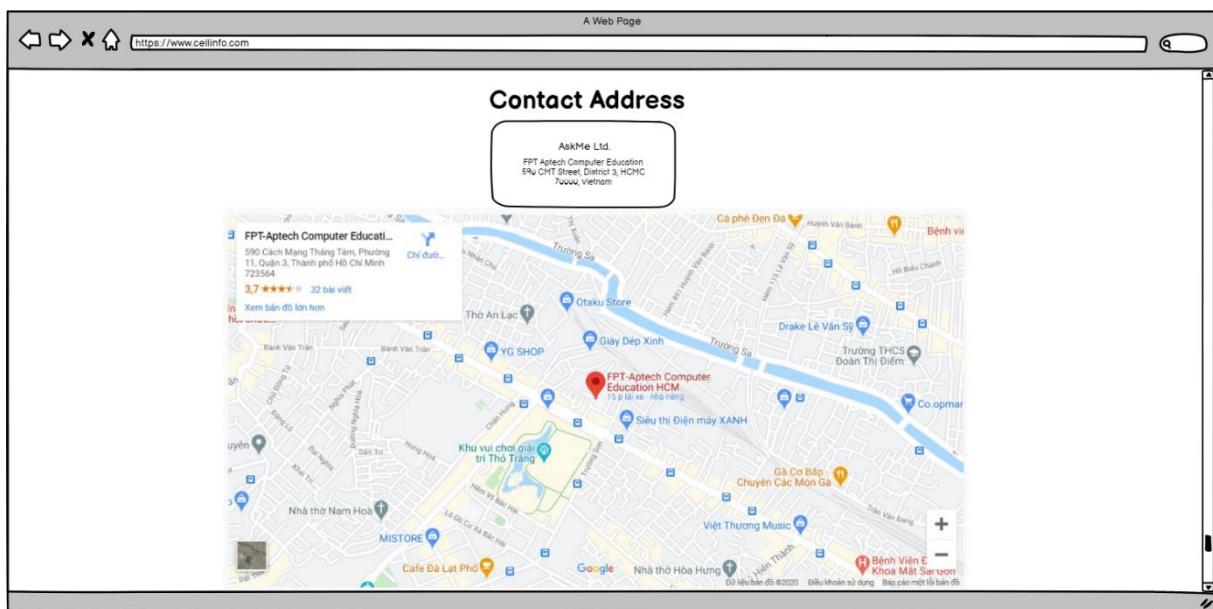
Your Name

Email Address

Your Feedback

Submit

Contact Address



3.7 TASK SHEET 1

Project Ref No.	Project Title – Ask Me Mobile	Activity Plan Prepared by	Date of preparation of Activity Plan			
			Actual Start Date	Actual Days	Teammate Names	Status
Brainstorming ideas for layouts, and Project Objective	Phát, Triệu, Nghĩa	05/09/2020	1 day	Phát, Triệu, Nghĩa	Completed	
Draw site maps and architecture design	Phát	03/09/2020	1 days	Phát	Completed	
Wire framing general page layout.	Phát, Triệu	05/09/2020	4 days	Phát, Triệu	Completed	
Collect static assets (pictures, mp4, documentation)	Phát, Triệu, Nghĩa	05/09/2020	3 days	Phát, Triệu, Nghĩa	Completed	
Design & Build Home Page	Phát	03/09/2020	8 days	Phát	Completed	
Design & Build Contact Us Page	Nghĩa	05/09/2020	2 days	Nghĩa	Completed	
Design & Build About Us Page	Triệu, Nghĩa	08/09/2020	4 days	Triệu, Nghĩa	In Progress	
Design & Build Footer Session	Triệu	12/09/2020	2 days	Triệu	In Progress	
Write project report Review 1	Phát	09/09/2020	3 days	Phát	Completed	

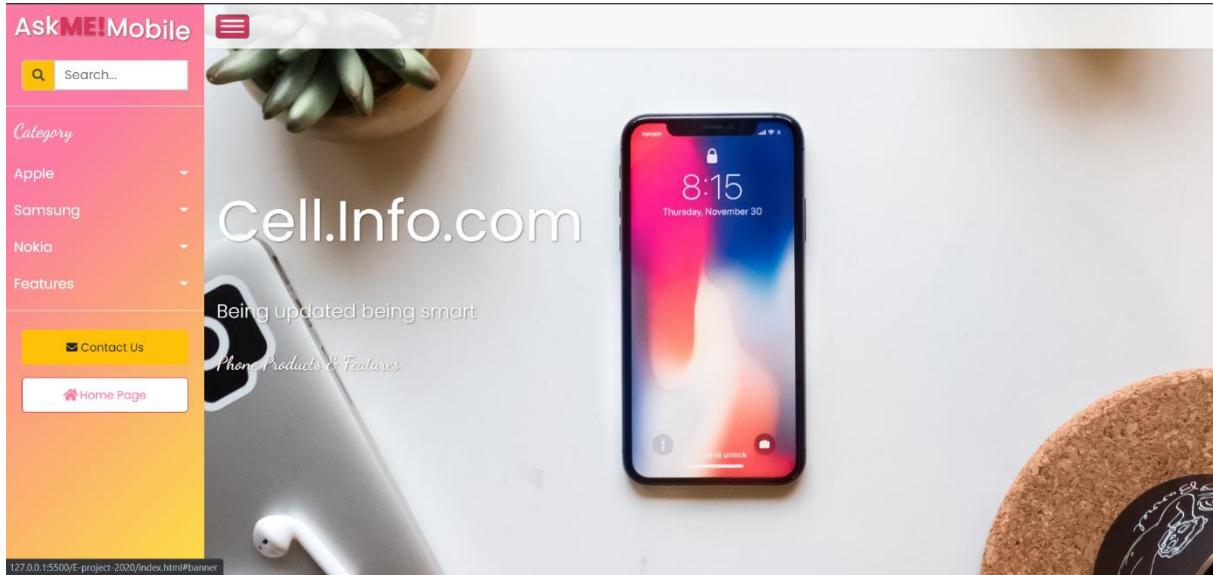
Signature of Faculty	Signature of Team Leader

4 REVIEW 2

5 PROJECT SNAPSHOTS

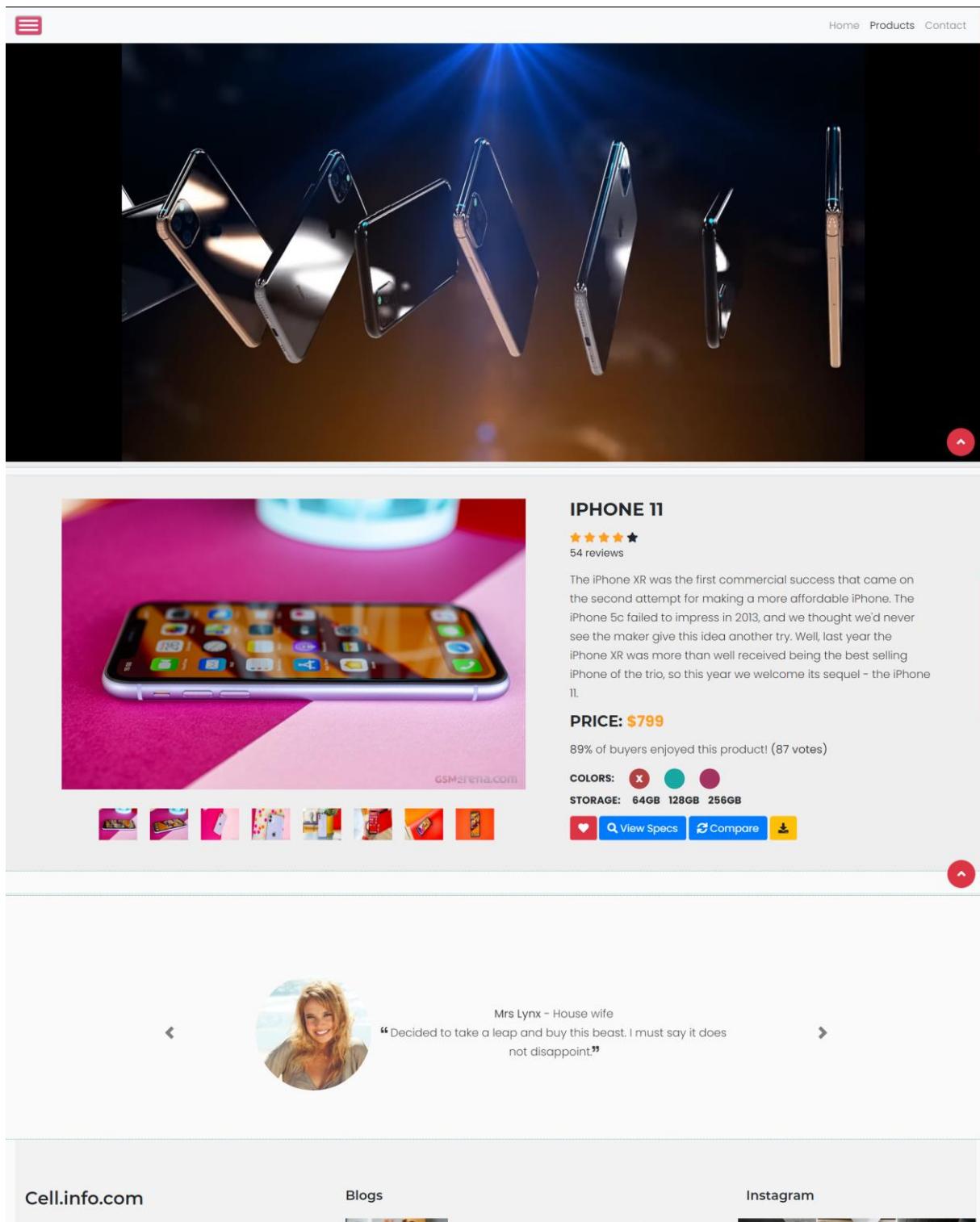
5.1 Home Page

The following snapshots illustrate the creation of CELL INFO.COM home page:



A screenshot of the 'Samsung' section on the CELL INFO.COM website. The top navigation bar includes a search bar and a 'Korean Favourites' link. Below the navigation, the word 'Samsung' is prominently displayed. A descriptive text states: 'The flagship Galaxy smartphones are the Galaxy S and the Galaxy Note series. The Galaxy Z series are foldable smartphones. The Galaxy A series and Galaxy M series are mid-range and low-end/budget models. Other lines are discontinued.' Three Samsung phones are shown in cards: the Samsung Galaxy A21s (red), the Samsung Galaxy A31 (red), and the Samsung Galaxy M31 (blue). Each card includes a thumbnail image of the phone, the model name, and a list of specifications. To the right of the cards is a vertical sidebar with icons for navigation and a red circular button. The URL 'https://www.samsung.com/vn/mobiles/galaxy-a31-a315/SM-A315GZBWWXX/' is visible at the bottom of the page.

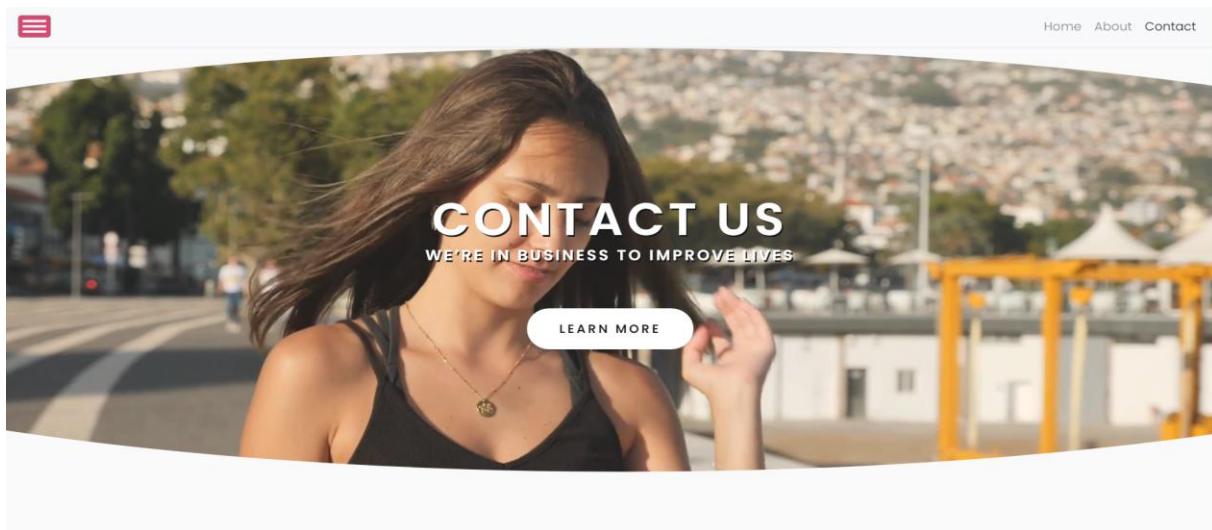
5.2 Product details Page



The screenshot displays a product details page for the iPhone 11. At the top, there is a large banner showing multiple iPhone 11 phones from various angles against a dark background with blue light rays. Below the banner, the product title "IPHONE 11" is displayed in bold capital letters. To the right of the title is a star rating of 4.5 stars based on 54 reviews. The main image shows the iPhone 11 lying on a pink surface next to a white lamp. Below the main image are several smaller thumbnail images of the phone. To the right of the main image, there is a summary of the product's features: "PRICE: \$799", "89% of buyers enjoyed this product! (87 votes)", "COLORS: X (red), C (cyan), M (magenta)", and "STORAGE: 64GB 128GB 256GB". Below these features are buttons for "View Specs", "Compare", and "Add to Cart". A testimonial section follows, featuring a circular profile picture of a woman and a quote: "Mrs Lynx - House wife" and "Decided to take a leap and buy this beast. I must say it does not disappoint". At the bottom of the page, there are links for "Cell.info.com", "Blogs", and "Instagram". The Instagram section includes a preview of a blog post titled "The 5 Secrets You Will Never Know About Your Phones." with a date of "14 Sep 2020".

5.3 Contact Us:

The following snapshots illustrate the creation of CELL INFO.COM contact us page:



CONTACT US
WE'RE IN BUSINESS TO IMPROVE LIVES

LEARN MORE

Home About Contact

Seek first to understand. Then to be understood.

Follow us

[f](#) [t](#) [p](#) [in](#) [m](#)

Send us an Email

askme@mobile.info

Have a Problem to report?

[Tell us about it here](#)

Contact Address





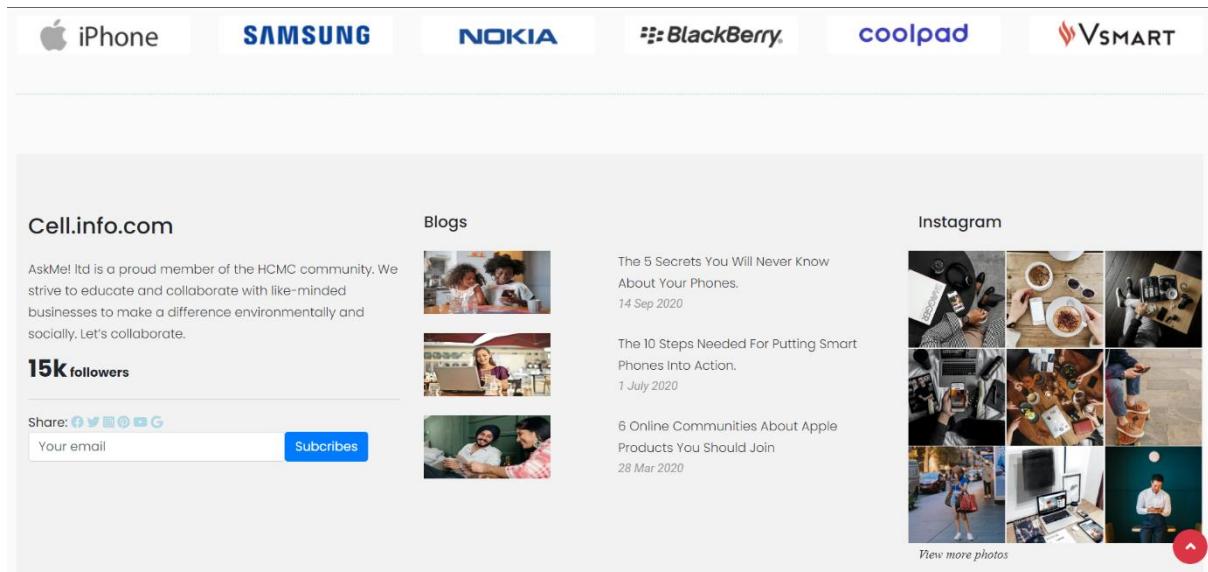
AskMe!Mobile ltd.
FPT Aptech Computer Education
590 CMT Street, District 3, HCMC
70000, Vietnam



Sử dụng ctrl + cuộn để thu phóng bản đồ

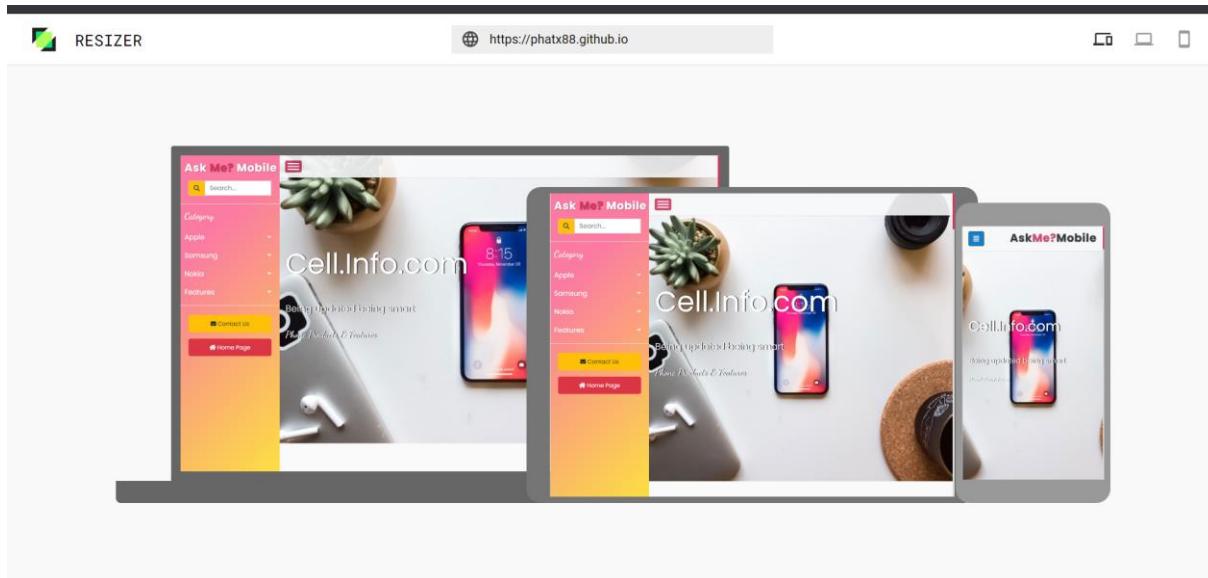
5.4 Footer

The following snapshot illustrates the creation of CELL INFO.COM footer session:



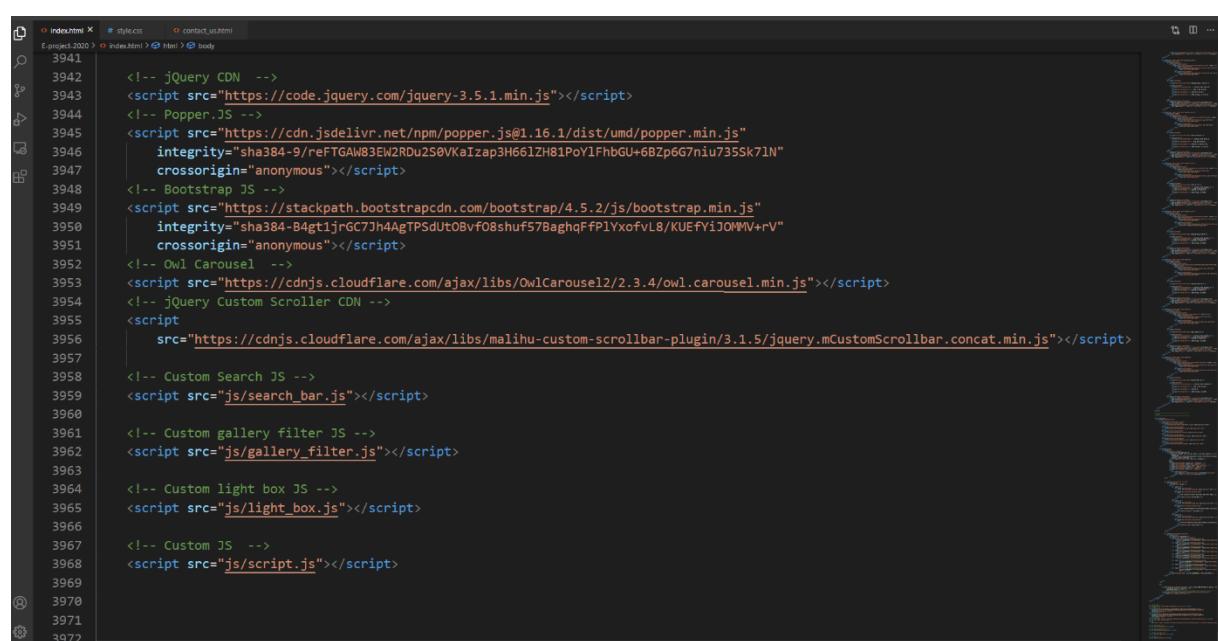
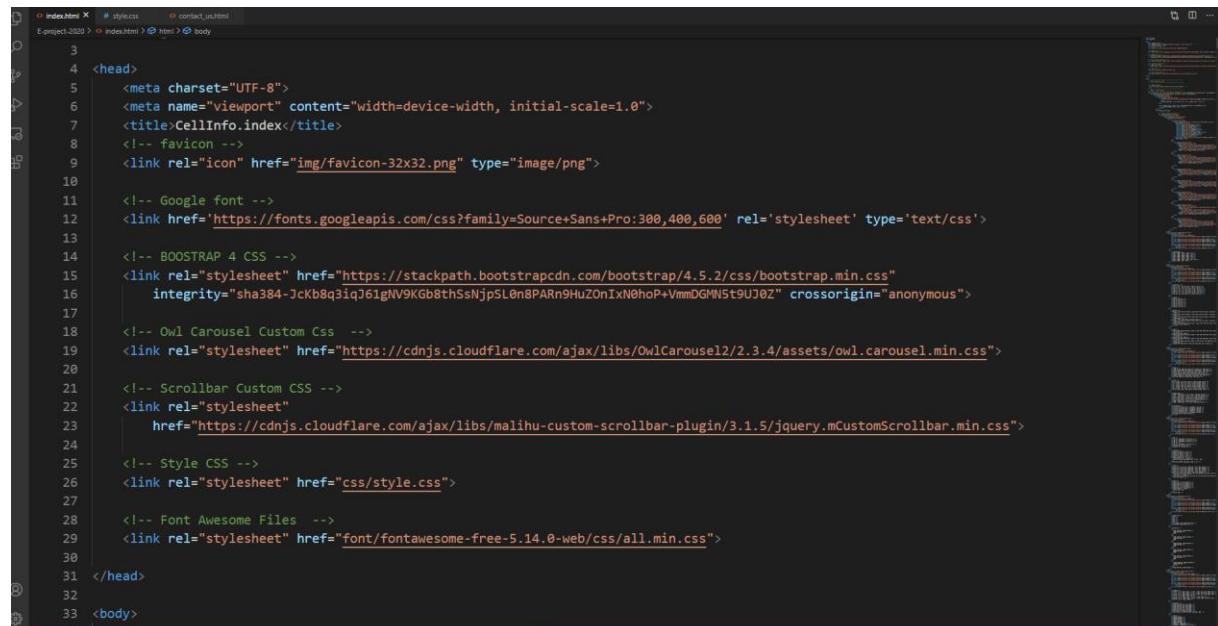
5.5 Responsiveness Test

Using Google Resizer to test, our website is 100% responsive to all standard mobile devices and tablets.



6 SOURCE CODE WITH COMMENT

The project is built based upon the Bootstrap 4 frame work. However, our developer team also heavily modify this website using custom plug-ins and our own HTML/CSS/JS codes. Below is the illustration of important source codes and libraries that we are using for our project.



```
index.html
Project-2020 > index.html > index.html > Body
3
4 <head>
5   <meta charset="UTF-8">
6   <meta name="viewport" content="width=device-width, initial-scale=1.0">
7   <title>CellInfo.index</title>
8   <!-- favicon -->
9   <link rel="icon" href="img/favicon-32x32.png" type="image/png">
10
11   <!-- Google font -->
12   <link href="https://fonts.googleapis.com/css?family=Source+Sans+Pro:300,400,600" rel='stylesheet' type='text/css'>
13
14   <!-- BOOTSTRAP 4 CSS -->
15   <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
16     integrity="sha384-JcK8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmDGNNt9UJ02" crossorigin="anonymous">
17
18   <!-- Owl Carousel Custom Css -->
19   <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/OwlCarousel2/2.3.4/assets/owl.carousel.min.css">
20
21   <!-- Scrollbar Custom CSS -->
22   <link rel="stylesheet"
23     href="https://cdnjs.cloudflare.com/ajax/libs/malihu-custom-scrollbar-plugin/3.1.5/jquery.mCustomScrollbar.min.css">
24
25   <!-- Style CSS -->
26   <link rel="stylesheet" href="css/style.css">
27
28   <!-- Font Awesome Files -->
29   <link rel="stylesheet" href="font/fontawesome-free-5.14.0-web/css/all.min.css">
30
31 </head>
32
33 <body>
34
```



```
index.html
Project-2020 > index.html > style.css > contact_us.html
3941
3942   <!-- jQuery CDN -->
3943   <script src="https://code.jquery.com/jquery-3.5.1.min.js"></script>
3944   <!-- Popper.JS -->
3945   <script src="https://cdn.jsdelivr.net/npm/popper.js@1.16.1/dist/umd/popper.min.js"
3946     integrity="sha384-B4gt1jRcC7Jh4AgTP5dUt0Bvf08shuf57BaghqFFlYxofvL8/KUEfyIJOVV+rV"
3947     crossorigin="anonymous"></script>
3948   <!-- Bootstrap JS -->
3949   <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"
3950     integrity="sha384-B4gt1jRcC7Jh4AgTP5dUt0Bvf08shuf57BaghqFFlYxofvL8/KUEfyIJOVV+rV"
3951     crossorigin="anonymous"></script>
3952   <!-- Owl Carousel -->
3953   <script src="https://cdnjs.cloudflare.com/ajax/libs/OwlCarousel2/2.3.4/owl.carousel.min.js"></script>
3954   <!-- jQuery Custom Scroller CDN -->
3955   <script
3956     src="https://cdnjs.cloudflare.com/ajax/libs/malihu-custom-scrollbar-plugin/3.1.5/jquery.mCustomScrollbar.concat.min.js"></script>
3957
3958   <!-- Custom Search JS -->
3959   <script src="js/search_bar.js"></script>
3960
3961   <!-- Custom gallery filter JS -->
3962   <script src="js/gallery_filter.js"></script>
3963
3964   <!-- Custom light box JS -->
3965   <script src="js/light_box.js"></script>
3966
3967   <!-- Custom JS -->
3968   <script src="js/script.js"></script>
3969
3970
3971
3972
```

We will go through each module in greater details following our Developer guide.

7 USER MANUAL

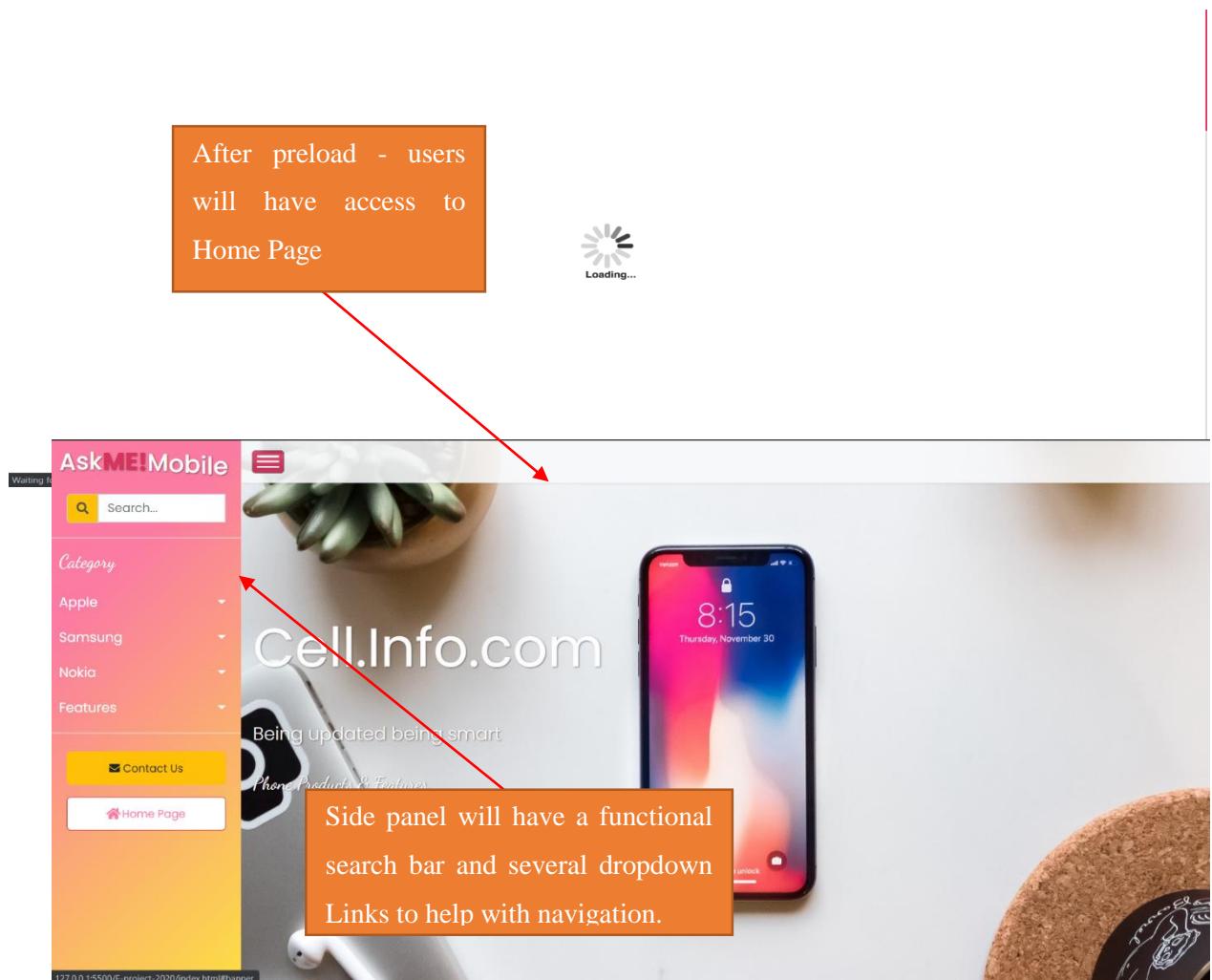
7.1 System Requirements:

No.	Items	Description
1	Operating System	Android, iOS, window 7 or higher.
2	Supporting Browsers	Chrome, Firefox, Microsoft Edge, IE10+, Opera

7.2 Step by Step Instructions:

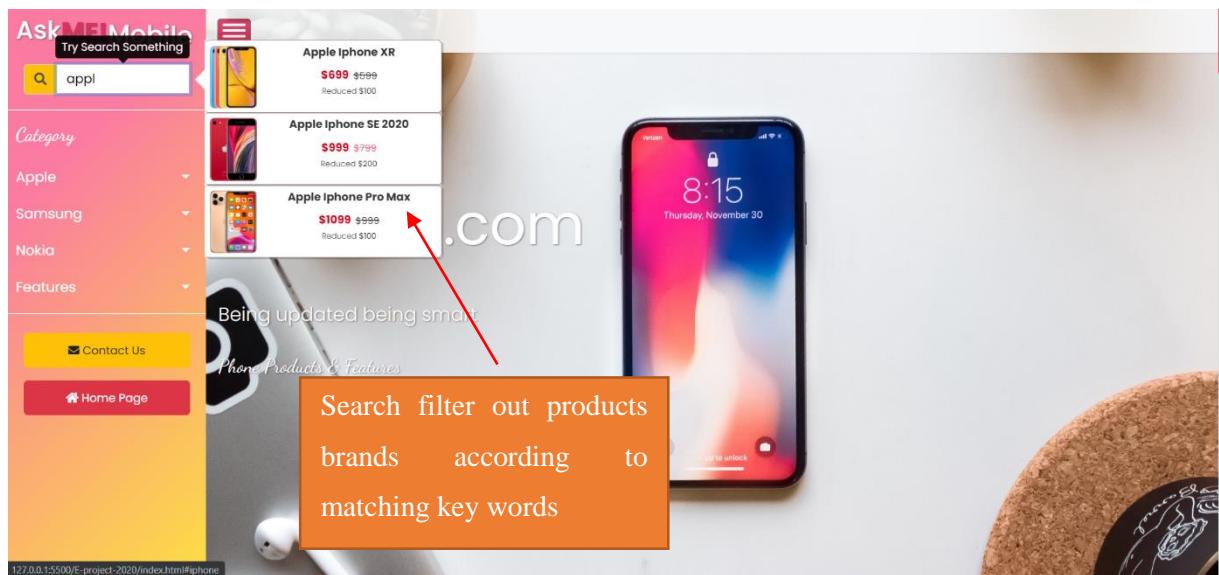
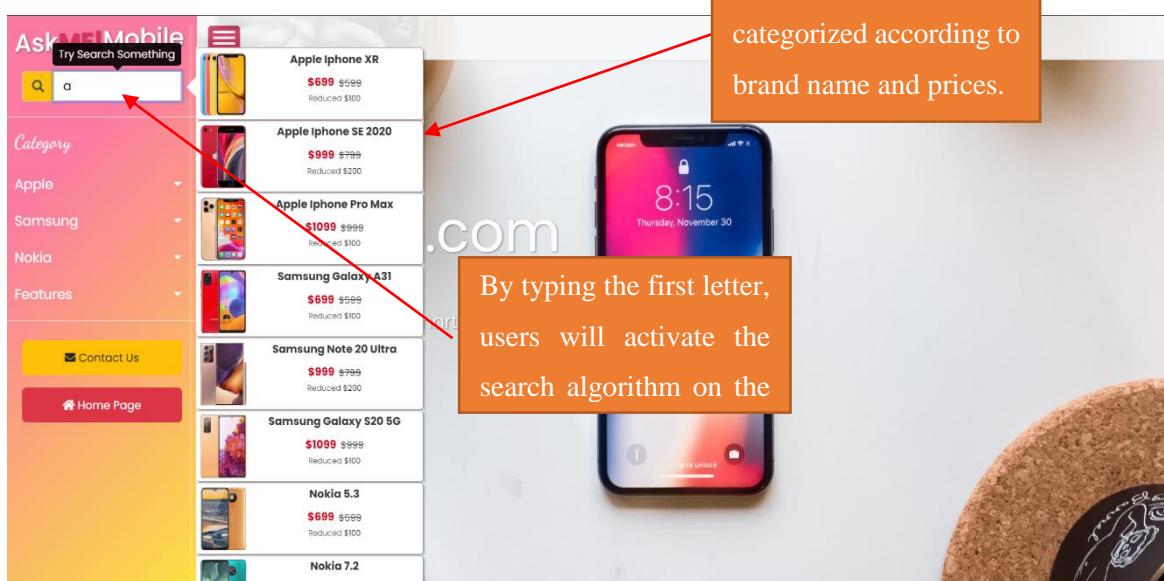
7.2.1 Starting Home Page:

Users will have access to the website by typing to domain name CELLINFO.com, After a brief loading screen user will have access to a top navigation bar and a side menu.



7.2.2 Using Search bars & Dropdown menu

From the side panel, users can start searching for products specifically by typing keywords into search bar. If the users prefer to browse first, there are several dropdown menu categorizing phone products according to brands and features.



AskME Mobile

Try Search Something

Category

- Apple
- Samsung
- Nokia
- Nokia 2.3
- Nokia 5.3
- Nokia 7.2
- Nokia 8.3 5G
- Nokia C3
- Features

Contact Us

Home Page

Phone Products & Features

Connecting People

05:00 Sun, Feb 26

NOKIA

NOKIA

NOKIA

NOKIA

NOKIA

AskME Mobile

Try Search Something

Category

- Apple
- Samsung
- Nokia
- Features

Contact Us

Home Page

Background images will also change each time according to which brand the user is currently viewing.

Samsung

Samsung Galaxy A21s

Samsung Galaxy A31

Samsung Galaxy A31

Samsung Galaxy M31

Samsung Galaxy S20

Samsung

Turn On Tomorrow

SAT, FEBRUARY 24

Phone Products & Features

AskME Mobile

Try Search Something

Category

- Apple
- Samsung
- Nokia
- Nokia 2.3
- Nokia 5.3
- Nokia 7.2
- Nokia 8.3 5G
- Nokia C3
- Features

Contact Us

Home Page

127.0.0.1:5500/E-project-2020/index.html#nokia

Nokia

Connecting People

Phone Products & Features

05:00 Sun, Feb 26

NOKIA

NOKIA

NOKIA

NOKIA

7.2.3 Browsing Products Gallery:

After clicking to certain phone model in drop down menu, Users will be guided to the product carousels.

Korean Favourites

Samsung

The flagship Galaxy smartphones are the Galaxy S and the Galaxy Note series. The Galaxy Z series are foldable smartphones. The Galaxy A series and Galaxy M series are mid-range and low-end/budget models. Other lines are discontinued.

Samsung Galaxy A21s

- Released 2020, June 02
- 192g, 8.9mm thickness
- Android 10, One UI 2.0
- 32GB/64GB storage, microSDXC

Samsung Galaxy A31

- Released 2020, April 27
- 185g, 8.6mm thickness
- Android 10, One UI 2.0
- 64GB/128GB storage, microSDXC

Samsung Galaxy M31

- Released 2020, March 05
- 191g, 8.9mm thickness
- Android 10, One UI 2.0
- 64GB/128GB storage, microSDXC

<https://www.samsung.com/vn/mobiles/galaxy-a31-a315/SM-A315GZBWWXV/>

Users can perform browsing by clicking and dragging the product cards to any left/right direction.

Korean Favourites

Samsung

The flagship Galaxy smartphones are the Galaxy S and the Galaxy Note series. The Galaxy Z series are foldable smartphones. The Galaxy A series and Galaxy M series are mid-range and low-end/budget models. Other lines are discontinued.

Samsung Galaxy A21s

- Released 2020, April 27
- 185g, 8.6mm thickness
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Samsung Galaxy A31

- Released 2020, March 05
- 191g, 8.9mm thickness
- Android 10, One UI 2.0
- 64GB/128GB storage, microSDXC

Samsung Galaxy M31

- Released 2020, March 05
- 191g, 8.9mm thickness
- Android 10, One UI 2.0
- 64GB/128GB storage, microSDXC

Samsung Galaxy S10e

- Released 2020, March 05
- 163g, 7.9mm thickness
- Android 10, One UI 2.5
- 128GB storage, microSDXC

<https://www.samsung.com/vn/mobiles/galaxy-a31-a315/SM-A315GZBWWXV/>

Each product card will contain a brief summary of phone features

Two CTA buttons at the bottom. The blue button will open a comparison table, the yellow one will prompt users to download Word docs containing full spec information of the phone model

7.2.4 Product Details Page:

Clicking on the product card will prompt users to open a product details window.

iPhone 11 Pro Max
Released 2019, September 20
194g, 8.1mm thickness
iOS 13, up to iOS 13.6.1
64GB/128GB/256GB storage, no card slot

iPhone 11
Released 2019, September 20
194g, 8.1mm thickness
iOS 13, up to iOS 13.6.1
64GB/128GB/256GB storage, no card slot

Apple iPhone XR
Released 2018, October 26
194g, 7.3mm thickness
iOS 12, up to iOS 13.6.1
64GB/128GB/256GB storage, no card slot

Features
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[Compare](#) [Download](#)

[Compare](#) [Download](#)

[Compare](#) [Download](#)

iPhone 11 trailer – Apple

IPHONE 11

★★★★★
54 reviews

The iPhone XR was the first commercial success that came on the second attempt for making a more affordable iPhone. The iPhone 5c failed to impress in 2013, and we thought we'd never see the maker give this idea another try. Well, last year the iPhone XR was more than well received being the best selling iPhone of the trio, so this year we welcome its sequel - the iPhone 11.

PRICE: \$799

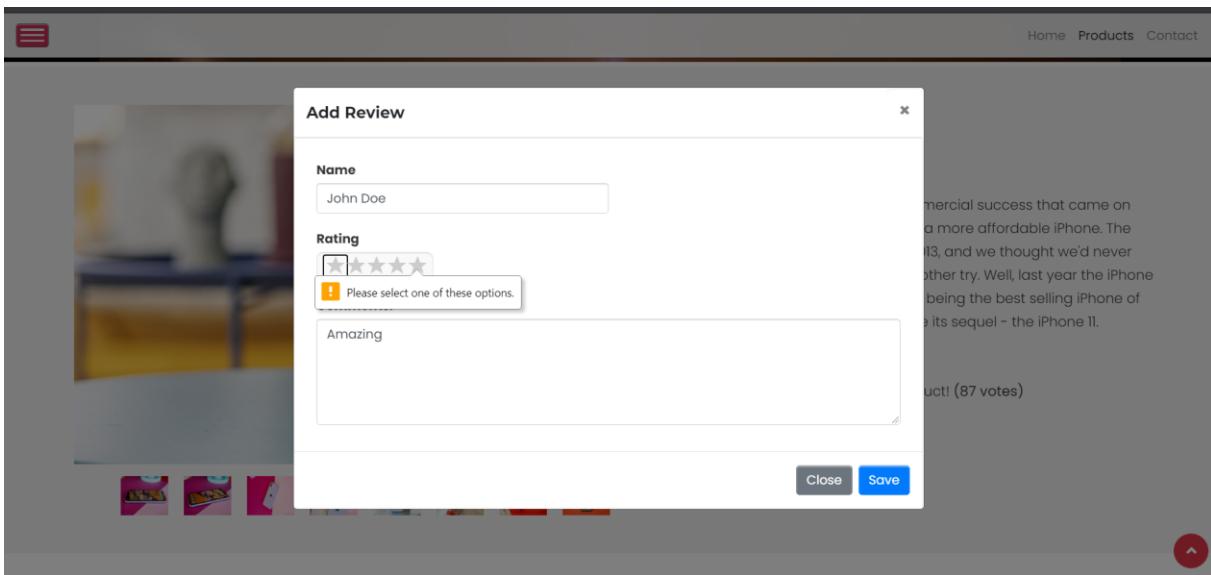
89% of buyers enjoyed this product! (87 votes)

COLORS: X ● ●

STORAGE: 64GB 128GB 256GB

[View Specs](#) [Download](#)

Users can leave a review or view/download phone specs by clicking at CTA buttons.



AskME!Mobile

Category

- Apple
- Samsung
- Nokia
- Features

Contact Us | Home Page

127.0.0.1:5500/E-project-2020/index.html#iphone



IPHONE 11

★★★★★ 54 reviews

The iPhone XR was the first commercial success that came on the second attempt for making a more affordable iPhone. The iPhone 5c failed to impress in 2013, and this idea worked more than expected. The iPhone 11 Pro - the iPhone 11.

PRICE: 89% of buyers

COLORS: X (Red) | C (Green) | M (Purple)

STORAGE: 64GB | 128GB | 256GB

[View Specs](#)

Clicking Link on the right will return users to the Home Page.

Trusted Brand

Apple iphone

The iPhone is a line of touchscreen-based smartphones designed and marketed by Apple Inc. that use Apple's iOS mobile operating system. The first-generation iPhone was announced by Apple co-founder Steve Jobs on January 9, 2007. Since then Apple has annually released new iPhone models and iOS updates. As of November 1, 2018, more than 2.2 billion iPhones had been sold.



iPhone 11

- Released 2019, September 20
- 194g, 8.1mm thickness
- iOS 13, up to iOS 13.6.1
- 64GB/128GB/256GB storage, no card slot



Apple iphone XR

- Released 2018, October 26
- 194g, 7.3mm thickness
- iOS 12, up to iOS 13.6.1
- 64GB/128GB/256GB storage, no card slot



iPhone SE(2020)

- Released 2020, April 24
- 148g, 7.3mm thickness
- iOS 13
- 64GB/128GB/256GB storage, no card slot

7.2.5 CTA Buttons – Compare & Download

Clicking The blue button will prompt users to open a modal window.

Info will be updated every month at the end of the countdown

All info will be categorized according to phone features to help with accessibility.

A table modal will be opened.

Next Info update in Nov 5th, 2020. time remaining: 48d 17h 5m 7s

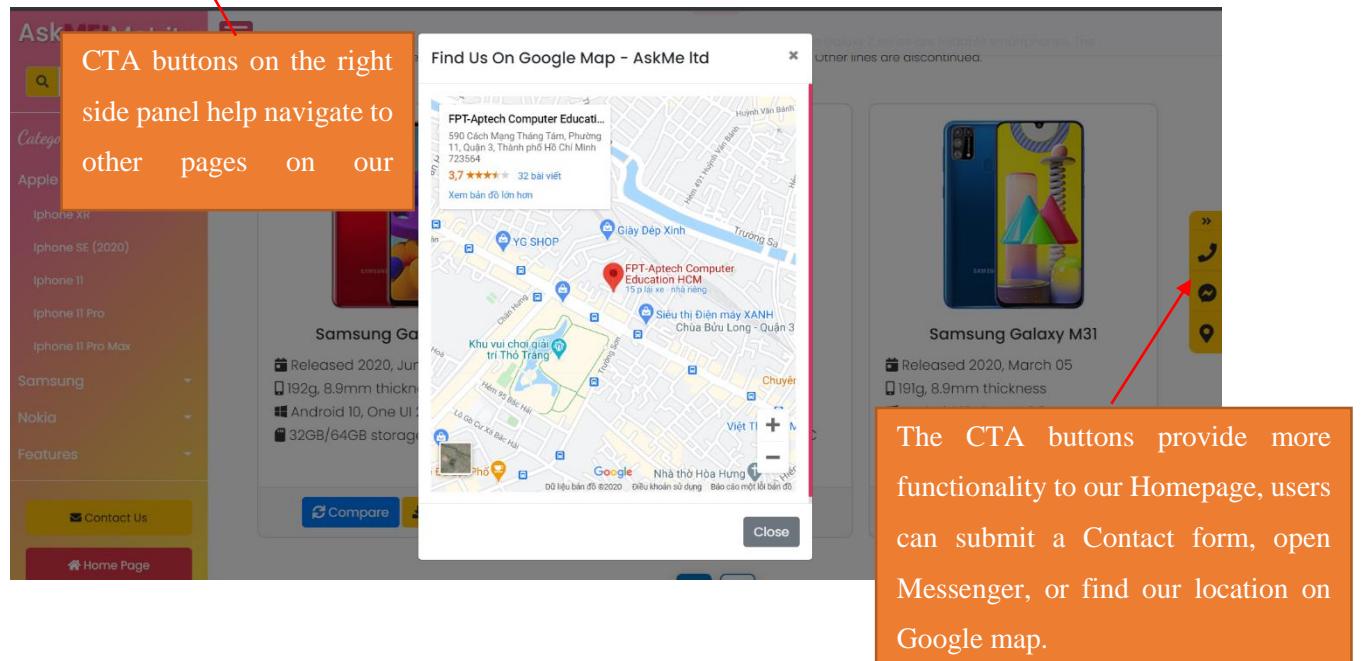
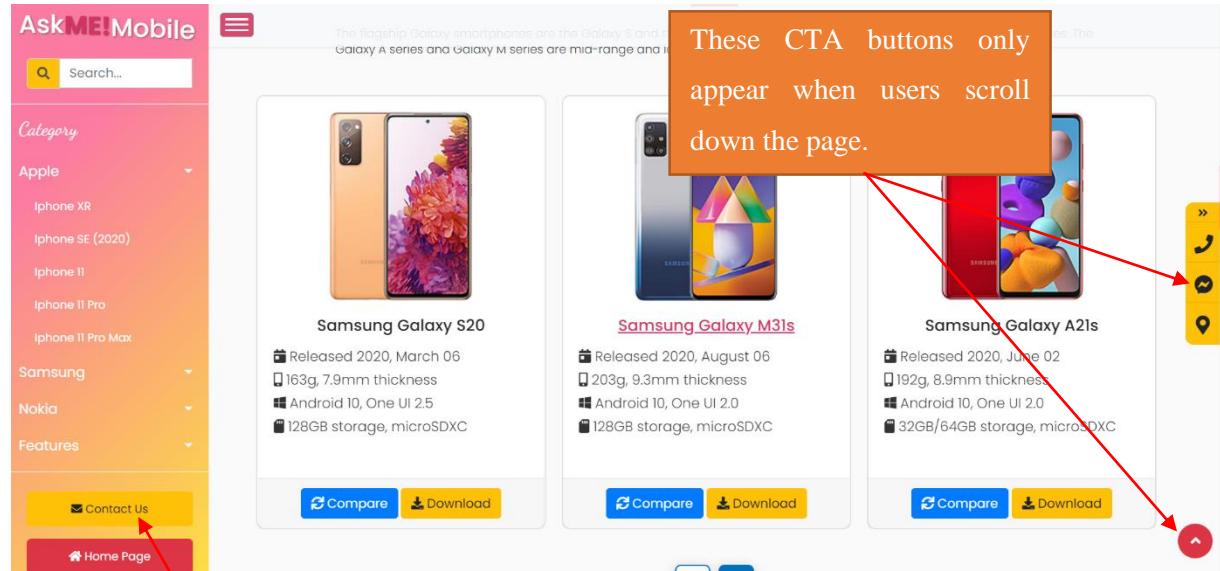
	Nokia 2.3	Nokia 5.3	Nokia 7.2	Nokia 8.3 5G	Nokia C3 (2020)	Apple iPhone 11 Pro Max	Samsung Galaxy S20
NETWORK	Nokia 2.3	Nokia 5.3	Nokia 7.2	Nokia 8.3 5G	Nokia C3 (2020)	Apple iPhone 11 Pro Max	Samsung Galaxy S20
Technology	GSM / CDMA / HSPA / EVDO / LTE	GSM / CDMA / HSPA / EVDO / LTE	GSM / CDMA / HSPA / EVDO / LTE	GSM / CDMA / HSPA / EVDO / LTE	GSM / CDMA / HSPA / EVDO / LTE	GSM / CDMA / HSPA / EVDO / LTE / 5G	GSM / HSPA / LTE / 5G
BODY	Nokia 2.3	Nokia 5.3	Nokia 7.2	Nokia 8.3 5G	Nokia C3 (2020)	Apple iPhone 11 Pro Max	Samsung Galaxy S20

Users can compare 5 phone models of the same brand and 2 phone models of other brands.

Clicking ‘download’ button prompt the users to down Word docx file containing a full spec description of that phone model

7.2.6 CTA Buttons – Miscellaneous

There are several CTA buttons on the right side of the browser window. These buttons will only pop out when users start scrolling to main content of the home page.



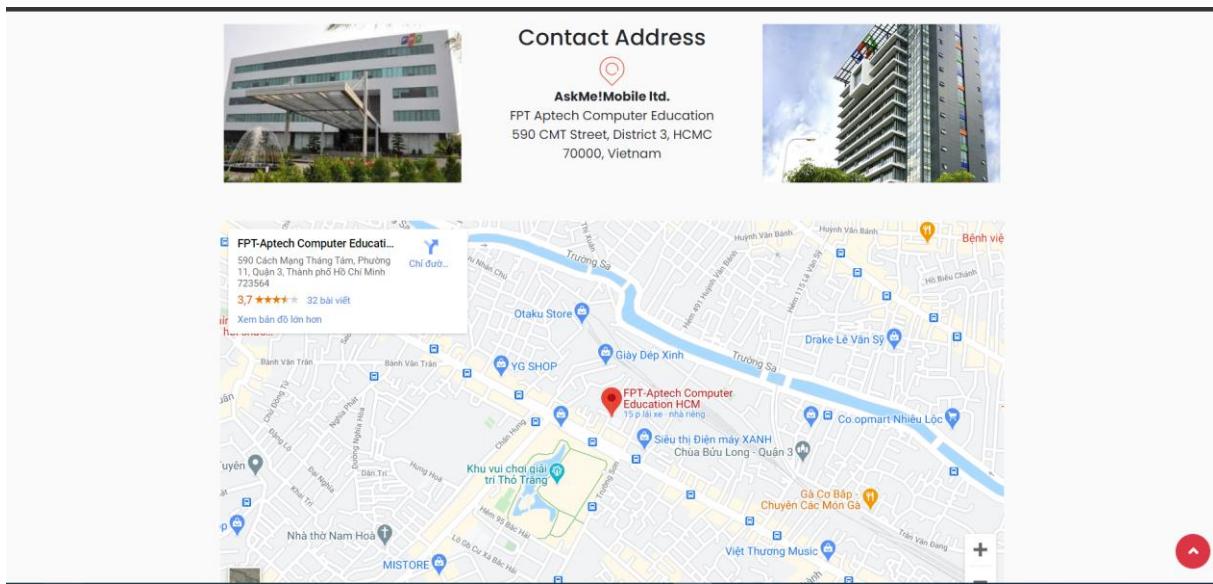
7.2.7 Contact Us



7.2.8 Contact Us – Email & Geolocation

In the Contact Us page, users are provided with several links to connect with us through Social Media. If they wish to directly send us an e-message, there are two links to provide users with options to connect with us through emails or a submit form.

The form is titled "Have a Problem to report?". It includes a "Send Us Feedback" button with a pen icon. Below the title are fields for "Your Name" and "Email Address". A large text area for "Your Feedback" is followed by a "Submit" button. A small circular icon with an upward arrow is located in the bottom right corner of the form area.



Our office location can be found at the bottom of Contact Us page

7.2.9 Footer

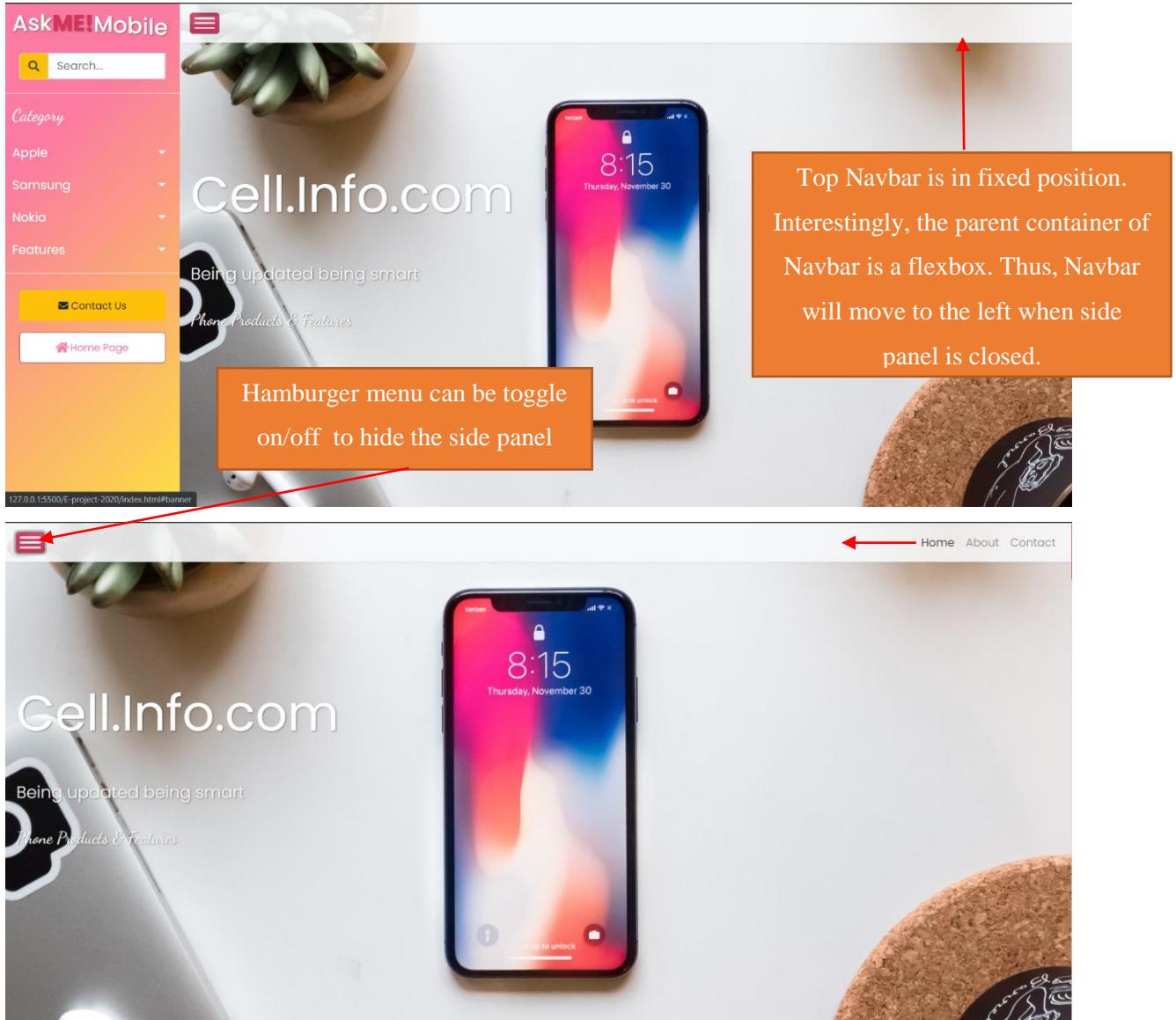
More information about our website and company will be displayed in the footer session.

8 DEVELOPER'S GUIDE

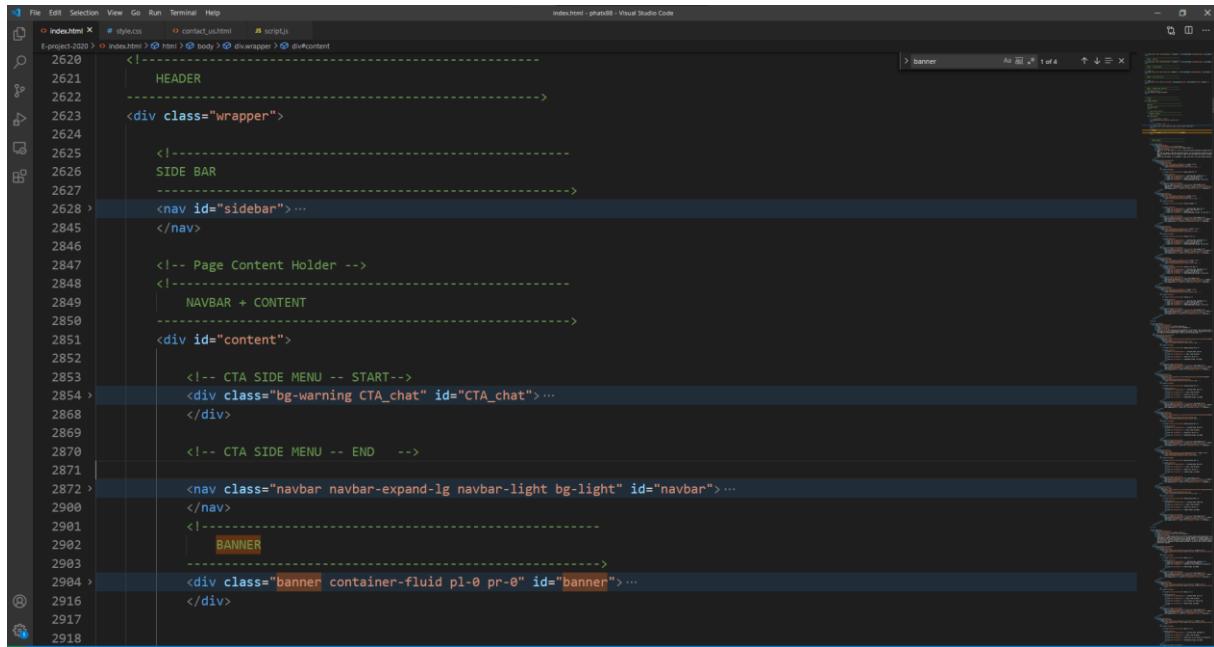
8.1 Home page

8.1.1 Bootstrap layout

Cell INFO.COM is built using Bootstrap 4 Framework, The Home Page template is the standard template with navigation bar on top, a fixed side menu, main content will be in the middle and footer section at the bottom of the page.



HTML codes:

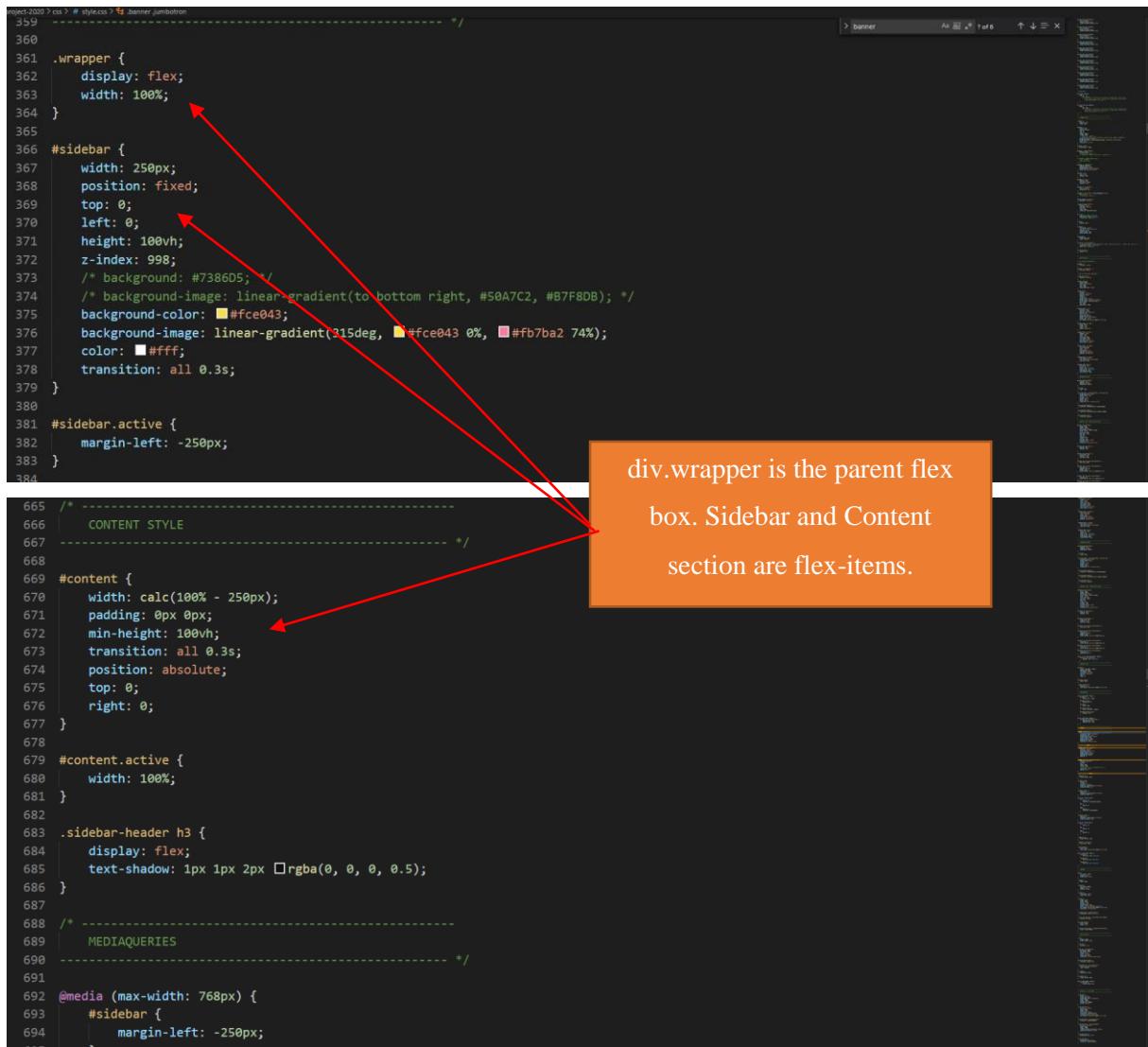


```

2628 <!-- HEADER -->
2629 <div class="wrapper">
2630   <!-- SIDE BAR -->
2631   <nav id="sidebar"> ...
2632 </nav>
2633 
2634 <!-- Page Content Holder -->
2635 <!-- NAVBAR + CONTENT -->
2636 
2637 <div id="content">
2638   <!-- CTA SIDE MENU -- START-->
2639   <div class="bg-warning CTA_chat" id="CTA_chat"> ...
2640 </div>
2641 
2642   <!-- CTA SIDE MENU -- END -->
2643 
2644   <nav class="navbar navbar-expand-lg navbar-light bg-light" id="navbar"> ...
2645 </nav>
2646 
2647 <!-- BANNER -->
2648 <div class="banner container-fluid pl-0 pr-0" id="banner"> ...
2649 </div>
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```

CSS:

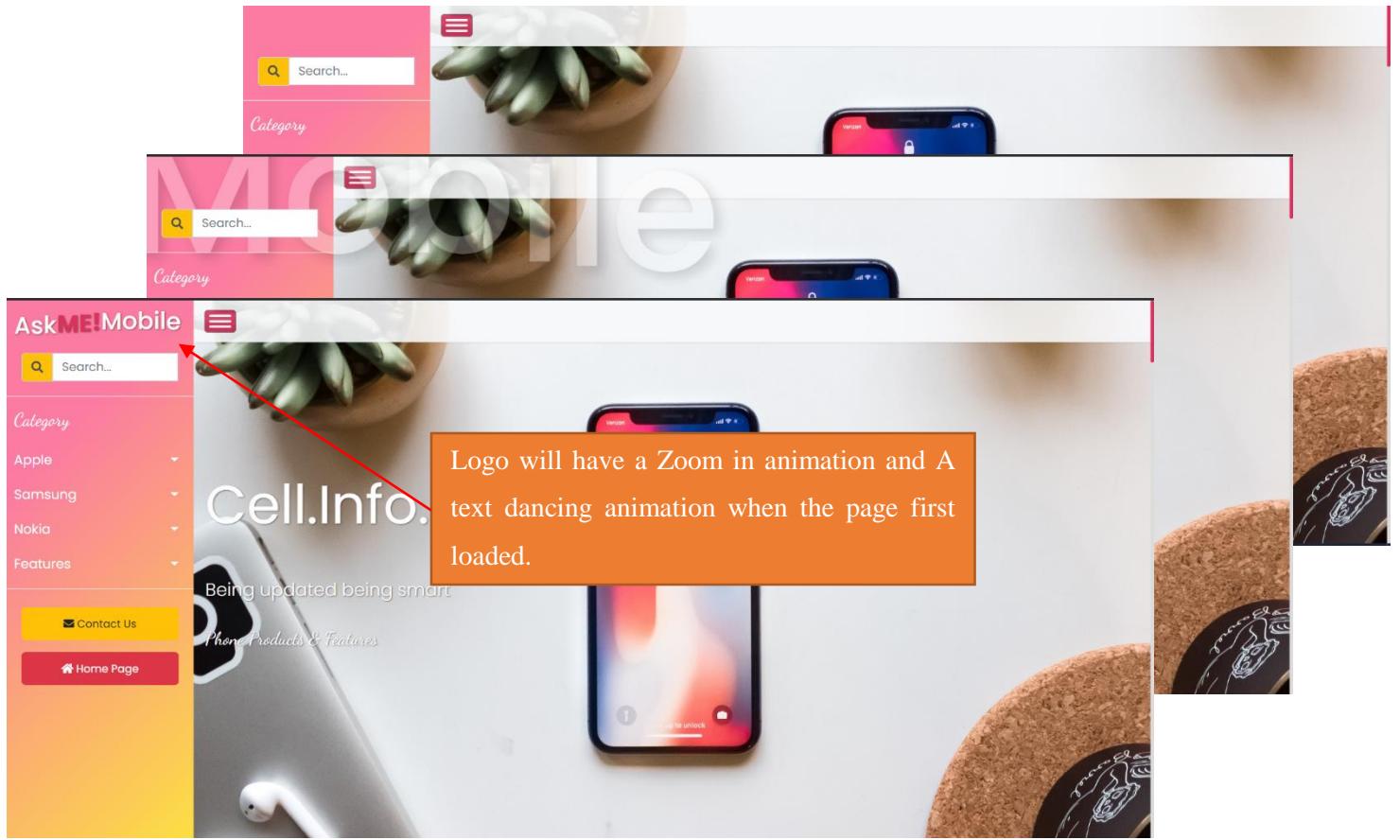


div.wrapper is the parent flex box. Sidebar and Content section are flex-items.

```

359 .wrapper {
360   display: flex;
361   width: 100%;
362 }
363 
364 #sidebar {
365   width: 250px;
366   position: fixed;
367   top: 0;
368   left: 0;
369   height: 100vh;
370   z-index: 998;
371   /* background: #7386D5; */
372   /* background-image: linear-gradient(to bottom right, #50A7C2, #B7F8DB); */
373   background-color: #fce043;
374   background-image: linear-gradient(15deg, #fce043 0%, #fb7ba2 74%);
375   color: #fff;
376   transition: all 0.3s;
377 }
378 
379 
380 #sidebar.active {
381   margin-left: -250px;
382 }
383 
384 
385 /* ----- */
386 /* CONTENT STYLE */
387 /* ----- */
388 
389 #content {
390   width: calc(100% - 250px);
391   padding: 0px 0px;
392   min-height: 100vh;
393   transition: all 0.3s;
394   position: absolute;
395   top: 0;
396   right: 0;
397 }
398 
399 #content.active {
400   width: 100%;
401 }
402 
403 .sidebar-header h3 {
404   display: flex;
405   text-shadow: 1px 1px 2px rgba(0, 0, 0, 0.5);
406 }
407 
408 /* ----- */
409 /* MEDIAQUERIES */
410 /* ----- */
411 
412 @media (max-width: 768px) {
413   #sidebar {
414     margin-left: -250px;
415   }
416 }
417 
```

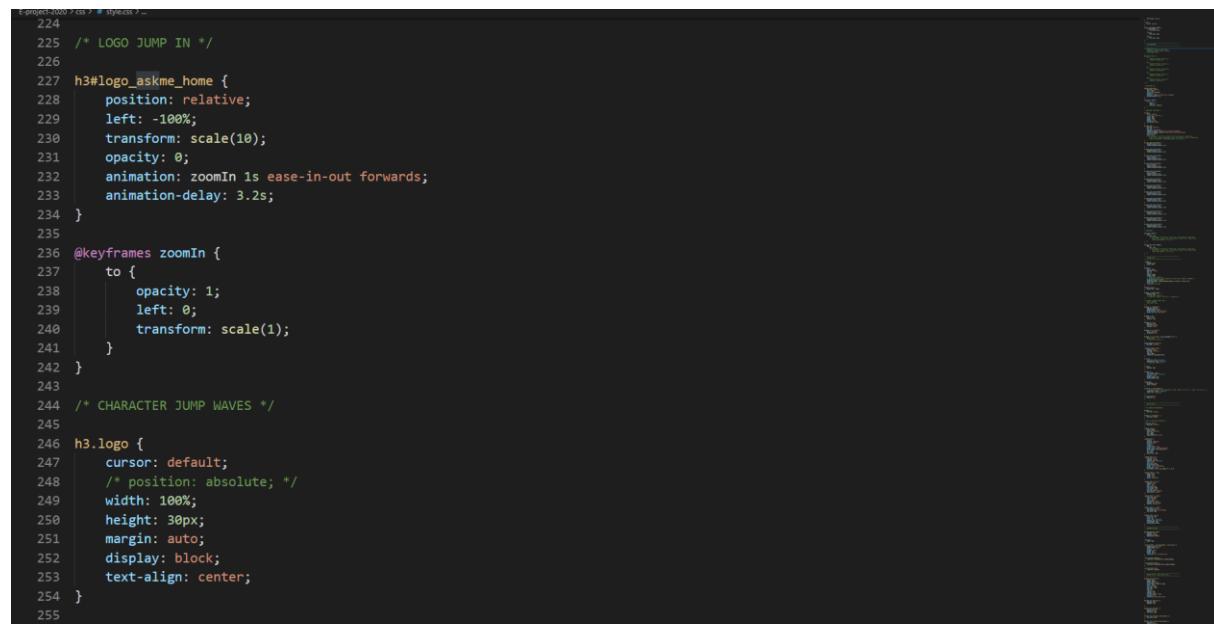
8.1.2 Logo Animation



HTML code:

```
2622 <div class="wrapper">
2623   <!--
2624     SIDE BAR
2625   -->
2626   <nav id="sidebar">
2627     <div class="sidebar-header">
2628       <h3 id="logo_askme_home" class="logo">
2629         <span>A</span>
2630         <span>s</span>
2631         <span>k</span>
2632         <span><strong>M</strong></span>
2633         <span><strong>E</strong></span>
2634         <span><strong>I</strong></span>
2635         <span>M</span>
2636         <span>o</span>
2637         <span>b</span>
2638         <span>i</span>
2639         <span>l</span>
2640         <span>e</span>
2641       </h3>
2642     </div>
2643   </nav>
2644   <ul class="list-unstyled CTAs mb-0">...
2645   </ul>
2646   <ul class="list-unstyled components" id="category">...
2647   </ul>
2648   <ul class="list-unstyled CTAs pt-0">...
2649   </ul>
2650 </div>
```

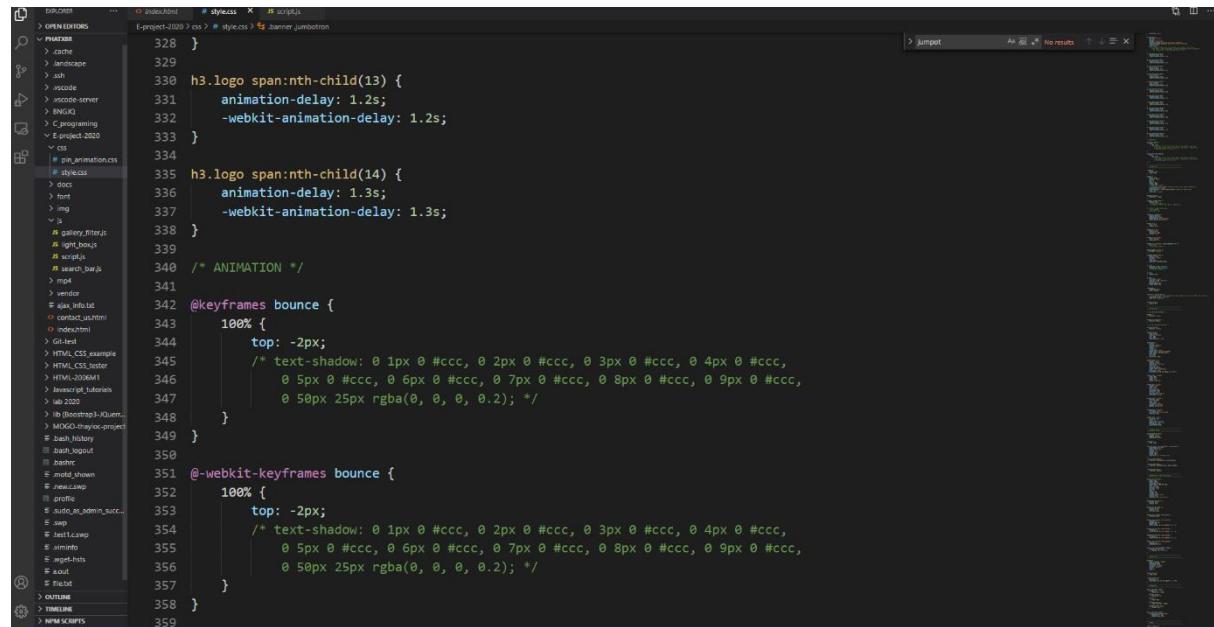
CSS Code:



```
224
225 /* LOGO JUMP IN */
226
227 h3#logo_askme_home {
228   position: relative;
229   left: -100%;
230   transform: scale(10);
231   opacity: 0;
232   animation: zoomIn 1s ease-in-out forwards;
233   animation-delay: 3.2s;
234 }
235
236 @keyframes zoomIn {
237   to {
238     opacity: 1;
239     left: 0;
240     transform: scale(1);
241   }
242 }
243
244 /* CHARACTER JUMP WAVES */
245
246 h3.logo {
247   cursor: default;
248   /* position: absolute; */
249   width: 100%;
250   height: 30px;
251   margin: auto;
252   display: block;
253   text-align: center;
254 }
255
```



```
256 h3.logo span {
257   position: relative;
258   top: 5px;
259   display: inline-block;
260   animation: bounce 1s ease-in-out infinite alternate;
261   -webkit-animation: bounce 1s ease-in-out infinite alternate;
262   font-size: 32px;
263   color: #ffff;
264   /* text-shadow: 0 1px 0 #ccc, 0 2px 0 #ccc, 0 3px 0 #ccc, 0 4px 0 #ccc,
265     0 5px 0 #ccc, 0 6px 0 transparent, 0 7px 0 transparent, 0 8px 0 transparent,
266     0 9px 0 transparent, 0 10px 10px rgba(0, 0, 0, 0.4); */
267 }
```



```
328 }
329
330 h3.logo span:nth-child(13) {
331   animation-delay: 1.2s;
332   -webkit-animation-delay: 1.2s;
333 }
334
335 h3.logo span:nth-child(14) {
336   animation-delay: 1.3s;
337   -webkit-animation-delay: 1.3s;
338 }
339
340 /* ANIMATION */
341
342 @keyframes bounce {
343   100% {
344     top: -2px;
345     /* text-shadow: 0 1px 0 #ccc, 0 2px 0 #ccc, 0 3px 0 #ccc, 0 4px 0 #ccc,
346       0 5px 0 #ccc, 0 6px 0 #ccc, 0 7px 0 #ccc, 0 8px 0 #ccc, 0 9px 0 #ccc,
347       0 50px 25px rgba(0, 0, 0, 0.2); */
348   }
349 }
350
351 @-webkit-keyframes bounce {
352   100% {
353     top: -2px;
354     /* text-shadow: 0 1px 0 #ccc, 0 2px 0 #ccc, 0 3px 0 #ccc, 0 4px 0 #ccc,
355       0 5px 0 #ccc, 0 6px 0 #ccc, 0 7px 0 #ccc, 0 8px 0 #ccc, 0 9px 0 #ccc,
356       0 50px 25px rgba(0, 0, 0, 0.2); */
357   }
358 }
```

8.2 Top Nav Bar

8.2.1 Hamburger Menu



HTML code:

A screenshot of Visual Studio Code showing the file "index.html" with line numbers 2849 to 2892. The code is as follows:

```
<!-- CTA SIDE MENU -- START-->
<div class="bg-warning CTA_chat" id="CTA_chat">...
</div>

<!-- CTA SIDE MENU -- END -->

<nav class="navbar navbar-expand-lg navbar-light bg-light" id="navbar">
  <div class="container-fluid">
    <button type="button" id="sidebarCollapse" class="btn btn-secondary">
      <div class="nav-icon">
        <div></div>
      </div>
      <button class="btn btn-dark d-inline-block d-lg-none ml-auto" type="button"
        data-toggle="collapse" data-target="#navbarSupportedContent"
        aria-controls="navbarSupportedContent" aria-expanded="false" aria-label="Toggle navigation">
        <i class="fas fa-align-justify"></i>
      </button>
    <div class="collapse navbar-collapse" id="navbarSupportedContent">
      <ul class="nav navbar-nav ml-auto">
        <li class="nav-item active">
          <a class="nav-link hvr-underline-from-center" href="#">Home</a>
          id="topHome">Home</a>
        </li>
        <li class="nav-item">
          <a class="nav-link hvr-underline-from-center" href="#">About</a>
        </li>
      </ul>
    </div>
  </div>
</nav>
```

CSS code:

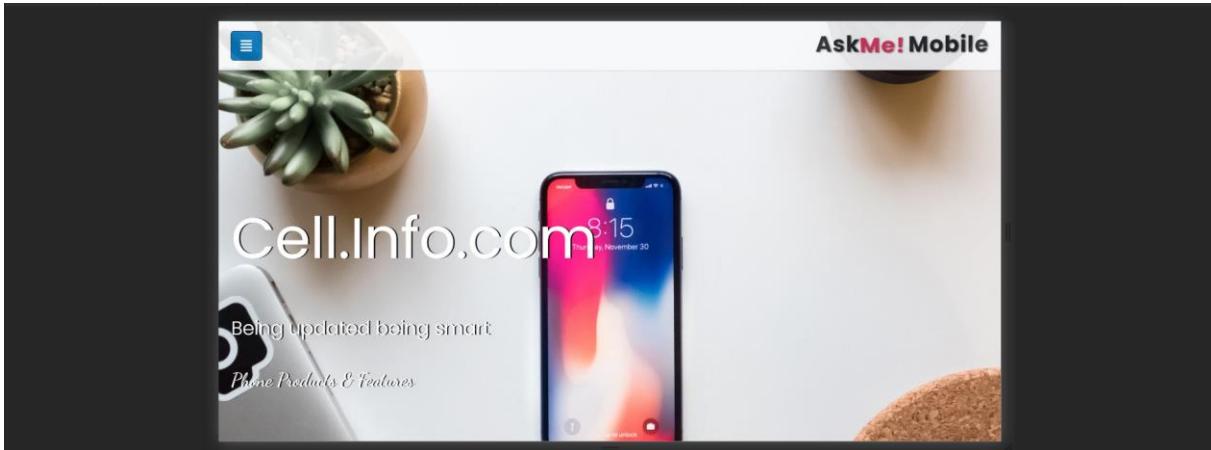
```
File Edit Selection View Go Run Terminal Help
OPEN EDITORS index.html # style.css # script.js
E-project-2020 > css > style.css - ...
71 button#sidebarCollapse {
    572     display: flex;
    573     padding: 2px 5px;
    574     background: #d8345f;
    575 }
    576 }
    577
    578 .nav-icon {
    579     width: 30px;
    580 }
    581
    582 .nav-icon:after, .nav-icon:before, .nav-icon div {
    583     background-color: #fff;
    584     border-radius: 3px;
    585     content: '';
    586     display: block;
    587     height: 3px;
    588     margin: 4px 0;
    589     transition: all .2s ease-in-out;
    590 }
    591
    592 .nav-icon:hover:before {
    593     transform: translateY(7px) rotate(135deg);
    594 }
    595
    596 .nav-icon:hover:after {
    597     transform: translateY(-7px) rotate(-135deg);
    598 }
    599
    600 .nav-icon:hover div {
    601     transform: scale(0);
    602 }
```

jQuery to toggle class “in” which will move side panel to the left by 250px

JS code:

```
File Edit Selection View Go Run Terminal Help
OPEN EDITORS index.html # style.css # script.js
E-project-2020 > js > script.js - ...
4 const loader = document.querySelector(".loader");
5 loader.className += " hidden"; // class "loader hidden"
6 });
7
8 $(document).ready(function () {
9     //Script to toggle sidebar menu
10    $("#sidebar").mCustomScrollbar({
11        theme: "minimal"
12    });
13
14    $('#sidebarCollapse').on('click', function () {
15        $('#sidebar, #content').toggleClass('active');
16        $('.collapse.in').toggleClass('in');
17        $('.aria-expanded=true]').attr('aria-expanded', 'false');
18    });
19
20    //Close side bar button @ certain window width
21    $(window).resize(function (event) {
22        if (window.matchMedia('(max-width: 768px)').matches) {
23            $('#sidebarCollapse').prop('disabled', true);
24            $('#sidebar, #content').removeClass('active');
25        }
26        if (window.matchMedia('(min-width: 769px)').matches) {
27            $('#sidebarCollapse').prop('disabled', false);
28        }
29    });
30
31    // Searching function for modal
32
33    // Searching function for modal
34
35
```

The side panel will automatically turn off and replaced by top navigation bar when the window view is less than 992px, this function is to help with responsiveness when browsing on mobile devices and tablets.



A screenshot of a mobile web browser displaying the Cell.Info.com website. The page features a large potted succulent at the top, followed by the text "Cell.Info.com" and "Being updated being smart". Below this is a section titled "Phone Products & Features". A smartphone is shown on the right side of the screen. The top navigation bar includes a hamburger menu icon, the text "AskMe! Mobile", and the time "8:15".

Visual Studio Code interface showing the script.js file:

```

File Edit Selection View Go Run Terminal Help
OPEN EDITORS
E-project-2020 index.html
PHANTOM
C_Programming
E-project-2020
css
about.css
headline_animation.css
pin_animation.css
products.css
docs
font
img
js
background_animation.js
gallery_filter.js
light_beams_animation.js
script.js
search_bar.js
mp4
product_details
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products.css
img
products.js
detail_phone_11_max.html
detail_phone_11_min.html
detail_phone_12_max.html
detail_phone_12_min.html
detail_phone_13_max.html
detail_phone_13_min.html
detail_nokia_2_max.html
detail_nokia_2_min.html
detail_nokia_3_max.html
detail_nokia_3_min.html
detail_nokia_5_2019_max.html
detail_nokia_5_2019_min.html
detail_nokia_c3.html
detail_samsung_A21.html
detail_samsung_A31.html
detail_samsung_M31.html
detail_samsung_M31_min.html
detail_samsung_S20_Fan.html
detail_samsung_Z_Fold_2.html
detail_samsung_Z_Fold_2_min.html
outline
timeline
NPM SCRIPTS
Yester

```

```

script.js - ready() callback > responsive > 700 > items
File Edit Selection View Go Run Terminal Help
OPEN EDITORS
E-project-2020 index.html
PHANTOM
C_Programming
E-project-2020
css
about.css
headline_animation.css
pin_animation.css
products.css
docs
font
img
js
background_animation.js
gallery_filter.js
light_beams_animation.js
script.js
search_bar.js
mp4
product_details
css
products.css
img
products.js
detail_phone_11_max.html
detail_phone_11_min.html
detail_phone_12_max.html
detail_phone_12_min.html
detail_phone_13_max.html
detail_phone_13_min.html
detail_nokia_2_max.html
detail_nokia_2_min.html
detail_nokia_3_max.html
detail_nokia_3_min.html
detail_nokia_5_2019_max.html
detail_nokia_5_2019_min.html
detail_nokia_c3.html
detail_samsung_A21.html
detail_samsung_A31.html
detail_samsung_M31.html
detail_samsung_M31_min.html
detail_samsung_S20_Fan.html
detail_samsung_Z_Fold_2.html
detail_samsung_Z_Fold_2_min.html
outline
timeline
NPM SCRIPTS
Yester

```

```

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36
37
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39
40
41
42
43
44
/*
----- Side bar menu Toggle on/off function -----
//Javascript to toggle sidebar menu
$("#sidebar").mCustomScrollbar({
    theme: "minimal"
});

$('#sidebarCollapse').on('click', function () {
    $('#sidebar, #content').toggleClass('active');
    $('.collapse-in').toggleClass('in');
    $('a[aria-expanded=true]').attr('aria-expanded', 'false');

});;

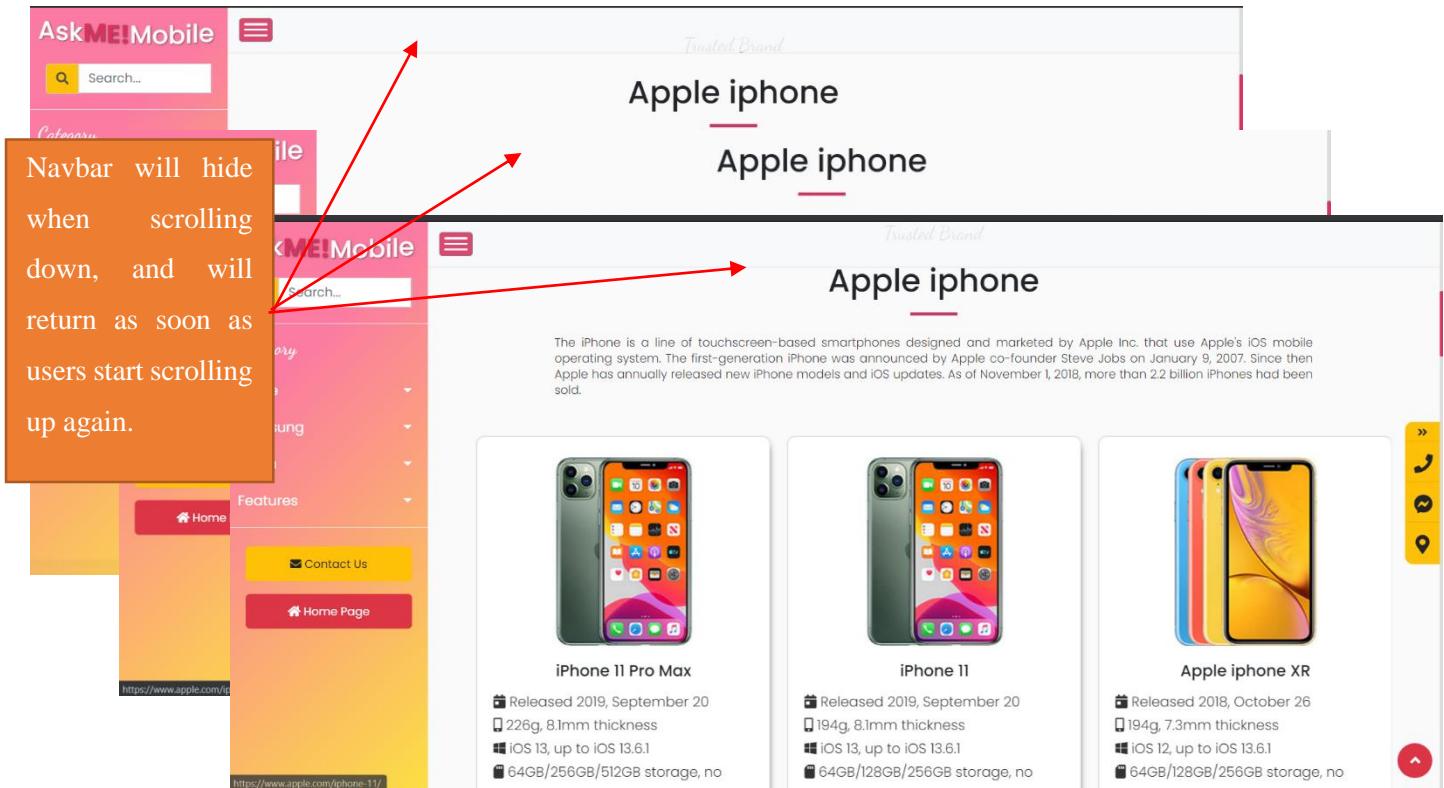
//Close side bar button @ certain window width
$(window).resize(function (event) {
    if (window.matchMedia('(max-width: 992px)').matches) {
        $('#sidebarCollapse').prop('disabled', true);
        $('#sidebarCollapse').addClass('d-none');
        $('#sidebar, #content').removeClass('active');
    }
    if (window.matchMedia('(min-width: 993px)').matches) {
        $('#sidebarCollapse').prop('disabled', false);
        $('#sidebarCollapse').removeClass('d-none');
    }
}).resize();

/*
----- Table filter for tabular information in modal 1 to mo

```

jQuery selector to add 'disable' property to the hamburger button. Note that we already used @media queries to handle screen responsive in CSS. For more information about the CSS, refer to 8.4.3

8.2.2 Navbar Auto hide on scroll



JS code:

```
File Edit Selection View Go Run Terminal Help
DOSLER ...
OPEN EDITORS ...
E-project-2020 > js > script.js ...
312 }
313
314 function toggleCalltoClick() {
315   if ($(window).scrollTop() == 0) {
316     $('.CTA_chat , .CTA_chat > a').fadeOut("slow");
317   }
318   else {
319     $('.CTA_chat , .CTA_chat > a').fadeIn("slow");
320   }
321 }
322
323 // hiding navbar when scroll
324
325 var prevScrollpos = window.pageYOffset;
326 window.onscroll = function () {
327   var currentScrollPos = window.pageYOffset;
328   if (prevScrollpos > currentScrollPos) {
329     document.getElementById("navbar").style.top = "0";
330   } else {
331     document.getElementById("navbar").style.top = "-100px";
332   }
333   prevScrollpos = currentScrollPos;
334 }
335
336 // Contact Us Video function
337 function deferVideo() {
338
339   //defer html5 video loading
400   $("video source").each(function () {
401     var sourceFile = $(this).attr("data-src");
402     $(this).attr("src", sourceFile);
403     var video = this.parentElement;
```

8.3 Side Panel / Side navbar

8.3.1 Search Bar & Searching Algorithm

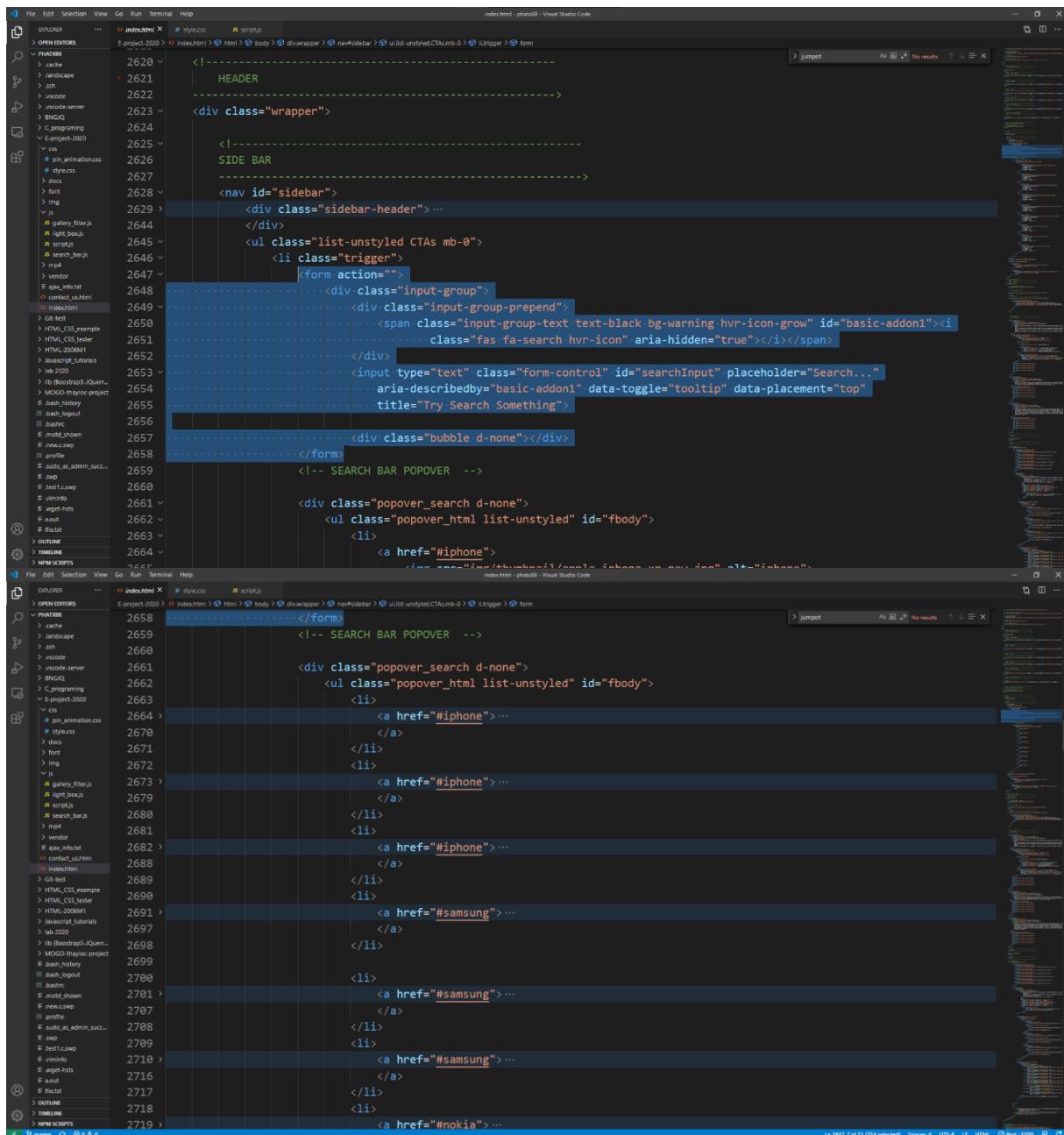
The image consists of two screenshots of a mobile application interface. Both screenshots show a search bar at the top left with a placeholder "Try Search Something". A red arrow points from the text "Similar to a Popover in Bootstrap. We created a custom Div to contain a list of product items. The custom “popup” is hidden and will show only when users start typing. User can use enter/exit key or clicking outside over body to “hide” the “popup” window." to the dropdown menu. Another red arrow points from the text "Then after filling a few keywords, a JS algorithm will start to filter out any list items that is not a match and hide it." to the second screenshot where the dropdown menu only shows Apple-related products.

Similar to a Popover in Bootstrap. We created a custom Div to contain a list of product items. The custom “popup” is hidden and will show only when users start typing. User can use enter/exit key or clicking outside over body to “hide” the “popup” window.

Then after filling a few keywords, a JS algorithm will start to filter out any list items that is not a match and hide it.

Category	Product	Price	Original Price	Status
Apple	Apple iPhone XR	\$699	\$599	Reduced \$100
Samsung	Apple iPhone SE 2020	\$999	\$799	Reduced \$200
Nokia	Apple iPhone Pro Max	\$1099	\$999	Reduced \$100
Features	Samsung Galaxy A31	\$699	\$599	Reduced \$100
	Samsung Note 20 Ultra	\$999	\$799	Reduced \$200
	Samsung Galaxy S20 5G	\$1099	\$999	Reduced \$100
	Nokia 5.3	\$699	\$599	Reduced \$100
	Nokia 7.2			

HTML code:



The screenshot shows two tabs of HTML code in Visual Studio Code. Both tabs are titled "index.html".

Top Tab (Line 2648 to 2657):

```
<!-- SEARCH BAR POPOVER -->  
  
<div class="popover_search d-none">  
  <ul class="popover_html list-unstyled" id="fbody">  
    <li>  
      <a href="#iphone">...</a>  
    </li>  
    <li>  
      <a href="#iphone">...</a>  
    </li>  
    <li>  
      <a href="#samsung">...</a>  
    </li>  
    <li>  
      <a href="#samsung">...</a>  
    </li>  
    <li>  
      <a href="#nokia">...</a>  
    </li>  
  </ul>  
</div>
```

Bottom Tab (Line 2658 to 2719):

```
<!-- SEARCH BAR POPOVER -->  
  
<div class="popover_search d-none">  
  <ul class="popover_html list-unstyled" id="fbody">  
    <li>  
      <a href="#iphone">...</a>  
    </li>  
    <li>  
      <a href="#iphone">...</a>  
    </li>  
    <li>  
      <a href="#samsung">...</a>  
    </li>  
    <li>  
      <a href="#samsung">...</a>  
    </li>  
    <li>  
      <a href="#nokia">...</a>  
    </li>  
  </ul>  
</div>
```

CSS code:

```

File Edit Selection View Go Run Terminal Help
E:\project-2020\css>#style.css > #scripts >
471 /*
472  * POP Up Search
473  -----
474  /* FIX SEARCH BAR OVERFLOWN */
475
476  #sidebar * {
477      overflow: visible;
478  }
479
480  #sidebar ul.components * {
481      overflow: hidden;
482  }
483
484  /* END FIX SEARCH BAR OVERFLOWN */
485
486  .container_search {
487      position: relative;
488  }
489
490  .popover_search {
491      width: 300px;
492      position: absolute;
493      left: 10%;
494      top: -30px;
495      background-color: white;
496  }
497
498  .bubble:after {
499      content: '';
500      position: absolute;
501      width: 0;
502      height: 0;
503      border-style: solid;
504      border-color: transparent #fffffe;
505      border-width: 15px 15px 15px 0;
506      left: 103%;
507      top: 25px;
508      margin-top: -20px;
509  }
510
511  .popover_over_html li a {
512      position: absolute;
513      display: block;
514      width: 0;
515      z-index: 1;
516      border-style: solid;
517      border-color: transparent #fffffe;
518      border-width: 15px 15px 15px 0;
519      left: 103%;
520      top: 25px;
521      margin-top: -20px;
522  }
523
524  .popover_over_html li a img {
525      width: 60px;
526      height: auto;
527      float: left;
528      margin: 0 6px 0 0;
529  }
530
531  .popover_over_html li a h3 {
532
533

```

“popup” window is in position absolute to the left of parent “search” div. We encounter “overflown” problem because the main root element side panel prevent all child elements to be wider than parent’s element. The following code is to address this problem

JS code:

```
1 //SEARCH BAR PART 1 - CODE TO HANDLE SEARCH/FILTER FUNCTION ON SEARCH BAR
2
3 // INITIATE FILTER FUNCTION ON EVENT KEY DOWN
4 $("#searchInput").keydown(function () {
5     //split the current value of searchInput
6     var data = this.value.toUpperCase().split(" ");
7     //create a jquery object of the rows
8     var jo = $("#body").find("li");
9     if (this.value == "") {
10         jo.show();
11         return;
12     }
13     //hide all the rows
14     jo.hide();
15
16     //Recursively filter the jquery object to get results.
17     jo.filter(function (i, v) {
18         var $t = $(this);
19         for (var d = 0; d < data.length; ++d) {
20             if ($t.text().toUpperCase().indexOf(data[d]) > -1) {
21                 return true;
22             }
23         }
24         return false;
25     }).show();
26
27 }).focus(function () {
28
29     this.value = "";
30     $(this).css({ "color": "black" });
31     $(this).unbind('focus');
32 });
33
34
35 //SEARCH BAR PART 2 - CODE TO HANDLE ENTER/EXIT KEY ON BUBBLE
```

Part 1:

Algorithm to take input key, transfer to Uppercase value and start matching with value in “li”.

It will hide all li, only show those that match keywords.

```
31     $(this).unbind('focus');
32 }).css({ "color": "#C0C0C0" });
33
34
35 //SEARCH BAR PART 2 - CODE TO HANDLE ENTER/EXIT KEY ON BUBBLE
36
37 $("#searchInput").keyup(function (e) {
38     e.preventDefault();
39     var keycode = (e.keyCode ? e.keyCode : e.which);
40     $('.popover_search').removeClass('d-none');
41     $('.bubble').removeClass('d-none');
42     if ($(this).val() == "") {
43         close_search();
44     }
45     if (keycode == "27") {
46         close_search();
47     }
48 });
49
50 //Exit search bar when click on body
51 $(document).mouseup(e => {
52     if (!( $('#searchInput').is(e.target) // if the target of the click isn't the container...
53       && !$('.popover_search').is(e.target)) // ... nor a descendant of the container
54     ) {
55         close_search();
56     }
57 });
58
59 function close_search() {
60     $('.popover_search').addClass('d-none');
61     $('.bubble').addClass('d-none');
```

Part 2:

Is to handle enter and exit keys, it determines which input on keyboard and mouse to toggle the “popup” window.

8.3.2 Drop Down Menus

The image displays three screenshots of mobile websites illustrating the implementation of drop-down menus and call-to-action (CTA) buttons.

Screenshot 1: A mobile website for "AskME! Mobile". The top navigation bar includes a search bar and a menu icon. The left sidebar, titled "Category", contains a drop-down menu for "Apple" which lists various iPhone models: iPhone XR, iPhone SE (2020), iPhone 11, iPhone 11 Pro, iPhone 11 Pro Max, and iPhone 11 Pro Max. A red arrow points from the text "Drop down menu is built upon Bootstrap framework, it will have similar structure as standard Bootstrap navigation bar. Clicking the Nav-link item will trigger scrolling animation toward the desired anchor link." to the "Apple" category dropdown.

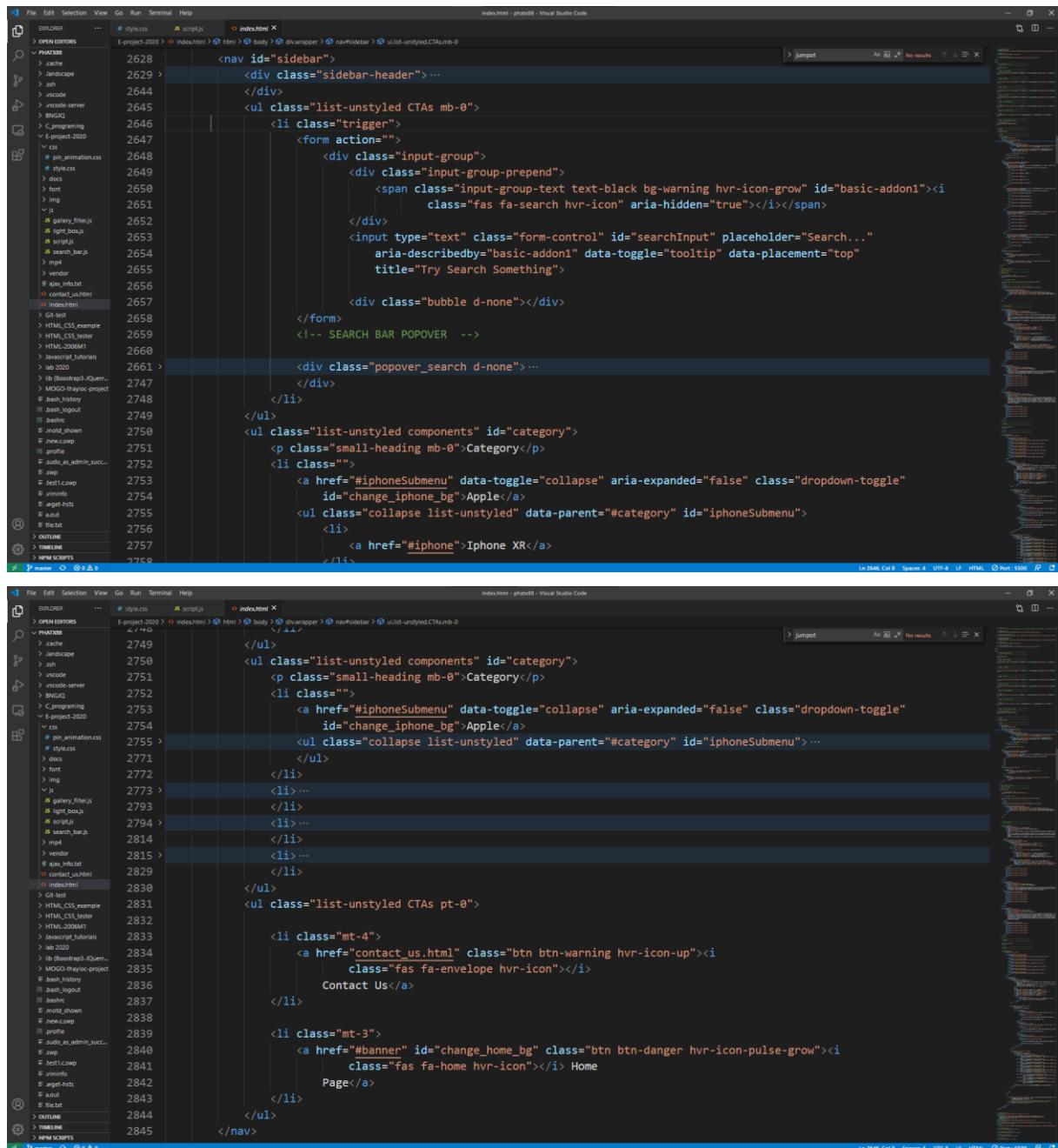
Screenshot 2: Another view of the "AskME! Mobile" website. The "Apple" category dropdown is open, showing the same list of iPhone models. A red arrow points from the text "Drop down menu is built upon Bootstrap framework, it will have similar structure as standard Bootstrap navigation bar. Clicking the Nav-link item will trigger scrolling animation toward the desired anchor link." to the "Apple" category dropdown.

Screenshot 3: A mobile website for "Cell.Info.com". The top navigation bar includes a search bar and a menu icon. The left sidebar, titled "Category", contains a CTA button labeled "Home Page". A red arrow points from the text "CTA buttons to navigate between the pages." to the "Home Page" button.

Text Overlay:

- Drop down menu is built upon Bootstrap framework, it will have similar structure as standard Bootstrap navigation bar. Clicking the Nav-link item will trigger scrolling animation toward the desired anchor link.
- CTA buttons to navigate between the pages.

HTML code:



```
<nav id="sidebar">
  <div class="sidebar-header">...
  </div>
  <ul class="list-unstyled CTAs mb-0">
    <li class="trigger">
      <form action="">
        <div class="input-group">
          <div class="input-group-prepend">
            <span class="input-group-text text-black bg-warning hvr-icon-grow" id="basic-addon1"><i class="fas fa-search hvr-icon" aria-hidden="true"></i></span>
          </div>
          <input type="text" class="form-control" id="searchInput" placeholder="Search..." aria-describedby="basic-addon1" data-toggle="tooltip" data-placement="top" title="Try Search Something" style="outline: none; border: 1px solid #ccc; border-radius: 10px; padding: 10px; width: 300px; height: 40px; font-size: 16px; font-weight: bold; font-family: inherit; margin-left: 10px; margin-top: 10px; margin-bottom: 10px; margin-right: 10px; transition: all 0.3s ease;"/>
        </div>
        <div class="bubble d-none"></div>
      </form>
      <!-- SEARCH BAR POPOVER -->
      <div class="popover_search d-none">
        <div class="arrow" style="width: 10px; height: 10px; background-color: transparent; border: 1px solid #ccc; border-radius: 50%; position: absolute; left: -10px; top: 50%; transform: rotate(45deg);></div>
        <div class="content">
          <ul class="list-unstyled components" id="category">
            <p class="small-heading mb-0">Category</p>
            <li class="">
              <a href="#iphoneSubmenu" data-toggle="collapse" aria-expanded="false" class="dropdown-toggle" id="change_iphone_bg">Apple</a>
              <ul class="collapse list-unstyled" data-parent="#category" id="iphoneSubmenu">
                <li>
                  <a href="#">Iphone XR</a>
                </li>
                <li>
                  <a href="#">Iphone 11</a>
                </li>
                <li>
                  <a href="#">Iphone 12</a>
                </li>
                <li>
                  <a href="#">Iphone 13</a>
                </li>
              </ul>
            </li>
          </ul>
          <ul class="list-unstyled components" id="category">
            <p class="small-heading mb-0">Category</p>
            <li class="">
              <a href="#iphoneSubmenu" data-toggle="collapse" aria-expanded="false" class="dropdown-toggle" id="change_iphone_bg">Apple</a>
              <ul class="collapse list-unstyled" data-parent="#category" id="iphoneSubmenu">
                <li>
                  <a href="#">Iphone XR</a>
                </li>
                <li>
                  <a href="#">Iphone 11</a>
                </li>
                <li>
                  <a href="#">Iphone 12</a>
                </li>
                <li>
                  <a href="#">Iphone 13</a>
                </li>
              </ul>
            </li>
          </ul>
          <ul class="list-unstyled CTAs pt-0">
            <li class="mt-4">
              <a href="contact_us.html" class="btn btn-warning hvr-icon-up"><i class="fas fa-envelope hvr-icon"></i> Contact Us</a>
            </li>
            <li class="mt-3">
              <a href="#" id="change_home_bg" class="btn btn-danger hvr-icon-pulse-grow"><i class="fas fa-home hvr-icon"></i> Home Page</a>
            </li>
          </ul>
        </div>
      </div>
    </li>
  </ul>
</nav>
```

CSS code:

The image shows two screenshots of the Visual Studio Code interface, both displaying the file `style.css`. The left screenshot shows lines 360 to 390, which define the `.wrapper` class and the `#sidebar` element. The right screenshot shows lines 392 to 423, which further style the sidebar's components like `.components`, `p`, `li`, and `a` elements.

```
360 /* -----  
361 | SIDEBAR STYLE  
362 | ----- */  
363  
364 .wrapper {  
365   display: flex;  
366   width: 100%;  
367 }  
368  
369 #sidebar {  
370   width: 250px;  
371   position: fixed;  
372   top: 0;  
373   left: 0;  
374   height: 100vh;  
375   z-index: 998;  
376   /* background: #7386D5; */  
377   /* background-image: linear-gradient(to bottom right, #50A7C2, #B7F8DB); */  
378   background-color: #fca043;  
379   background-image: linear-gradient(315deg, #fce043 0%, #fb7ba2 74%);  
380   color: #fff;  
381   transition: all 0.3s;  
382 }  
383  
384 #sidebar.active {  
385   margin-left: -250px;  
386 }  
387  
388 #sidebar .sidebar-header {  
389   padding: 10px;  
390   /* background: #6d7fcc; */  
391 }  
392 }  
393  
394 /* #sidebar .sidebar-header span {  
395   color: #d8345f;  
396   font-size: 1.2em;  
397 } */  
398  
399 #sidebar ul.components {  
400   padding: 0px 0px;  
401   padding-bottom: 10px;  
402   border-bottom: 1px solid #white;  
403   border-top: 1px solid #white;  
404 }  
405  
406 #sidebar ul p {  
407   color: #fff;  
408   padding: 10px;  
409 }  
410  
411 #sidebar ul li a {  
412   padding: 10px;  
413   font-size: 1.1em;  
414   display: block;  
415 }  
416  
417 #sidebar ul li a:hover {  
418   color: #fb7ba2;  
419   background: #fff;  
420 }  
421  
422 #sidebar ul li.active>a, a[aria-expanded="true"] {  
423   color: #fff.
```

```

File Edit Selection View Go Run Terminal Help
OPEN EDITORS
E-project-2020>css>#style.css > script.js > index.html
421
422 #sidebar ul li.active>a, a[aria-expanded="true"] {
423   color: #fff;
424   /* background: #6d7fcc; */
425 }
426
427 a[data-toggle="collapse"] {
428   position: relative;
429 }
430
431 .dropdown-toggle::after {
432   display: block;
433   position: absolute;
434   top: 50%;
435   right: 20px;
436   transform: translateY(-50%);
437 }
438
439 ul ul a {
440   font-size: 0.9em !important;
441   padding-left: 30px !important;
442   /* background: #6d7fcc; */
443 }
444
445 ul.CTAs {
446   padding: 20px;
447 }
448
449 ul.CTAs a {
450   text-align: center;
451   font-size: 0.9em !important;
452 }

```

JS code:

```

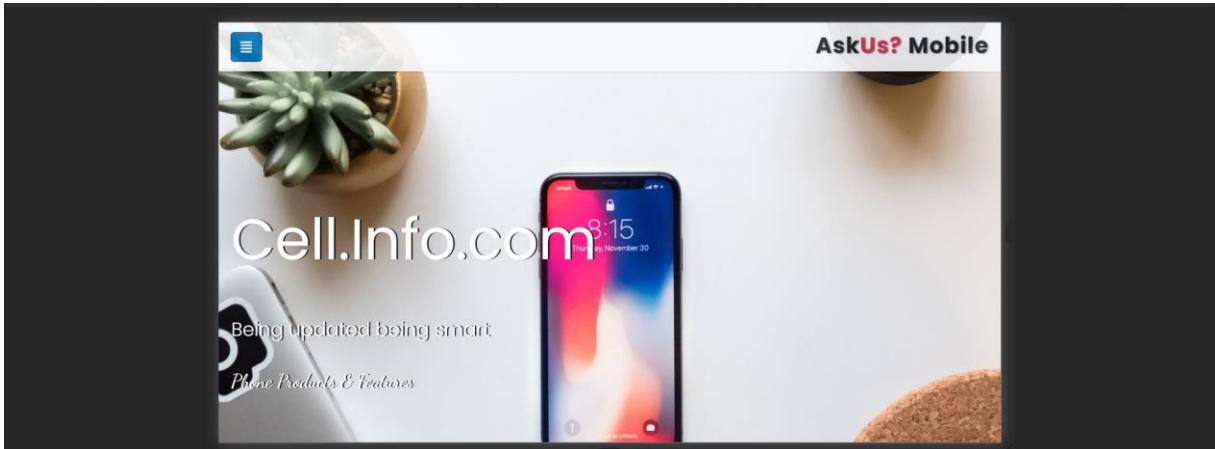
File Edit Selection View Go Run Terminal Help
OPEN EDITORS
E-project-2020>js>script.js > index.html
4 const loader = document.querySelector(".loader");
5 loader.className += " hidden"; // class "loader hidden"
6 });
7
8 $(document).ready(function () {
9
10   //Javascript to handle sidebar menu
11   $("#sidebar").mCustomScrollbar({
12     theme: "minimal"
13   });
14
15   $('#sidebarCollapse').on('click', function () {
16     $('#sidebar, #content').toggleClass('active');
17     $('.collapse.in').toggleClass('in');
18     $('a[aria-expanded=true]').attr('aria-expanded', 'false');
19   });
20
21   //Close side_bar button @ certain window width
22   $(window).resize(function (event) {
23     if (window.matchMedia('(max-width: 768px)').matches) {
24       $('#sidebarCollapse').prop('disabled', true);
25       $('#sidebar, #content').removeClass('active');
26     }
27     if (window.matchMedia('(min-width: 769px)').matches) {
28       $('#sidebarCollapse').prop('disabled', false);
29     }
30   });
31
32   // Searching function for modal
33
34

```

Dropdown menu use the standard code template from Bootstrap 4 to open/close dropdown items.

8.3.3 Side Panel Responsiveness on smaller screen

The side panel will close automatically when on medium screen or smaller (width < 992px)



CSS code:

```

File Edit Selection View Go Run Terminal Help
OPEN EDITORS
E-project-2020.css style.css
E-project-2020.css style.css
MEDIAQUERIES
/* -----
@media (max-width: 992px) {
    #sidebar {
        margin-left: -250px;
    }
    #sidebar.active {
        margin-left: 0;
    }
    #content {
        width: 100%;
    }
    #content.active {
        width: calc(100% - 250px);
    }
    #sidebarCollapse {
        display: none;
    }
    button#sidebarCollapse+button {
        margin-left: 0 !important;
    }
    #content div.container-fluid {
        padding-left: 15px;
        padding-right: 15px;
    }
}
----- */

```

CSS and jQuery code triggered on resizing of browser window.

JS code:

```

File Edit Selection View Go Run Terminal Help
OPEN EDITORS
E-project-2020.css style.css
E-project-2020.css style.css
responsive.js
Responsive.js
// Javascript to toggle sidebar menu
$( "#sidebar" ).mCustomScrollbar({
    theme: "minimal"
});

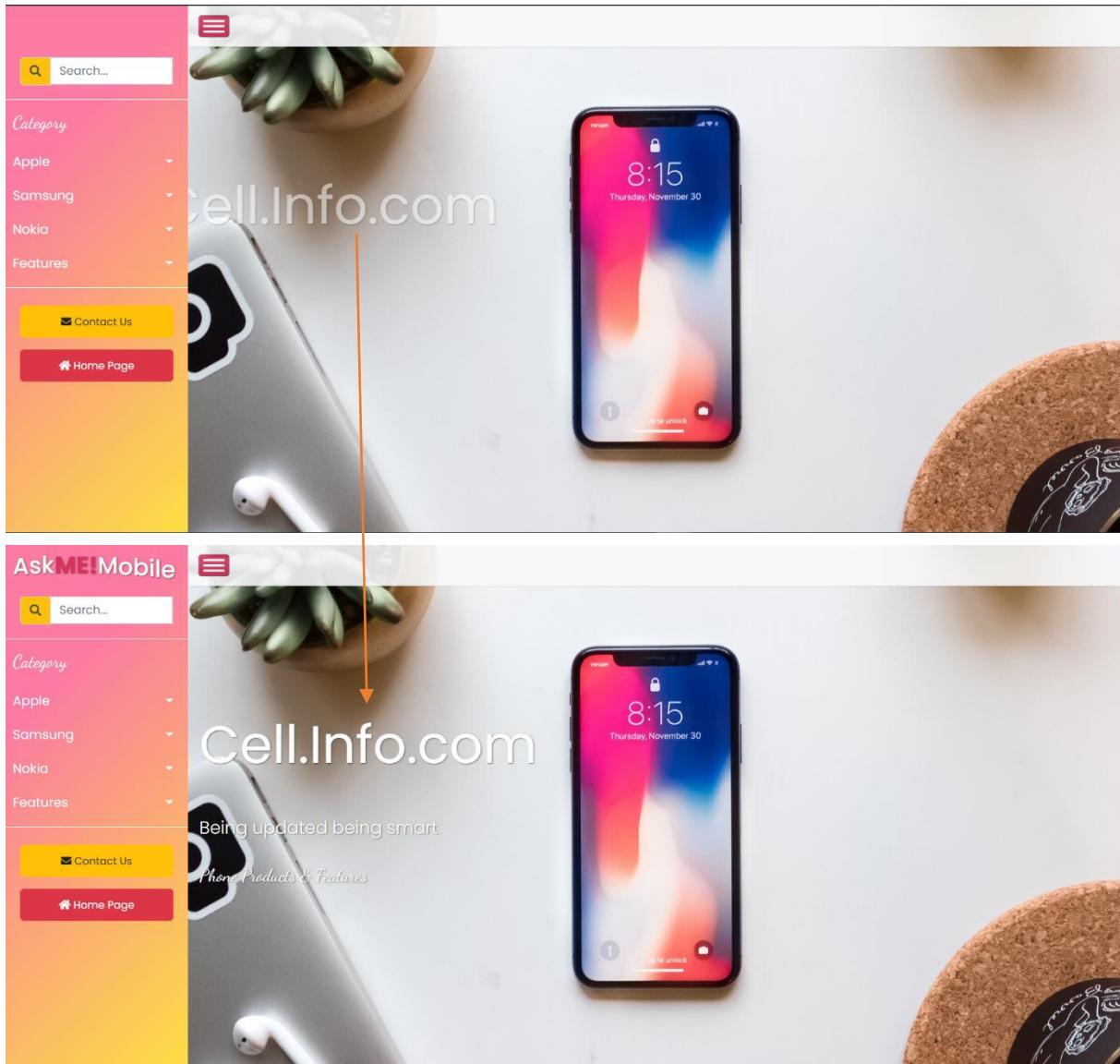
$( "#sidebarCollapse" ).on('click', function () {
    $( '#sidebar, #content' ).toggleClass('active');
    $( '.collapse.in' ).toggleClass('in');
    $( 'a[aria-expanded=true]' ).attr('aria-expanded', 'false');
});

//Close side bar button @ certain window width
$(window).resize(function (event) {
    if (window.matchMedia('(max-width: 992px)').matches) {
        $( "#sidebarCollapse" ).prop('disabled', true);
        $( "#sidebarCollapse" ).addClass('d-none');
        $( "#sidebar, #content" ).removeClass('active');
    }
    if (window.matchMedia('(min-width: 993px)').matches) {
        $( "#sidebarCollapse" ).prop('disabled', false);
        $( "#sidebarCollapse" ).removeClass('d-none');
    }
}).resize();

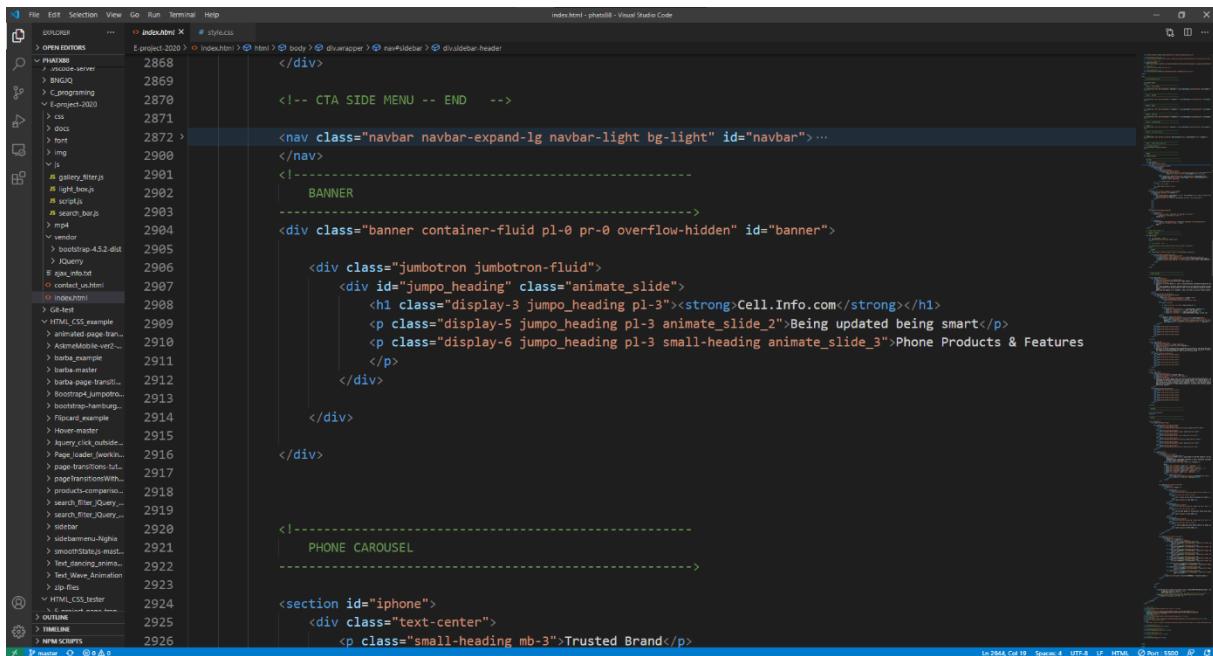
```

8.4 Home Page - Hero Banner –

8.4.1 Header Text Animation



HTML code:

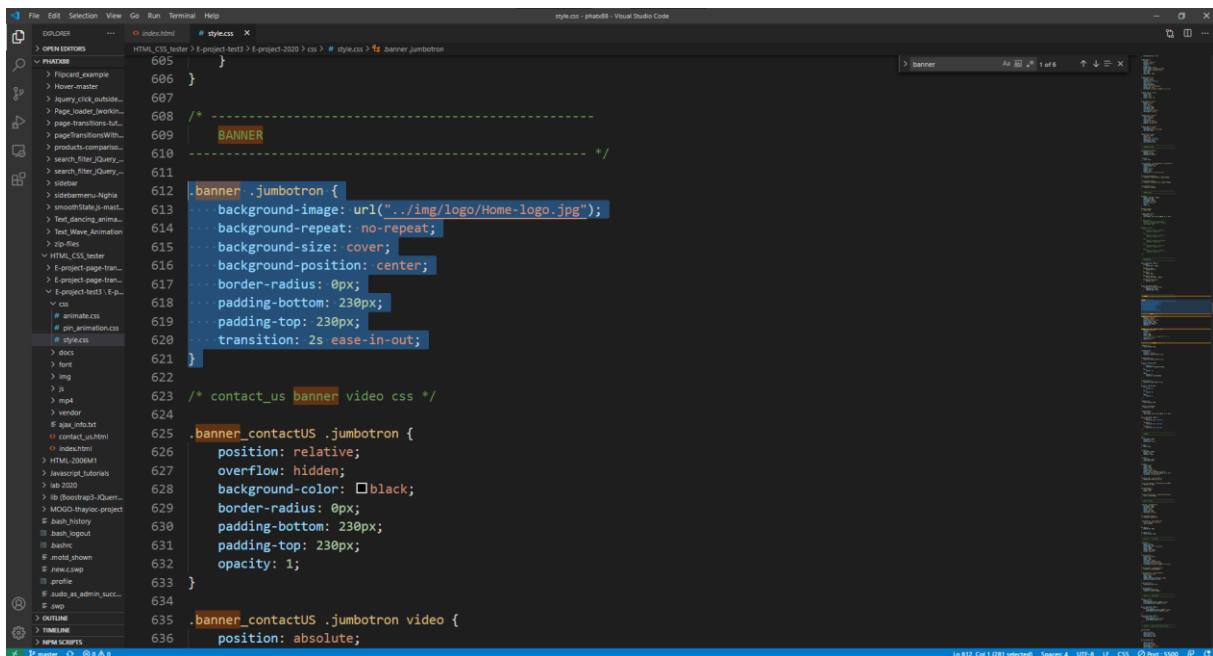


The screenshot shows the Visual Studio Code interface with the file 'index.html' open. The code is a single-line script tag containing the entire HTML document. The code includes a header section with a sidebar, a banner section with a jumbotron, and a phone carousel section.

```
<!-- CTA SIDE MENU -- END -->
<nav class="navbar navbar-expand-lg navbar-light bg-light" id="navbar">...
</nav>
<!-- BANNER
----->
<div class="banner container-fluid pl-0 pr-0 overflow-hidden" id="banner">
  <div class="jumbotron jumbotron-fluid">
    <div id="jumbo_heading" class="animate_slide">
      <h1 class="display-3 jumbo_heading pl-3"><strong>Cell.Info.com</strong></h1>
      <p class="display-5 jumbo_heading pl-3 animate_slide_2">Being updated being smart</p>
      <p class="display-6 jumbo_heading pl-3 small-heading animate_slide_3">Phone Products & Features
    </div>
  </div>
</div>
<!-- PHONE CAROUSEL
----->
<section id="iphone">
  <div class="text-center">
    <p class="small-heading mb-3">Trusted Brand</p>

```

CSS code:



The screenshot shows the Visual Studio Code interface with the file 'style.css' open. The code contains CSS rules for the 'BANNER' section, including background styling and a video player for the iPhone section.

```
/*
----- BANNER -----
*/
.banner .jumbotron {
  background-image: url("../img/logo/Home-logo.jpg");
  background-repeat: no-repeat;
  background-size: cover;
  background-position: center;
  border-radius: 0px;
  padding-bottom: 230px;
  padding-top: 230px;
  transition: 2s ease-in-out;
}

/* contact_us banner video css */
.banner_contactUS .jumbotron {
  position: relative;
  overflow: hidden;
  background-color: black;
  border-radius: 0px;
  padding-bottom: 230px;
  padding-top: 230px;
  opacity: 1;
}

.banner_contactUS .jumbotron video {
  position: absolute;
```

```

.jumbotron h1 {
  margin-bottom: 50px;
}

.animate_slide {
  z-index: 2;
  position: relative;
  animation: mytext_slide 1s ease;
}

.animate_slide_2 {
  animation: mytext_slide 2s ease;
}

@keyframes mytext_slide {
  0% {
    opacity: 0;
    transform: translateX(-250px);
  }
  25% {
    opacity: 0;
  }
  100% {
    opacity: 1;
    transform: translateX(0);
  }
}

.animate_slide_3 {
  animation: mytext_fade 6s ease;
}

```

```

.jumbotron p {
  margin-bottom: 25px;
}

.jumbotron .display-5 {
  font-size: 1.5em;
}

.jumbo_heading {
  color: #fff;
  text-shadow: 1px 1px 2px rgba(0, 0, 0, 0.5);
}

@media (max-width: 768px) {
  .display-3 {
    font-size: 10vw !important;
  }
  .display-5 {
    font-size: 5vw !important;
  }
  .display-6 {

```

8.4.2 Changing Background Image Animation

The image consists of three vertically stacked screenshots of a mobile application interface, likely a smartphone review or news website.

Screenshot 1: The background image shows a black iPhone X on a light-colored surface next to a small potted plant and a cork board. The phone's screen displays the time as 8:15 and the date as Thursday, November 30. The text "Cell.Info.com" is prominently displayed in the center of the image, along with the tagline "Being updated being smart" and "Phone Products & Features".

Screenshot 2: The background image shows a Samsung Galaxy S20 and a Galaxy A21s lying on a light-colored surface. The phones are shown from a slightly elevated angle, highlighting their cameras and designs. The text "SAT, FEBRUARY 24" is visible on the screen of the S20.

Screenshot 3: The background image shows a Samsung Galaxy S20 and a Galaxy A21s lying on a light-colored surface. The phones are shown from a slightly elevated angle, highlighting their cameras and designs. The text "SAT, FEBRUARY 24" is visible on the screen of the S20. The "Samsung" logo is also visible on the back of one of the phones.

Common UI Elements:

- Header:** "AskME! Mobile" logo and a search bar with a magnifying glass icon.
- Navigation:** A vertical sidebar menu titled "Category" with options: Apple, Samsung, Nokia, and Features. Below this are buttons for "Contact Us" and "Home Page".
- Page Number:** "127.0.0.1:5500/E-project-2020/index.html#samsungSubmenu" is visible at the bottom of the second screenshot.

JS code:

```
File Edit Selection View Go Run Terminal Help
DOSLGER ... style.css scripts x
E-project-2020 > js > scripts > lostDot.js
72
73     $("change_iphone_bg").click(function () {
74         var imageUrl =
75             "img/logo/Apple.jpg";
76         $("div#jumpo_heading").children("h1").html("Apple iPhone");
77         $("div#jumpo_heading").find("p:first-of-type").html("think different.");
78         $(".jumbotron").css("background-image", "url(" + imageUrl + ")");
79         $(".jumo_heading").css("color", "#a0a0a0");
80
81         var el = $('#jumpo_heading'),
82             newone = el.clone(true);
83
84         el.before(newone);
85
86         $('. ' + el.attr('class') + ":last").remove();
87     });
88
89     $("change_samsung_bg").click(function () {
90         var imageUrl =
91             "img/logo/samsung-logo.jpg";
92         $("div#jumpo_heading").children("h1").html("Samsung");
93         $("div#jumpo_heading").find("p:first-of-type").html("Turn On Tomorrow");
94         $(".jumbotron").children("h1").empty();
95         $(".jumbotron").css("background-image", "url(" + imageUrl + ")");
96         $(".jumo_heading").css("color", "#054b93");
97
98         var el = $('#jumpo_heading'),
99             newone = el.clone(true);
100
101         el.before(newone);
102
103     });

```

JS code to change

JS code to change image url, and text display

```
103
104     $("#change_nokia_bg").click(function () {
105         var imageUrl =
106             "img/logo/nokia-logo.jpg";
107         $("div#jumpo_heading").children("h1").html("Nokia");
108         $("div#jumpo_heading").find("p:first-of-type").html("Connecting People");
109         $(".jumbotron").css("background-image", "url(" + imageUrl + ")");
110         $(".jumpo_heading").css("color", "#dc7147");
111
112         var el = $('#jumpo_heading'),
113             newone = el.clone(true);
114
115         el.before(newone);
116
117         $('.'+ el.attr('class') + ":last").remove();
118     });
119     $("#change_home_bg").click(function () {
120         var imageUrl =
121             "img/logo/Home-logo.jpg";
122         $("div#jumpo_heading").children("h1").html("Cell.Info.com");
123         $("div#jumpo_heading").find("p:first-of-type").html("Being updated being smart");
124         $(".jumbotron").css("background-image", "url(" + imageUrl + ")");
125         $(".jumpo_heading").css("color", "#fff");
126
127         var el = $('#jumpo_heading'),
128             newone = el.clone(true);
129
130         el.before(newone);
131
132         $('.'+ el.attr('class') + ":last").remove();
133     });
134     $("#change_features_bg").click(function () {
135         var imageUrl =
136             "img/logo/features-banner.jpg";
137
138         var el = $('#features_heading'),
139             newone = el.clone(true);
140
141         el.before(newone);
142
143         $('.'+ el.attr('class') + ":last").remove();
144     });

```

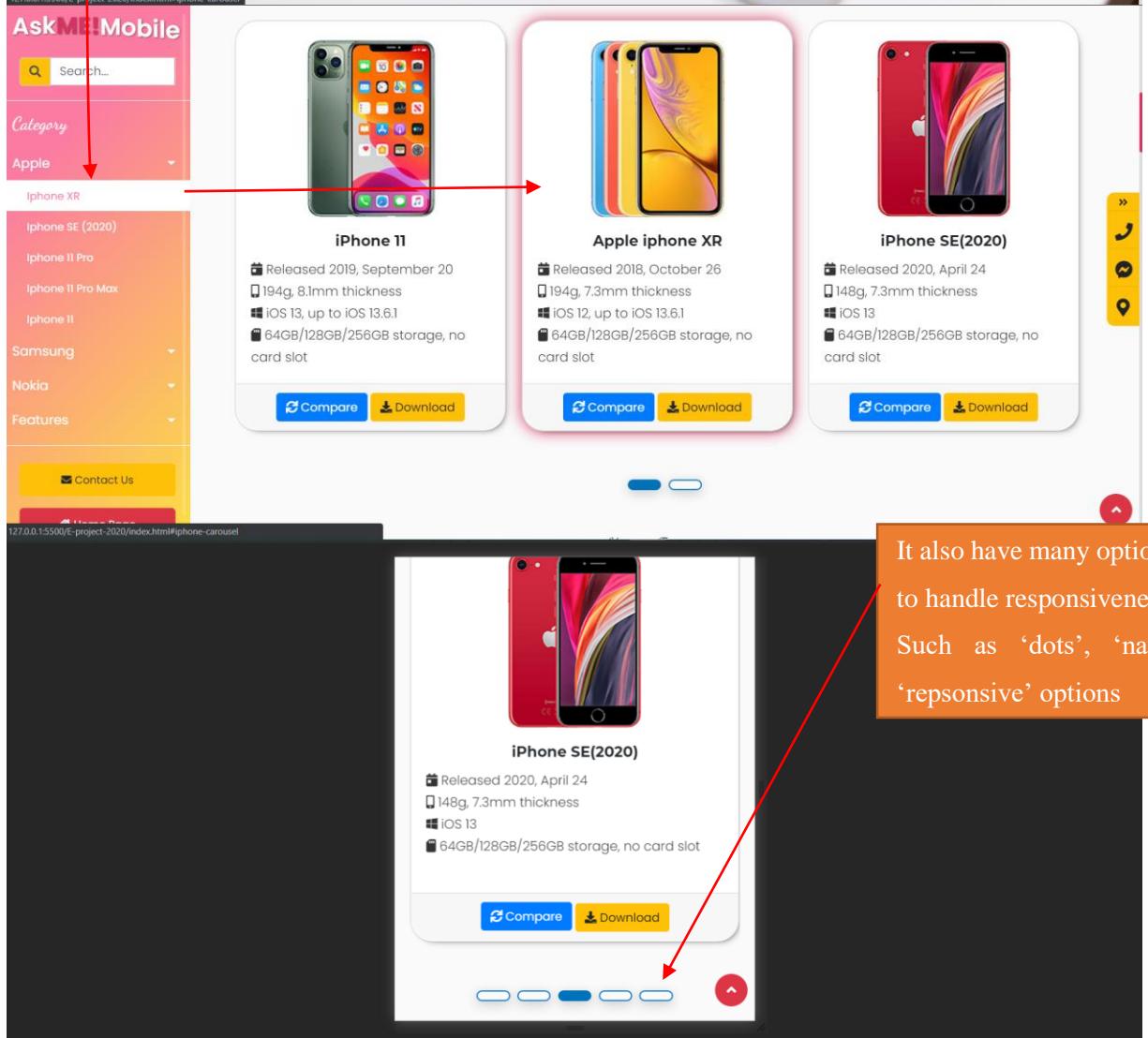
8.5 Home Page - Main Section

8.5.1 Main Section – Owl Carousel

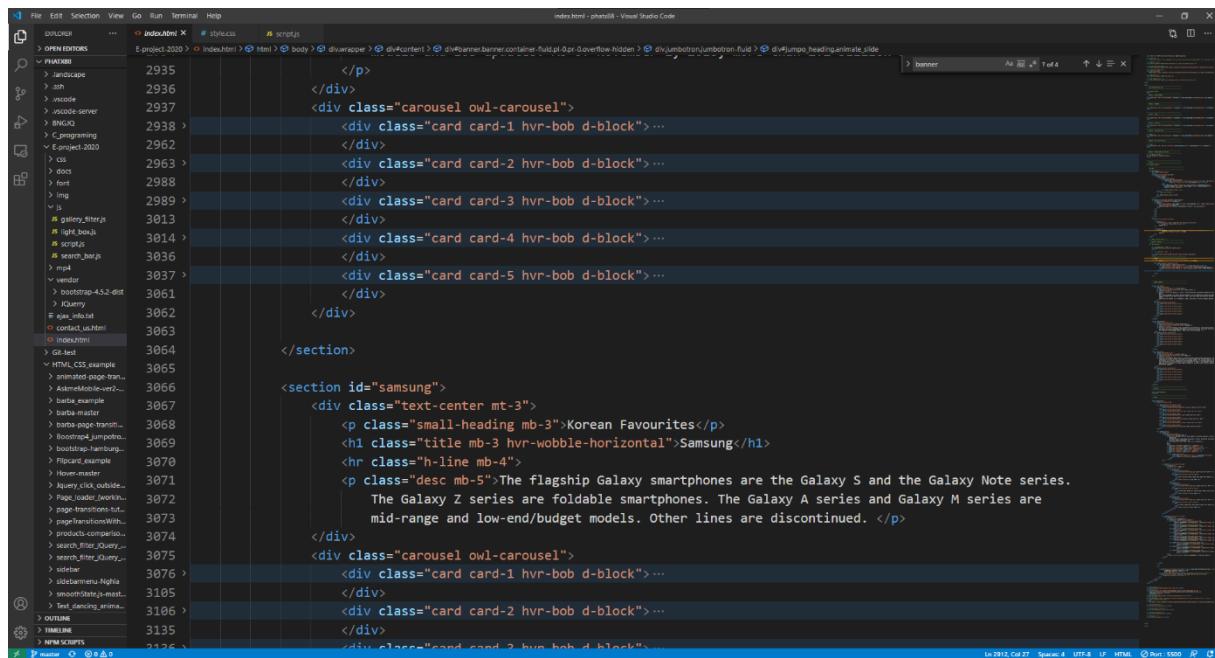
Carousel will move left/right by dragging mouse button. We use owl carousel plugin for our project

The flagships are the Galaxy S and the Galaxy Note series. The Galaxy Z series are foldable smartphones. The Galaxy A series and Galaxy M series are mid-range and low-end/budget models. Other lines are discontinued.

There are 3 items of total of 5 items, the owl carousel will remove last item at the end of the loop and append it at the beginning. This will create an endless loop pictures slide show.



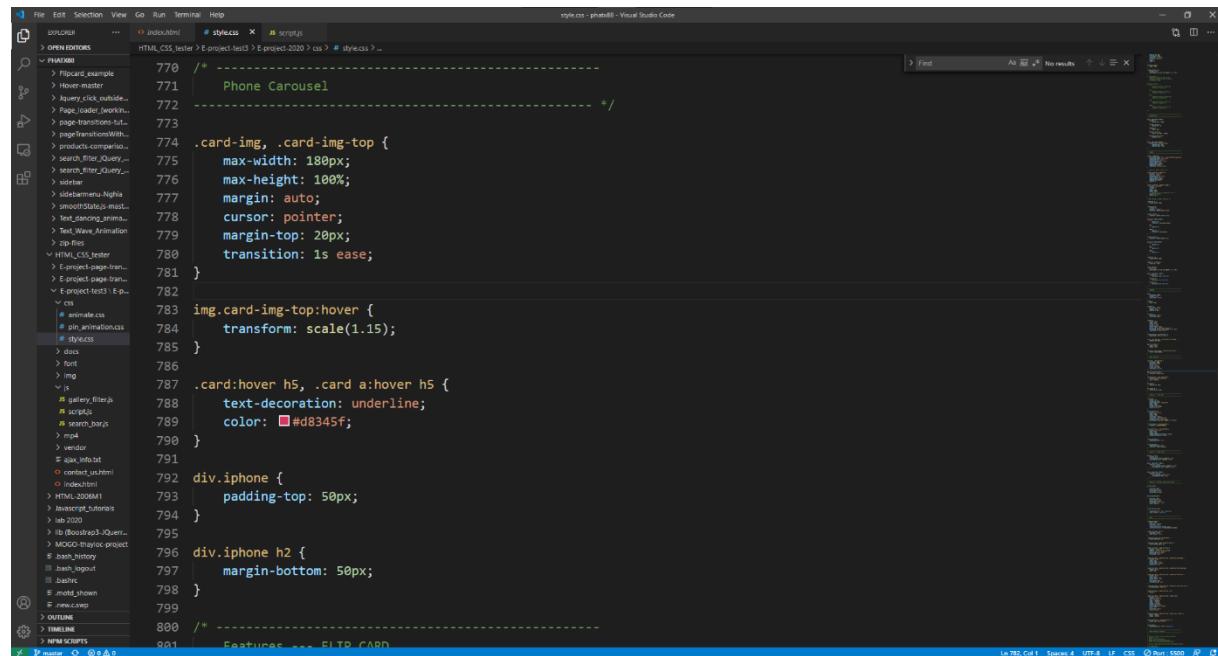
HTML code:



```
</p>
</div>
<div class="carousel owl-carousel">
  <div class="card card-1 hvr-bob d-block">...</div>
  <div class="card card-2 hvr-bob d-block">...</div>
  <div class="card card-3 hvr-bob d-block">...</div>
  <div class="card card-4 hvr-bob d-block">...</div>
  <div class="card card-5 hvr-bob d-block">...</div>
</div>
</section>

<section id="samsung">
  <div class="text-center mt-3">
    <p class="small-heading mb-3">Korean Favourites</p>
    <h1 class="title mb-3 hvr-wobble-horizontal">Samsung</h1>
    <br class="h-line mb-4">
    <p class="desc mb-5">The flagship Galaxy smartphones are the Galaxy S and the Galaxy Note series. The Galaxy Z series are foldable smartphones. The Galaxy A series and Galaxy M series are mid-range and low-end/budget models. Other lines are discontinued. </p>
  </div>
  <div class="carousel owl-carousel">
    <div class="card card-1 hvr-bob d-block">...</div>
    <div class="card card-2 hvr-bob d-block">...</div>
    <div class="card card-3 hvr-bob d-block">...</div>
  </div>
</section>
```

CSS code:



```
/* -----
Phone Carousel
----- */

.card-img, .card-img-top {
  max-width: 180px;
  max-height: 100%;
  margin: auto;
  cursor: pointer;
  margin-top: 20px;
  transition: 1s ease;
}

img.card-img-top:hover {
  transform: scale(1.15);
}

.card:hover h5, .card a:hover h5 {
  text-decoration: underline;
  color: #d8345f;
}

div.iphone {
  padding-top: 50px;
}

div.iphone h2 {
  margin-bottom: 50px;
}

/* -----
```

JS code:

```
// Own carousel custom script
$( ".carousel" ).owlCarousel({
    margin: 20,
    loop: true,
    autoplay: true,
    autoplayTimeout: 5000,
    autoplayHoverPause: true,
    responsive: {
        0: {
            items: 1,
            nav: false
        },
        600: {
            items: 2,
            nav: false
        },
        1000: {
            items: 3,
            nav: false
        }
    }
});

// Changing background image on jumptron
```

Owl Carousel to set
custom sliding time

```
// Custom code to Match dropdown menu with carousel item --start
var carousel = $("#iphone-carousel");
$("#iphoneSubmenu li:nth-child(1) a").click(function (e) {
    e.preventDefault();
    carousel.trigger("to.owl.carousel", [0, 500, true]);
    //adding glowing animation to selected card and remove others
    $('a').not(this).removeClass('active');
    $(this).addClass('active');
    $('div').not('#iphone-carousel > div.card-1').removeClass('glow');
    $('#iphone-carousel div.card-1').addClass('glow');
});
$("#iphoneSubmenu li:nth-child(2) a").click(function (e) {
    e.preventDefault();
    carousel.trigger("to.owl.carousel", [1, 500, true]);
    $('a').not(this).removeClass('active');
    $(this).addClass('active');
    $('div').not('#iphone-carousel > div.card-2').removeClass('glow');
    $('#iphone-carousel div.card-2').addClass('glow');
});
$("#iphoneSubmenu li:nth-child(3) a").click(function (e) {
    e.preventDefault();
    carousel.trigger("to.owl.carousel", [2, 500, true]);
    $('a').not(this).removeClass('active');
    $(this).addClass('active');
    $('div').not('#iphone-carousel > div.card-3').removeClass('glow');
    $('#iphone-carousel div.card-3').addClass('glow');
});
$("#iphoneSubmenu li:nth-child(4) a").click(function (e) {
    e.preventDefault();
    carousel.trigger("to.owl.carousel", [3, 500, true]);
});
```

We use “to.owl.carousel” to move slide to certain position, it creates an effect of linking item from viewing window.

8.5.2 Main Section – Gallery with filter buttons–

Clicking filter will show only desired products

The top screenshot shows the 'All' filter selected in the navigation bar. The bottom screenshot shows the 'Best Sellers' filter selected.

Top Screenshot (All Filter Selected):

- Motorola Razr 5G:** Released 2020, September 09 | 190g, 8mm thickness | Android 10 | 128GB storage, no card slot
- Samsung Galaxy Z Fold 5G:** Exp. release 2020, September 18 | 282g, 6.9mm thickness | Android 10, One UI 2.5 | 256GB/512GB storage, no card slot
- Samsung Galaxy Z flip 5G:** Released 2020, August 07 | 183g, 7.2mm thickness | Android 10, One UI 2 | 256GB storage, no card slot

Bottom Screenshot (Best Sellers Filter Selected):

- Nokia 9 PureView:** Released 2019, March 15 | 172g, 8mm thickness | Android 9.0, Android 10.0 | 128GB storage, no card slot
- Nokia 8.3 5G:** Released 2019, December 19 | 183g, 8.7mm thickness | Android 9.0, Android 10 | 32GB storage, microSDXC
- Samsung Galaxy S20 5G:** Released 2019, December 19 | 183g, 8.7mm thickness | Android 9.0, Android 10 | 32GB storage, microSDXC

HTML code:

The screenshot shows the Visual Studio Code interface with the file 'index.html' open. The code displays a navigation menu with several filter buttons. A red circle highlights the first button, which is active and has the class 'filter-button active'. The code snippet below illustrates this:

```
<div class="mb-1 id="filter_menu">
  <button class="btn btn-primary filter-button active" data-filter="all">All</button>
  <button class="btn btn-primary filter-button" data-filter="best">Best Sellers</button>
  <button class="btn btn-primary filter-button" data-filter="new">New Arrivals</button>
  <button class="btn btn-primary filter-button" data-filter="sale">Blowout Sale</button>
</div>
```

Use CSS grid to organize individual phone items.

CSS code:

The screenshot shows the Visual Studio Code interface with the file 'style.css' open. The code defines a grid layout for a section titled '#features .grid'. A red circle highlights the media query '@media (max-width: 970px) {'. A red arrow points from this media query to the text 'Use CSS grid to organize individual phone items.' located above the screenshot. The code snippet below shows the grid definition:

```
#features .grid {
  display: grid;
  grid-template-columns: repeat(3, auto);
  grid-template-rows: repeat(3, auto);
}
```

JS code:

```

1 $(document).ready(function () {
2
3     $(".filter-button").click(function () {
4         var value = $(this).attr('data-filter');
5
6         if (value == "all") {
7             //$('.filter').removeClass('hidden');
8             $('.filter').show(500);
9         }
10        else {
11            //$('.filter[filter-item="'+value+'"]').removeClass('hidden');
12            //$('.filter').not('.filter[filter-item="'+value+'"]').addClass('hidden');
13            $(".filter").not('.filter-item-' + value).hide(500);
14            $('.filter').filter('.filter-item-' + value).show(500);
15        }
16    });
17
18    // ADDING ACTIVE TO BUTTON
19
20    $('#filter_menu').on('click', '.filter-button', function (e) {
21        e.preventDefault();
22        $(this).parents('#filter_menu').find('.active').removeClass('active').end().end().addClass('active');
23    });
24
25
26
27 });

```

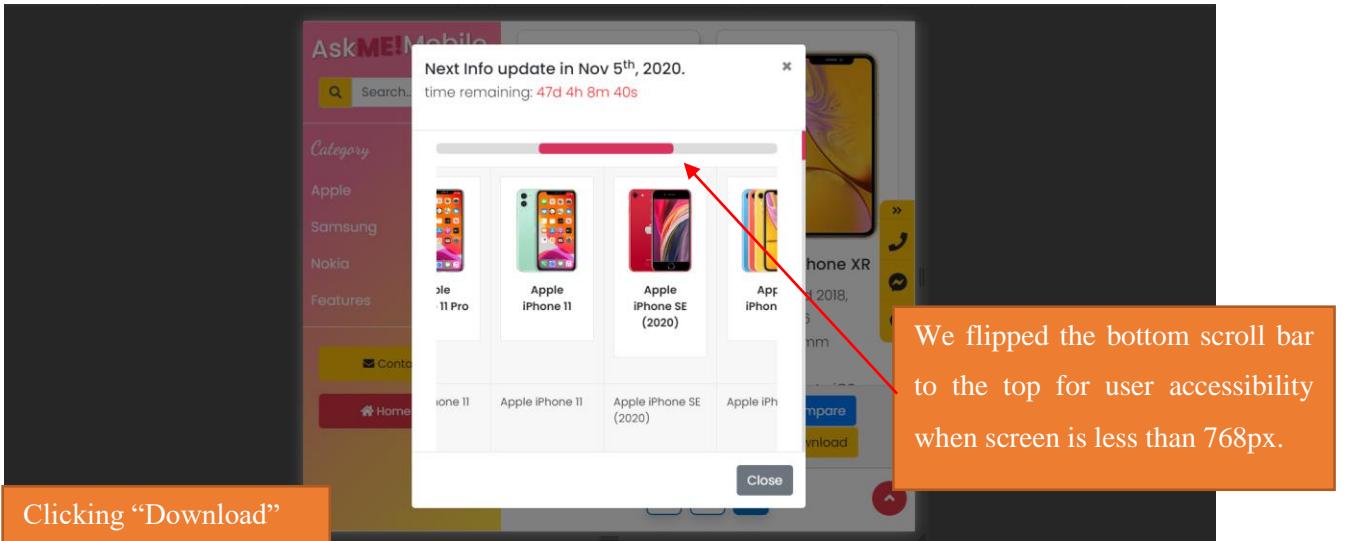
Algorithm to insert attr['data-filter'] when clicking to certain button. Using JQuery selector ('.filter') to decide to show if attr['data-filter'] is a match and to hide if attr not match.

8.5.3 Main Section - Compare & Download Modals –

A countdown timer reminder set to expired in 1 month

	Apple iPhone 11 Pro Max	Apple iPhone 11 Pro	Apple iPhone 11	Apple iPhone SE (2020)	Apple iPhone XR	Samsung Galaxy Note20 Ultra 5G	Nokia 8.3 5G
NETWORK	Apple iPhone 11 Pro Max	Apple iPhone 11 Pro	Apple iPhone 11	Apple iPhone SE (2020)	Apple iPhone XR	Samsung Galaxy Note20 Ultra 5G	Nokia 8.3 5G
Technology	GSM / CDMA / HSPA / EVDO / LTE	GSM / CDMA / HSPA / EVDO / LTE	GSM / CDMA / HSPA / EVDO / LTE	GSM / CDMA / HSPA / EVDO / LTE	GSM / CDMA / HSPA / EVDO / LTE	GSM / CDMA / HSPA / EVDO / LTE / 5G	GSM / HSPA / LTE / 5G

Clicking compare will open a modal. A tabular info table is inserted within the modal



Clicking “Download”

HTML code:

```

<!-- MODAL1 - APPLE IPHONE -->
<div class="modal fade" id="exampleModal" tabindex="-1" aria-labelledby="exampleModalLabel" aria-hidden="true">
  <div class="modal-dialog modal-dialog-scrollable modal-xl" id="myModal">
    <div class="modal-content">
      <div class="modal-header">
        <div class="d-flex flex-column">
          <h5 class="modal-title" id="exampleModalLabel">Next Info update in Nov 5<sup>th</sup>, 2020.</h5>
          <p>time remaining: <span style="color: #red;" class="timer"></span></p>
        </div>
      </div>
      <div class="modal-body">
        <!-- Product Comparison Table -->
        <div class="container pb-5 mb-2">...
      </div>
      <div class="modal-footer">
        <button type="button" class="btn btn-secondary" data-dismiss="modal">Close</button>
      </div>
    </div>
  </div>
</div>

```

The modal html is copied from Bootstrap 4 documentation. Our project used the standard scrollable modal template.

Select option to choose and categorize tabular info

```



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <div class="form-control custom-select" data-filter="trigger"> &lt;select&gt;     &lt;option value="all"&gt;Show All&lt;/option&gt;     &lt;option value="network"&gt;Network&lt;/option&gt;     &lt;option value="body"&gt;Body&lt;/option&gt;     &lt;option value="display"&gt;Display&lt;/option&gt;     &lt;option value="platform"&gt;Platform&lt;/option&gt;     &lt;option value="memory"&gt;Memory&lt;/option&gt;     &lt;option value="main_camera"&gt;Main Camera&lt;/option&gt;     &lt;option value="features"&gt;Features&lt;/option&gt;     &lt;option value="battery"&gt;Battery&lt;/option&gt;     &lt;option value="misc"&gt;Misc&lt;/option&gt; &lt;/select&gt;&lt;small class="form-text text-muted"&gt;* Choose criteria to filter table below.&lt;/small&gt; </div> |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |


```

```

<tbody id="network" data-filter="target">
| Network |
| --- |
| Apple iPhone 11 Pro Max</td> |
| Apple iPhone 11 Pro</td> |
| Apple iPhone 11</td> |
| Apple iPhone SE (2020)</td> |
| Apple iPhone XR</td> |
| Samsung Galaxy Note20 Ultra 5G</td> |
| Nokia 8.3 5G</td> |

```

We fill table with information, table layout is standard thead, tbody, and tfooter

The screenshot shows a Visual Studio Code interface with multiple tabs open. The left sidebar displays a file tree for a project named 'E-project-2020'. The main editor area shows a large block of HTML code with several tbody elements containing target data. The status bar at the bottom right indicates the code is 54.6KB, 40 lines long, with 4 spaces, 4 tabs, and 173 LFCR.

```
</thead>
<tbody id="network" data-filter="target"> ...
</tbody>
<tbody id="body" data-filter="target"> ...
</tbody>
<tbody id="display" data-filter="target"> ...
</tbody>
<tbody id="platform" data-filter="target"> ...
</tbody>
<tbody id="memory" data-filter="target"> ...
</tbody>
<tbody id="main_camera" data-filter="target"> ...
</tbody>
<tbody id="features" data-filter="target"> ...
</tbody>
<tbody id="battery" data-filter="target"> ...
</tbody>
<tbody id="misc" data-filter="target"> ...
</tbody>
</table>
</div>
</div>
```

```
</div>
<div class="modal-footer">
    <button type="button" class="btn btn-secondary" data-dismiss="modal">Close</button>
</div>
</div>
</div>
```

CSS code:

We designed the table to be able to handle small mobile screen. Users is able to scroll horizontally when overflown. This design decision is to enhance user accessibility without causing frustration when reading on small screen.

Then we flipped the scroll bar from bottom to top.

```

File Edit Selection View Go Run Terminal Help
OPEN EDITORS ... index.html # style.css
E-project-2020 > css > # style.css > () @media (max-width: 768px) > # sidebar
1051 .comparison-table table {
1052   min-width: 41rem;
1053   /* table-layout: auto; */
1054   table-layout: fixed;
1055 }
1056 }
1057 /* Fixed responsiveness for modal table */
1058 @media only screen and (max-width: 1200px) {
1059   .comparison-table table {
1060     table-layout: auto;
1061     -webkit-overflow-scrolling: auto;
1062   }
1063   .comparison-table {
1064     overflow-x: auto;
1065     transform: rotateX(180deg);
1066   }
1067   .comparison-table>table {
1068     transform: rotateX(180deg);
1069   }
1070 }
1071 }
1072 }
1073 .comparison-table table tbody+tbody {
1074   border-top-width: 1px
1075 }
1076 }
1077
1078 .comparison-table .table-bordered thead td {
1079   border-bottom-width: 1px
1080 }
1081
1082
1083
1084
1085
1086
1087
1088
1089
1090
1091
1092
1093
1094
1095
1096
1097
1098
1099
1100
1101
1102
1103
1104
1105
1106
1107
1108
1109
1110
1111
1112
1113
1114
1115
1116
1117
1118
1119
1120
1121
1122
1123
1124
1125
1126
1127
1128
1129
1130
1131
1132
1133
1134
1135
1136
1137
1138
1139
1140
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1150
1151
1152

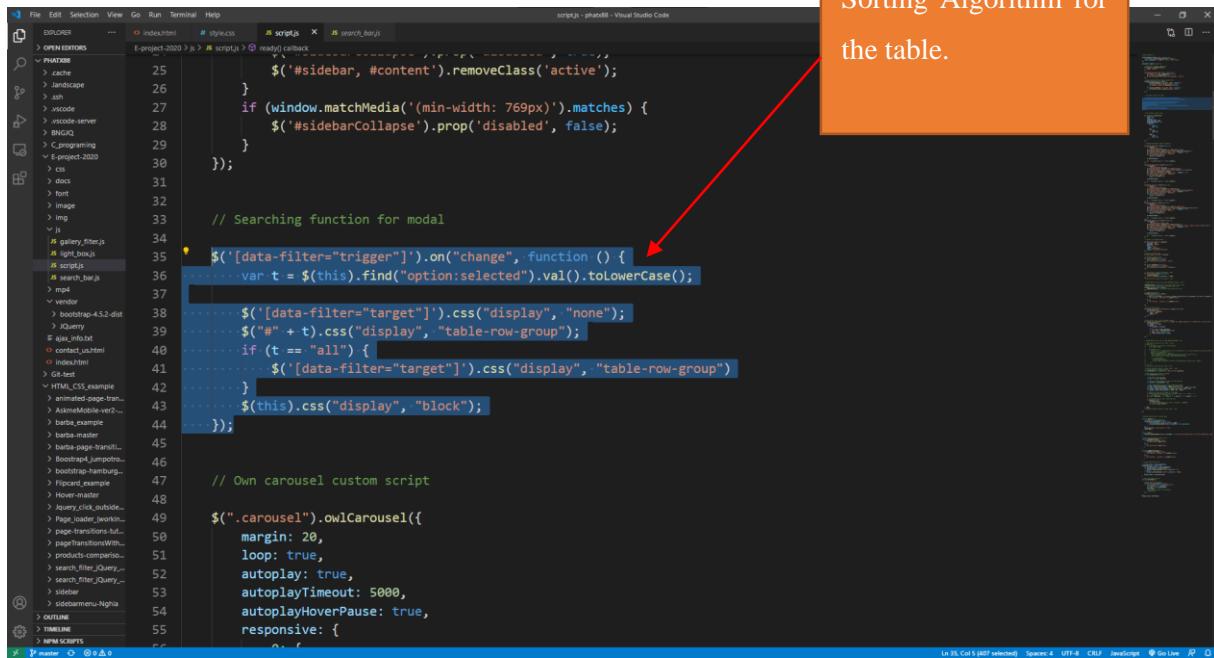
```

```

File Edit Selection View Go Run Terminal Help
OPEN EDITORS ... index.html # style.css
E-project-2020 > css > # style.css > () @media (max-width: 768px) > # sidebar
1122 .comparison-item .remove-item .feather {
1123   position: absolute;
1124   top: -.3125rem;
1125   right: -.3125rem;
1126   width: 1.375rem;
1127   height: 1.375rem;
1128   border-radius: 50%;
1129   background-color: #f44336;
1130   color: #fff;
1131   text-align: center;
1132   cursor: pointer;
1133 }
1134 .comparison-table .comparison-item .remove-item .feather {
1135   width: .875rem;
1136   height: .875rem;
1137 }
1138
1139 .table-bordered th, .table-bordered td {
1140   border: 1px solid #e7e7e7;
1141 }
1142
1143 .bg-secondary {
1144   background-color: #f7f7f7 !important;
1145 }
1146
1147 div#CTA_clickToCall .divider-div .divider-bar {
1148   width: 130px;
1149   height: 4px !important;
1150   border-top: 1px solid #e9ebf1 !important;
1151   display: inline-block !important;
1152 }

```

JS code:



The screenshot shows a Visual Studio Code interface with the following details:

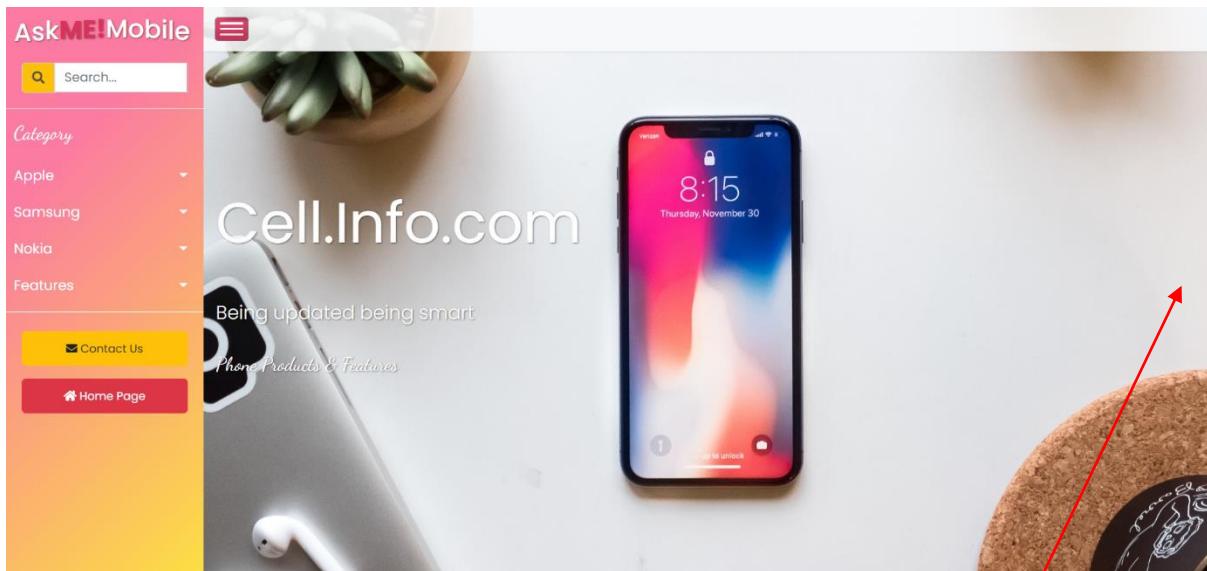
- File Explorer:** Shows a project structure with files like index.html, style.css, script.js, and search_bar.js.
- Editor:** Displays the content of script.js. The code is a sorting algorithm for a table, specifically targeting rows with the class "table-row-group".
- Status Bar:** Shows the current file path as script.js - phantomb - Visual Studio Code, and other status information like Line 35, Col 1 (807 selected), Spaces: 4, UTT: 0, CRLF, Developer, Go Live, and a search icon.

The code in script.js is as follows:

```
// Sorting Algorithm for the table.  
$( '[data-filter="trigger"]' ).on( "change", function () {  
    var t = $(this).find("option:selected").val().toLowerCase();  
  
    $( '[data-filter="target"]' ).css("display", "none");  
    $("#" + t).css("display", "table-row-group");  
    if (t == "all") {  
        $( '[data-filter="target"]' ).css("display", "table-row-group");  
    }  
    $(this).css("display", "block");  
});  
  
// Own carousel custom script  
  
$(".carousel").owlCarousel({  
    margin: 20,  
    loop: true,  
    autoplay: true,  
    autoplayTimeout: 5000,  
    autoplayHoverPause: true,  
    responsive: {  
        0: {  
            items: 1  
        },  
        600: {  
            items: 2  
        },  
        1000: {  
            items: 3  
        }  
    }  
});
```

Sorting Algorithm for the table.

8.6 Side Panel Call To Action Modals



The screenshot shows a mobile website for AskME! Mobile. The hero banner features two iPhone models. A call-to-action (CTA) panel is overlaid on the banner, containing text: "CTA panel to only appear when scrolling down below the Hero Banner but on top of footer." Red arrows point from the top right towards the CTA panel and from the bottom right towards the footer area.

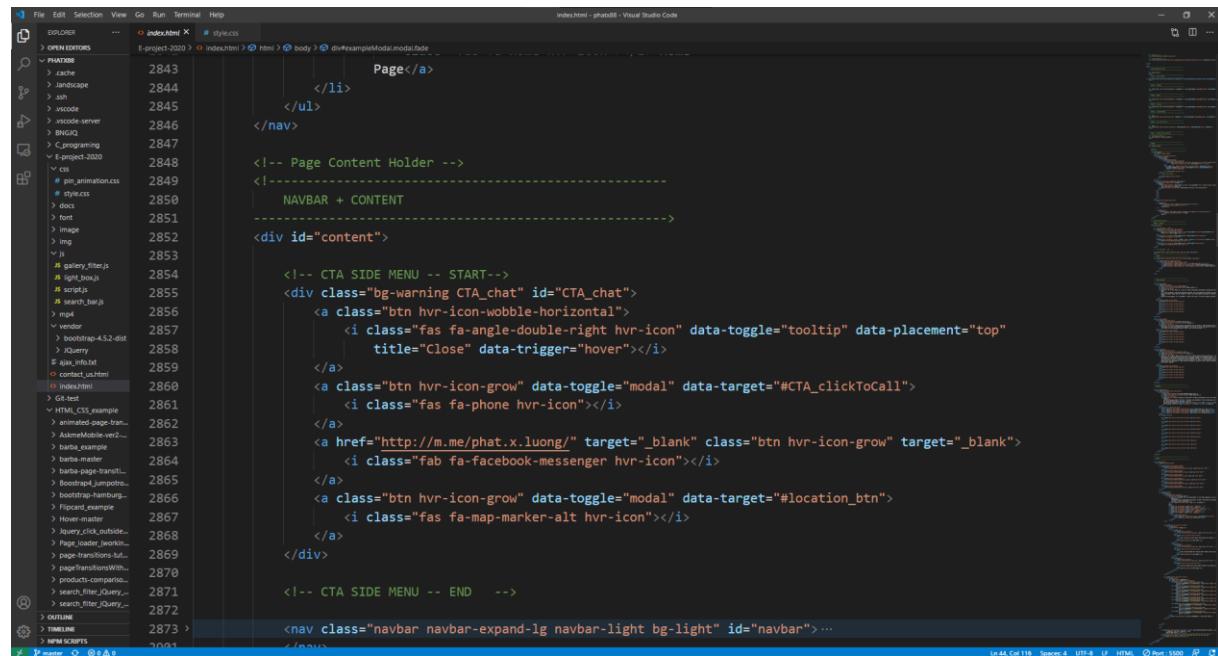
The screenshot shows a mobile website for Cell.info.com. The hero banner features various smartphone brands: iPhone, SAMSUNG, NOKIA, BlackBerry, coolpad, and VSMART. A call-to-action (CTA) panel is overlaid on the banner, containing text: "CTA panel to only appear when scrolling down below the Hero Banner but on top of footer." Red arrows point from the top right towards the CTA panel and from the bottom right towards the footer area.

The screenshot shows a mobile phone listing page for the AskME Mobile website. A central modal window titled "Contact Form" is displayed. The modal contains instructions: "Please leave us your numbers and one of our agents will contact you within the first 5 minutes." Below this is a text input field labeled "Your phone numbers..." and a yellow "Contact Request" button. At the bottom of the modal are "Close" and "Submit" buttons. To the right of the modal, there are three smartphone cards: Nokia 9 PureView, Nokia 8.3 5G, and Samsung Galaxy S20 5G. The Samsung card has a red arrow pointing to its side menu icon, which includes a call, message, and location icon.

Clicking the side button will open modals. The top button will remove the CTA panel.

This screenshot shows the same mobile phone listing page as the previous one, but the "Contact Form" modal is no longer visible. The three smartphone cards (Nokia 9 PureView, Nokia 8.3 5G, and Samsung Galaxy S20 5G) are now fully visible. The red arrow from the previous screenshot points to the "Close" button on the side menu of the Samsung Galaxy S20 5G card.

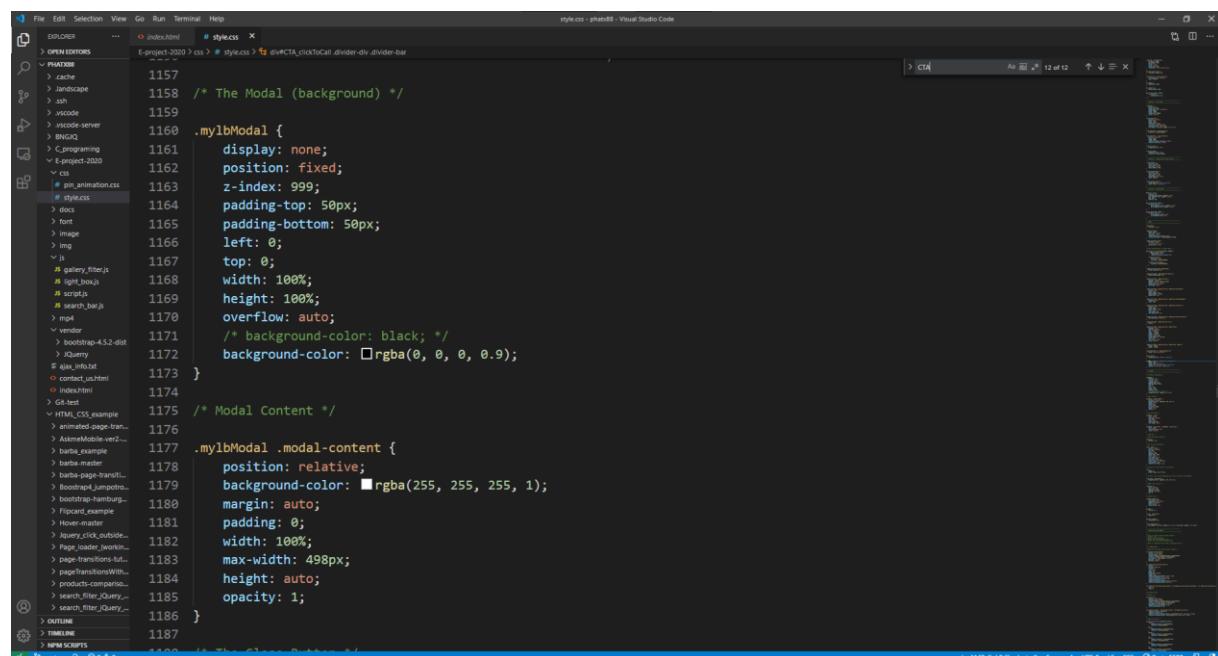
HTML code:



A screenshot of Visual Studio Code showing the HTML code for `index.html`. The code includes a navigation bar, a content area, and a side menu. The side menu contains links for chat, phone, and location. The code uses Bootstrap classes like `btn`, `hvr-icon`, and `modal`.

```
<!-- Page Content Holder -->
<!-- NAVBAR + CONTENT -->
<div id="content">
    <!-- CTA SIDE MENU -- START-->
    <div class="bg-warning CTA_chat" id="CTA_chat">
        <a class="btn hvr-icon-wobble-horizontal">
            <i class="fas fa-angle-double-right hvr-icon" data-toggle="tooltip" data-placement="top" title="Close" data-trigger="hover"></i>
        </a>
        <a class="btn hvr-icon-grow" data-toggle="modal" data-target="#CTA_clickToCall">
            <i class="fas fa-phone hvr-icon"></i>
        </a>
        <a href="http://m.me/phat.x.luong/" target="_blank" class="btn hvr-icon-grow" target="_blank">
            <i class="fab fa-facebook-messenger hvr-icon"></i>
        </a>
        <a class="btn hvr-icon-grow" data-toggle="modal" data-target="#location_btn">
            <i class="fas fa-map-marker-alt hvr-icon"></i>
        </a>
    </div>
    <!-- CTA SIDE MENU -- END -->
<nav class="navbar navbar-expand-lg navbar-light bg-light" id="navbar">...
```

CSS code:



A screenshot of Visual Studio Code showing the CSS code for `style.css`. It defines styles for a modal window, including its background and content areas.

```
/* The Modal (background) */
.mybModal {
    display: none;
    position: fixed;
    z-index: 999;
    padding-top: 50px;
    padding-bottom: 50px;
    left: 0;
    top: 0;
    width: 100%;
    height: 100%;
    overflow: auto;
    /* background-color: black; */
    background-color: #rgba(0, 0, 0, 0.9);
}

/* Modal Content */
.mybModal .modal-content {
    position: relative;
    background-color: #rgba(255, 255, 255, 1);
    margin: auto;
    padding: 0;
    width: 100%;
    max-width: 498px;
    height: auto;
    opacity: 1;
}
```

8.7 Product Details Page

We created a html page detailing product's features for each of the phone models on our website.

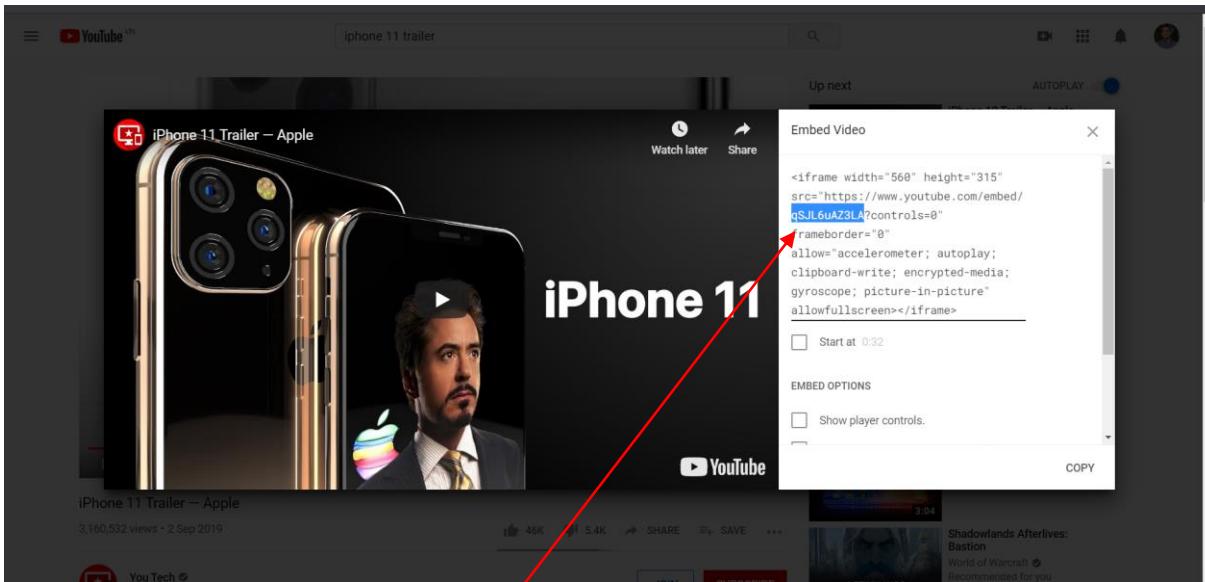
The screenshot shows a mobile application interface for 'AskME!Mobile'. On the left is a sidebar with a search bar, a menu icon, and category dropdowns for Apple (selected), Samsung, Nokia, and Features. Below these are contact links for 'Contact Us' and 'Report Bug'. The main content area displays three smartphone models: 'iPhone 11 Pro Max' (dual-camera system, green back), 'iPhone 11' (single-camera system, red back), and 'Apple iPhone XR' (triple-camera system, yellow back). Each card includes a brief description and two buttons: 'Compare' and 'Download'. A top banner states: 'The iPhone is one of the most popular smartphones, designed and marketed by Apple Inc. Their first iPhone model operating system. The first-generation iPhone was announced by Apple co-founder Steve Jobs on January 9, 2007. Since then Apple has annually released new iPhone models and iOS updates. As of November 1, 2018, more than 2.2 billion iPhones had been sold.'

8.7.1 Youtube embedded promotional videos.

This is an embedded YouTube video showing a trailer of this phone modal



HTML code:



Applying video id to our
HTML code

Applying video id to our HTML code

```
detail_iphone_11.html - phat88 - Visual Studio Code
IS


Contact


```

8.7.2 Product detail section

The screenshot shows a product detail page for the iPhone 11. At the top, there's a large image of the phone on a pink surface, followed by a horizontal row of smaller thumbnail images. A red arrow points from the text "We used Bootstrap 4 'tab', 'data target' attributes to build a bootstrap carousel, to show case the products screen shots" to the row of thumbnails.

IPHONE 11

★★★★★ 54 reviews

The iPhone XR was the first commercial success that came on the second attempt for making a more affordable iPhone. The iPhone 5c failed to impress in 2013, and we thought we'd never see the maker give this idea another try. Well, last year the iPhone XR was more than well received being the best selling iPhone of the trio, so this year we welcome its sequel - the iPhone 11.

PRICE: \$799

89% of buyers enjoyed this product! (87 votes)

COLORS: X (Red) • (Teal) • (Purple)
STORAGE: 64GB 128GB 256GB

[View Specs](#) [Download](#)

We used Bootstrap 4 "tab", "data target" attributes to build a bootstrap carousel, to show case the products screen shots

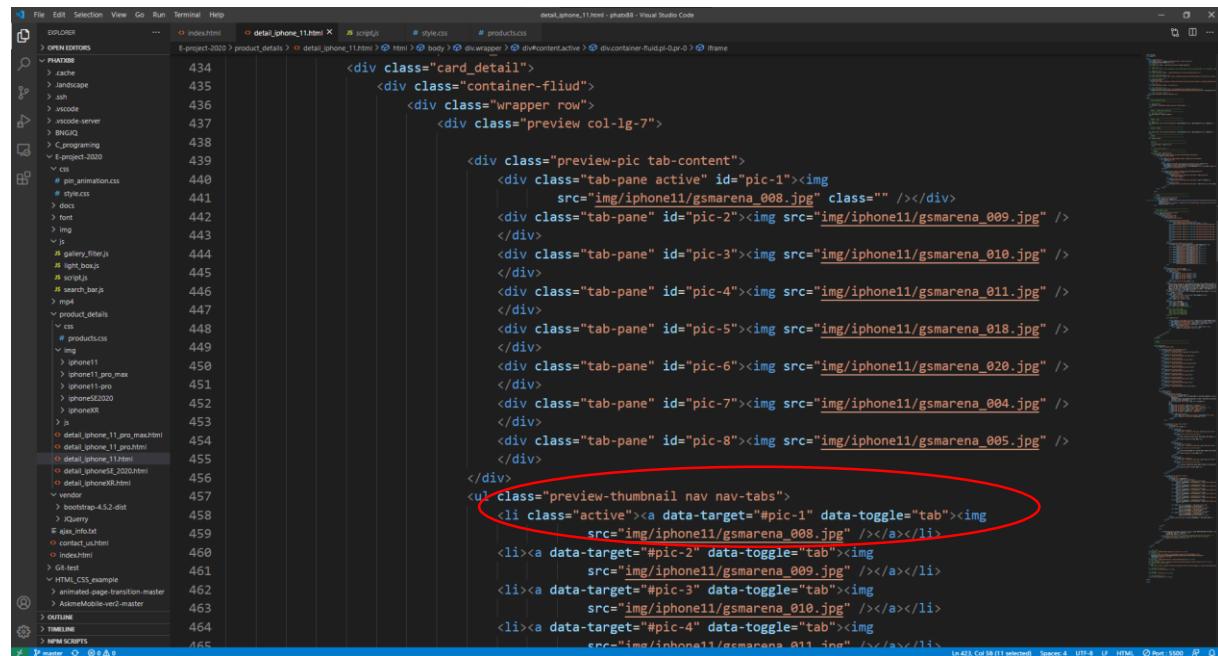
The second screenshot shows the same product detail page for the iPhone 11, with a red arrow pointing from the text "Clicking on 'view specs' will open more info about the phone model" to the "View Specs" button in the sidebar.

Apple iPhone 11

- › **Body:** Aluminum frame, Gorilla Glass front with oleophobic coating, Gorilla Glass back with glossy finish, IP68 certified for water and dust resistance. Black, Green, Yellow, Purple, White, and Red color options.
- › **Screen:** 6.1" IPS LCD screen of 828 x 1792 px resolution, 326ppi, 625 nits, 120Hz touch sensing, wide color gamut. True Tone adjustment via a six-channel ambient light sensor.
- › **OS:** Apple iOS 13
- › **Chipset:** Apple A13 Bionic chip (7nm+) - Hexa-core (2x2.66 GHz Lightning + 4x1.8 GHz Thunder) Apple CPU, four-core Apple GPU, 8-core Apple NPU 3-gen
- › **Memory:** 4GB of RAM; 64/128/256GB of internal storage
- › **Camera:** Dual 12MP camera: 26mm main wide-angle, F/1.8, OIS, Dual Pixel AF; 13mm ultra wide-angle, F/2.4, 120-degree field of view; quad-LED flash with slow sync
- › **Video recording:** 2160p@60/30fps, 1080p@30/60/120/240fps video recording with wider dynamic range and spatial sound, OIS + EIS
- › **Selfie:** Dual camera - 23mm 12MP F/2.2 front-facing camera with HDR mode + 3D TOF camera; 2160p@60/30fps, 1080p@30/60/120fps video recording with wider dynamic range and spatial sound, EIS, depth detection for Portrait mode
- › **Connectivity:** Dual SIM, 4G LTE (1 Gbps); Wi-Fi a/b/g/n/ac/ax; Bluetooth 5.0; Lightning port; GPS

Clicking on 'view specs' will open more info about the phone model

HTML code:

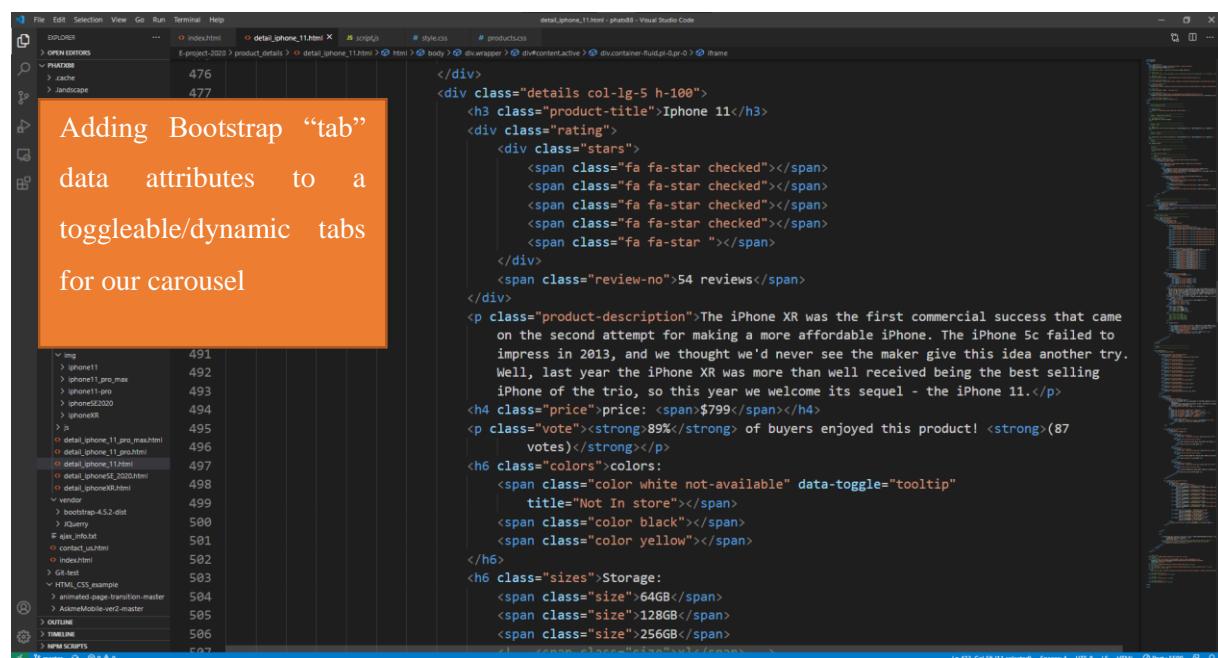


```

<div class="card_detail">
  <div class="container-fluid">
    <div class="wrapper row">
      <div class="preview col-lg-7">
        <div class="preview-pic tab-content">
          <div class="tab-pane active" id="pic-1"></div>
          <div class="tab-pane" id="pic-2"></div>
          <div class="tab-pane" id="pic-3"></div>
          <div class="tab-pane" id="pic-4"></div>
          <div class="tab-pane" id="pic-5"></div>
          <div class="tab-pane" id="pic-6"></div>
          <div class="tab-pane" id="pic-7"></div>
          <div class="tab-pane" id="pic-8"></div>
        </div>
        <ul class="preview-thumbnail nav nav-tabs">
          <li class="active"><a data-target="#pic-1" data-toggle="tab"></a></li>
          <li><a data-target="#pic-2" data-toggle="tab"></a></li>
          <li><a data-target="#pic-3" data-toggle="tab"></a></li>
          <li><a data-target="#pic-4" data-toggle="tab"></a></li>
        </ul>
      </div>
    </div>
  </div>

```

Adding Bootstrap "tab" data attributes to a toggleable/dynamic tabs for our carousel

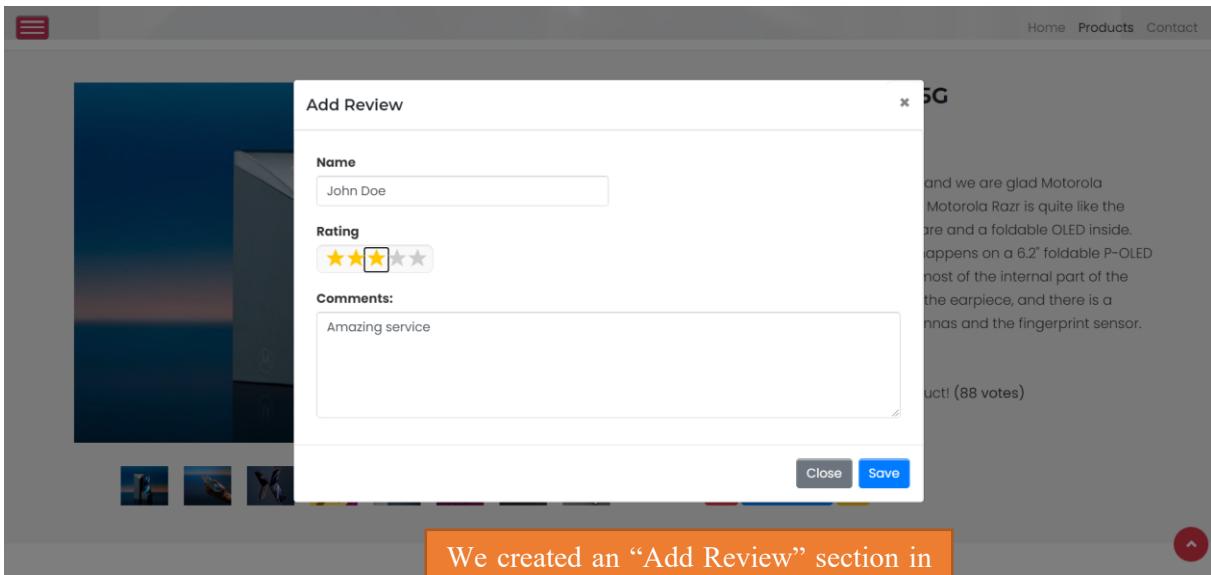


```

<div class="details col-lg-5 h-100">
  <h3 class="product-title">iPhone 11</h3>
  <div class="rating">
    <div class="stars">
      <span class="fa fa-star checked"></span>
      <span class="fa fa-star checked"></span>
      <span class="fa fa-star checked"></span>
      <span class="fa fa-star checked"></span>
      <span class="fa fa-star "></span>
    </div>
    <span class="review-no">54 reviews</span>
  </div>
  <p class="product-description">The iPhone XR was the first commercial success that came on the second attempt for making a more affordable iPhone. The iPhone 5c failed to impress in 2013, and we thought we'd never see the maker give this idea another try. Well, last year the iPhone XR was more than well received being the best selling iPhone of the trio, so this year we welcome its sequel - the iPhone 11.</p>
  <h4 class="price">price: <span>$799</span></h4>
  <p class="vote"><strong>89%</strong> of buyers enjoyed this product! <strong>(87 votes)</strong></p>
  <h6 class="colors">colors:<br/>
    <span class="color white not-available" data-toggle="tooltip" title="Not in store"></span>
    <span class="color black"></span>
    <span class="color yellow"></span>
  </h6>
  <h6 class="sizes">Storage:<br/>
    <span class="size">64GB</span>
    <span class="size">128GB</span>
    <span class="size">256GB</span>
  </h6>

```

8.7.3 Rating page



HTML code:

```

<div class="modal fade" id="staticBackdrop-2" data-backdrop="static" data-keyboard="false" tabindex="-1" aria-labelledby="staticBackdropLabel" aria-hidden="true">
  <div class="modal-dialog modal-lg modal-dialog-centered modal-dialog-scrollable">
    <div class="modal-content">
      <div class="modal-header">
        <h5 class="modal-title" id="staticBackdropLabel">Add Review</h5>
        <button type="button" class="close" data-dismiss="modal" aria-label="Close">&times;</button>
      </div>
      <form id="review-form" onsubmit="alert('Thank You For Rating!');return false;">
        <div class="modal-body p-2">
          <div id="review-form-container">
            <div class="fieldset">
              <label for="reviewName">Name</label>
              <input name="reviewName" id="reviewName" class="form-control w-50" required="">
            </div>
            <div class="fieldset">
              <label>Rating</label>
              <div class="rate">
                <input type="radio" id="star5" name="rate" value="5" onkeydown="navRadioGroup(event)" onfocus="setFocus(event)" required="">
                <label for="star5" title="5 stars">5 stars</label>
                <input type="radio" id="star4" name="rate" value="4" onkeydown="navRadioGroup(event)">
                <label for="star4" title="4 stars">4 stars</label>
                <input type="radio" id="star3" name="rate" value="3" onkeydown="navRadioGroup(event)">
              </div>
            </div>
          </div>
        </div>
      </form>
    </div>
  </div>

```

The code editor shows the HTML structure of the modal. It includes a header with a close button, a form with a name input field, and a rating section using a class named "rate" which contains five radio buttons for star ratings. The code is part of a larger file named "detail_motorola_razr_5g.html".

We use some a code on code.pen as a reference for creating the rating page.

> C_Programming	224
\ E-project-2020	225
> class	226
> class	227
> font	228
> img	228
> js	229
> mp4	229
\ vendor_details	
> css	230
> img	231
> is	
\ detail_iphone_11_pro_max.html	232
\ detail_iphone_11_pro.html	233
\ detail_iphone_11.html	234
\ detail_iphone_2020_max.html	234
\ detail_iphone_0.html	235
\ detail_iphone_0_max.html	235
\ detail_motorola_x40_5G.html	236
\ detail_nokia_x_37.html	237
\ detail_nokia_x_37.html	237
\ detail_nokia_x_22.html	238
\ detail_nokia_x_22.html	239
\ detail_nokia_x_PureView.html	240
\ detail_nokia_x.html	240
\ detail_samsung_A21s.html	241
\ detail_samsung_A31.html	241
\ detail_samsung_M31.html	242
\ detail_samsung_M15.html	243
\ detail_samsung_S50.html	243
\ detail_samsung_Z_Fold_Sg.html	244
\ detail_samsung_Z_Fold_Sg.html	244
\ vendor	245
\ alias_info.txt	246
\ contact_us.html	246
\ index.html	247
\ GR-test	248
\ HTML_CSS_examle	249
\ HTML_CSS_tester	249
\ index.html	250
\ TIMELINE	250
\ MP4_SCRIPTS	251

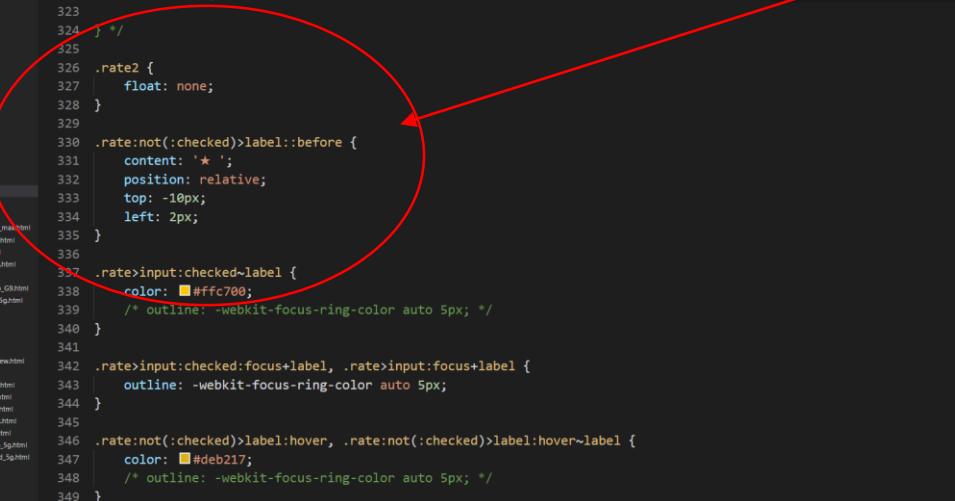
```
detail_motorola_review_Signed.html // Visual Studio Code
mi > HTML > body > div#staticBackdrop-1.modal.fade > div.modal-dialog.modal-lg.modal-dialog-centered.modal-dialog-scrollable > div.modal-content > div.modal-body.p-2 > ul.article > li
    onkeydown="navRadioGroup(event)">
        <label for="star3" title="3 stars">3 stars</label>
        <input type="radio" id="star2" name="rate" value="2"
            onkeydown="navRadioGroup(event)">
        <label for="star2" title="2 stars">2 stars</label>
        <input type="radio" id="star1" name="https://codepen.io/penn/rate" value="1"
            onkeydown="navRadioGroup(event)" onfocus="setFocus(event)">
        <label for="star1" title="1 star">1 star</label>
    </div>
</div>

<div class="fieldset">
    <label for="reviewComments">Comments:</label>
    <textarea name="reviewComments" id="reviewComments" class="form-control" rows="5"
        required=""></textarea>
</div>

</div>
</div>
<div class="modal-footer">
    <button type="button" class="btn btn-secondary" data-dismiss="modal">Close</button>
    <button type="submit" class="btn btn-primary submit-review-btn">Save</button>
</div>
orm>
```

CSS code to add “star” when checking on input radio for rating.

CSS code:



The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a tree view of files and folders. The file `products.css` is selected.
- Terminal:** Shows the command `products.css phant08 - Visual Studio Code`.
- Code Editor:** Displays the CSS code for the `.rate` class. A large red circle highlights the entire class definition, and a red arrow points from the top right towards the circle.

```
322 /* #star1:focus{  
323  
324 } */  
325  
326 .rate2 {  
327 |   float: none;  
328 }  
329  
330 .rate:not(:checked)>label::before {  
331 |   content: '*';  
332 |   position: relative;  
333 |   top: -10px;  
334 |   left: 2px;  
335 }  
336  
337 .rate>input:checked~label {  
338 |   color: #ffc700;  
339 |   /* outline: -webkit-focus-ring-color auto 5px; */  
340 }  
341  
342 .rate>input:checked:focus+label, .rate>input:focus+label {  
343 |   outline: -webkit-focus-ring-color auto 5px;  
344 }  
345  
346 .rate:not(:checked)>label:hover, .rate:not(:checked)>label:hover~label {  
347 |   color: #0eb217;  
348 |   /* outline: -webkit-focus-ring-color auto 5px; */  
349 }  
350  
351 .rate>input:checked+label:hover, .rate>input:checked+label:hover~label, .rate>input:checkbox+label:hover, .rate>input:checkbox+label:hover~label {  
352 |   color: #c59b08;  
353 }
```

JS code:

```
const setFocus = (evt) => {
  const rateRadios = document.getElementsByName('rate');
  const rateRadiosArr = Array.from(rateRadios);
  const anyChecked = rateRadiosArr.some(radio => { return radio.checked === true; });
  // console.log('anyChecked', anyChecked);
  if (!anyChecked) {
    const star1 = document.getElementById('star1');
    star1.focus();
    // star1.checked = true;
  }
};

const navRadioGroup = (evt) => {
  // console.log('key', evt.key, 'code', evt.code, 'which', evt.which);
  // console.log(evt);

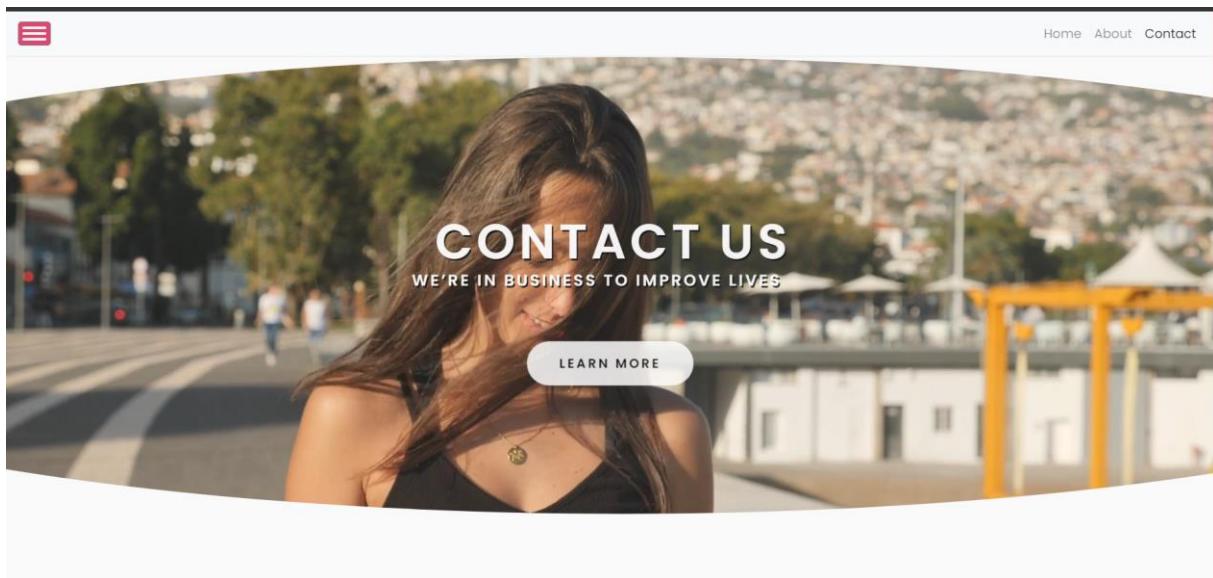
  const star1 = document.getElementById('star1');
  const star2 = document.getElementById('star2');
  const star3 = document.getElementById('star3');
  const star4 = document.getElementById('star4');
  const star5 = document.getElementById('star5');

  if(['ArrowRight', 'ArrowLeft', 'ArrowDown', 'ArrowUp'].includes(evt.key)) {
    evt.preventDefault();
    // console.log('attempting return');
    if (evt.key === 'ArrowRight' || evt.key === 'ArrowDown') {
      switch(evt.target.id) {
        case 'star1':
          star2.focus();
          star2.checked = true;
          break;
        case 'star2':
          star3.focus();
          star3.checked = true;
          break;
        case 'star3':
          star4.focus();
          star4.checked = true;
          break;
        case 'star4':
          star5.focus();
          star5.checked = true;
          break;
        case 'star5':
          star1.focus();
          star1.checked = true;
          break;
      }
    } else if (evt.key === 'ArrowLeft' || evt.key === 'ArrowUp') {
      switch(evt.target.id) {
        case 'star1':
          star5.focus();
          star5.checked = true;
          break;
        case 'star2':
          star1.focus();
          break;
      }
    }
  }
};
```

Code to handle focus and input keys for star rating using “left, right, up, down” arrows

8.8 Contact Us Page

8.8.1 Contact Us - Hero Banner –



HTML code:

```
</nav>

<!--
    BANNER
-->

<div class="banner_about container-fluid overflow-hidden p-0">
    <div class="embed-responsive embed-responsive-16by9 text_logo">
        <video autoplay muted loop poster="img/vlcsnap-2020-09-10-09h33m25s677.jpg">
            <source src="" data-src="mp4\coverr--07-20-fitness-girl-exercising-in-city-38-4928.mp4"
                    type="video/mp4" class="embed-responsive-item">
        </video>
    </div>
    <div class="text_box">
        <h3 class="heading_primary">
            <span class="heading_main">Contact Us</span>
            <span class="heading_sub">We're in Business to Improve Lives</span>
        </h3>
        <span><a href="#contact" class="btn btn-white btn-animated">Learn More</a></span>
    </div>
<!--
    CONTACT US
-->

<section id="contact">
    <div class="container-fluid text-center pb-5 pt-3">
        <div class="row mt-5">
```

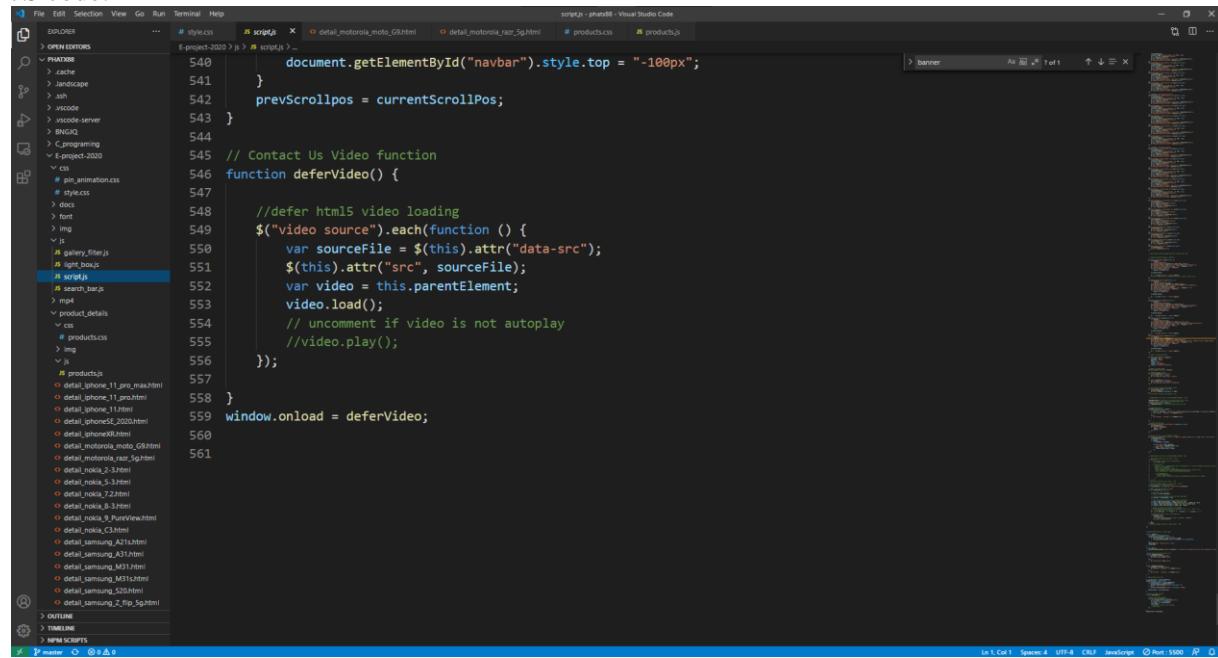
CSS code:

Three screenshots of Visual Studio Code showing the CSS code for the 'CONTACT US - Banner video' section across three different file versions (style.css, style.css, and style.css). The code includes media queries for mobile devices and various styling rules for headings, text boxes, and background images.

```

1997 CONTACT US - Banner video
1998
1999
2000 .banner_about {
2001   position: relative;
2002   height: 100vh;
2003   background-position: top;
2004   background-size: cover;
2005   z-index: 2;
2006   background-color: black;
2007   opacity: 0.9;
2008   clip-path: ellipse(86% 40% at 51% 48%);
2009 }
2100
2101 .text_box {
2102   position: absolute;
2103   top: 50%;
2104   left: 50%;
2105   transform: translate(-50%, -50%);
2106   text-align: center;
2107 }
2108
2109 .heading_primary {
2110   color: white;
2111   text-transform: uppercase;
2112   margin-bottom: 60px;
2113 }
2114
2115 .heading_main {
2116   display: block;
2117   font-size: 62px;
2118 }
2119
2120 .heading_main {
2121   display: block;
2122   font-size: 62px;
2123   font-weight: 400px;
2124   letter-spacing: 5px;
2125   animation: moveLeft 5s ease-out;
2126   /* animation-delay: 1s; */
2127   text-shadow: 2px 2px 0px rgba(0, 0, 0, 1);
2128 }
2129
2130 .heading_sub {
2131   display: block;
2132   font-size: 20px;
2133   font-weight: 700px;
2134   letter-spacing: 3px;
2135   animation: moveRight 5s ease-out;
2136   text-shadow: 2px 2px 0px rgba(0, 0, 0, 1);
2137 }
2138
2139 @media screen and (max-width: 858px) {
2140   .heading_main {
2141     font-size: 24px;
2142   }
2143   .heading_sub {
2144     font-size: 12px;
2145   }
2146   .text_box>span a {
2147     font-size: 10px !important;
2148   }
2149 }
2150
2151
2152 @keyframes moveLeft {
2153   0% {
2154     opacity: 0;
2155     transform: translateX(-100px);
2156   }
2157   80% {
2158     transform: translateX(5px);
2159   }
2160   100% {
2161     opacity: 1;
2162     transform: translateX(0);
2163   }
2164 }
2165
2166 @keyframes moveRight {
2167   0% {
2168     opacity: 0;
2169     transform: translateX(100px);
2170   }
2171   80% {
2172     transform: translateX(-20px);
2173   }
2174   100% {
2175     opacity: 1;
2176     transform: translateX(0);
2177   }
2178 }
2179
2180 @keyframes moveBottom {
2181   0% {
2182     opacity: 0;
2183     transform: translateY(-50px);
2184   }
2185   80% {
2186     transform: translateY(5px);
2187   }
2188   100% {
2189     opacity: 1;
2190     transform: translateY(0);
2191   }
2192 }
2193
2194
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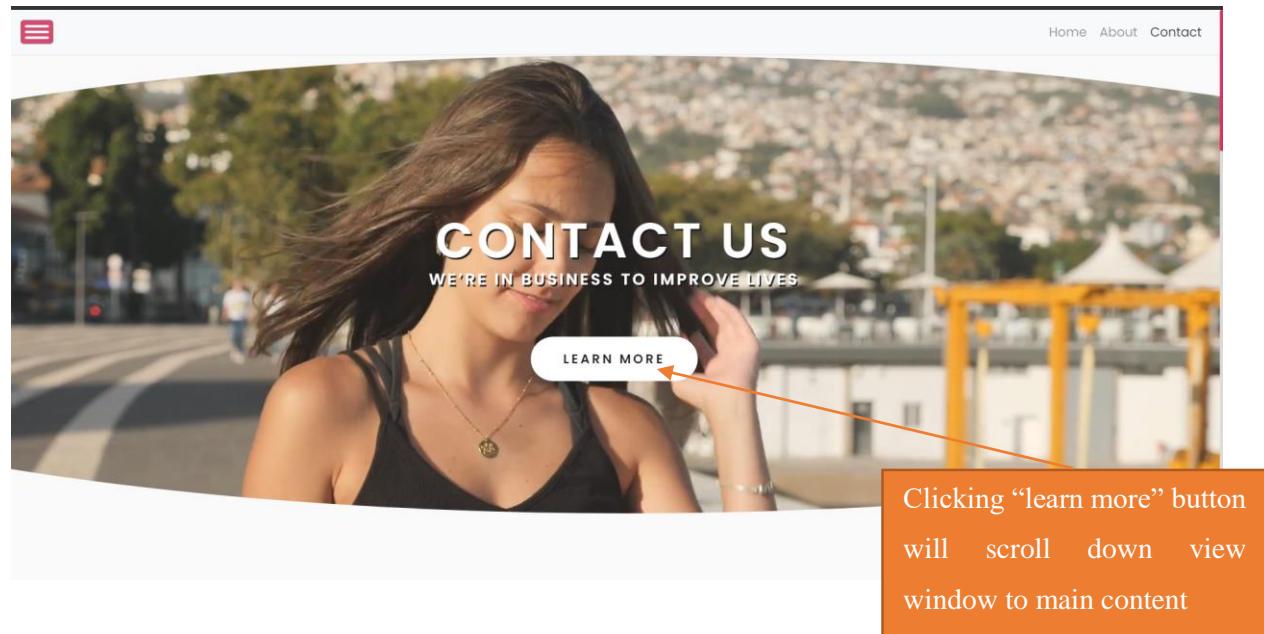


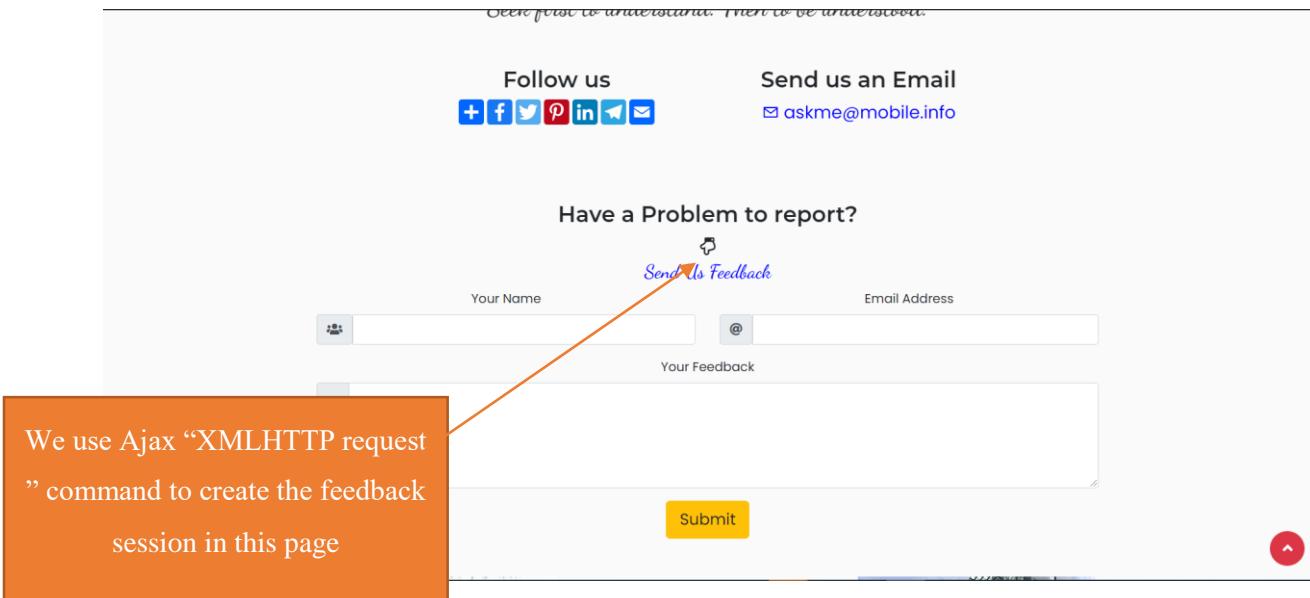
```
document.getElementById("navbar").style.top = "-100px";
prevScrollpos = currentScrollPos;
}

// Contact Us Video function
function deferVideo() {
    //defer html5 video loading
    $("video source").each(function () {
        var sourcefile = $(this).attr("data-src");
        $(this).attr("src", sourcefile);
        var video = this.parentElement;
        video.load();
        // uncomment if video is not autoplay
        //video.play();
    });
}

window.onload = deferVideo;
```

8.8.2 Contact Us – Feedback & Inquiries –





HTML code:

```

File Edit Selection View Go Run Terminal Help
contact_us.html - phast88 - Visual Studio Code
E-project-2020 > contact_us.html > style.css
OPEN EDITORS
PHANTOM
> cache
> escape
> dn
> voxode
> voxode-server
> BINGO
> Coprogramming
> Contact-2020
> CSS
> font
> font
> img
> is
> imp
> vendor_details
> CSS
> img
> is
#products.js
detail_phone_11_pro_max.html
detail_phone_11_pro.html
detail_phone_11.html
detail_phone_11_max.html
detail_phone_20.html
detail_phone_20_max.html
detail_motorola_naz_Sg.html
detail_motorola_naz_Sg.html
detail_nokia_2.html
detail_nokia_3.html
detail_nokia_7_2.html
detail_nokia_7.html
detail_samsung_A21.html
detail_samsung_A31.html
detail_samsung_M31.html
detail_samsung_M31.html
detail_samsung_S20.html
detail_samsung_J_20_Sg.html
detail_Samsung_G_04_Sg.html
> vendor
= exec.info.txt
contact_us.html
index.html
> Gif-test
> HTML_CSS_example
> Timeline
> NPM SCRIPTS
346 <div class="row mt-5">
347 <div class="col-md-3"></div>
348 <div class="col-md-3">
349 <h3 class="title hvr-pulse-grow">Follow us</h3>
350 <!-- AddToAny BEGIN -->
351 <div class="a2a_kit a2a_kit_size_32 a2a_default_style mb-5">
352 <div class="m-auto">
353 <a class="a2a_dd" href="https://www.addtoany.com/share"></a>
354 <a class="a2a_button_facebook"></a>
355 <a class="a2a_button_twitter"></a>
356 <a class="a2a_button_pinterest"></a>
357 <a class="a2a_button_linkedin"></a>
358 <a class="a2a_button_telegram"></a>
359 <a class="a2a_button_email"></a>
360 <script async src="https://static.addtoany.com/menu/page.js"></script>
361 </div>
362 <!-- AddToAny END -->
363 </div>
364 <div class="col-md-3">
365 <h3 class="title hvr-pulse-grow">Send us an Email</h3>
366 <div class="API text-center mb-5">
367 <a href="mailto:nghiapham27121998@outlook.com?subject=Your Feedback"
368 style="color: #0000ff; font-size: 1.2em; font-weight: bold; text-decoration: none; text-align: center; margin-left: 10px; margin-right: 10px;">askme@mobile.info</a>
369 </div>
370 <div class="col-md-3"></div>
371 <div class="row mt-5">
372 <div class="col-md-8 offset-md-2">
373 <h3 class="title hvr-pulse-grow text-center">Have a Problem to report?</h3>
374 </div>
375 </div>
376 </div>
377 </div>

```

JS code:

```

File Edit Selection View Go Run Terminal Help
OPEN EDITORS
    index.html script.js style.css contact_us.html
E-project-2020 > js > script.js > ready() callback > scroll() callback
531
532
533
534     /*
535      XMLHTTP REQUEST FOR CONTACT US PAGE
536      -----
537
538 //Loading AJAXinfo.txt in contact page
539
540 function loadDoc() {
541     var xhttp = new XMLHttpRequest();
542     xhttp.onreadystatechange = function () {
543         if (this.readyState == 4 && this.status == 200) {
544             document.getElementById("addDoc").innerHTML = this.responseText;
545         }
546     };
547     xhttp.open("GET", "ajax_info.txt", true);
548     xhttp.send();
549 }
550
551 function data() {
552     document.getElementById("ketqua").innerHTML = "<i class='far fa-check-circle'></i> We've received your report.";
553 }
554
555 /*
556 Back to top/ Call to Click function
557 -----
558 */
559
560 //hiding back-to-top button when on Top
561 function toggleBackToTop() {

```

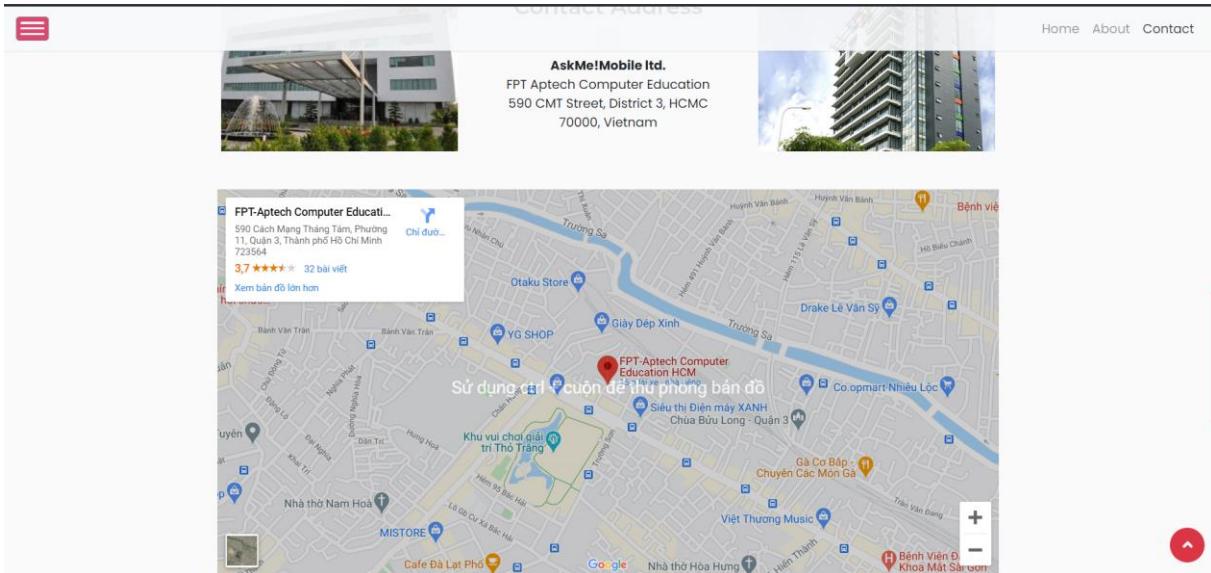
Ajax text file:

```

File Edit Selection View Go Run Terminal Help
OPEN EDITORS
    script.js style.css ajax_info.txt contact_us.html
E-project-2020 > js > ajax_info.txt
2
<form onsubmit="data();return false;">
3     <div class="row">
4         <div class="col-md-6">
5             <label class="" for="Name">Your Name</label>
6             <div class="form-group input-group">
7                 <span class="input-group-text"><i class="fas fa-users"></i></span>
8                 <input type="text" id="Name" required class="form-control form-group input-group">
9             </div>
10            <div class="col-md-6">
11                <label class="" for="email">Email Address</label>
12                <div class="form-group input-group">
13                    <span class="input-group-text"><i class="fas fa-at"></i></span>
14                    <input type="email" id="email" required class="form-control form-group input-group">
15                </div>
16                <div class="col-md-6">
17                    <label for="comment">Your Feedback</label>
18                    <div class="form-group input-group">
19                        <div class="input-group-prepend">
20                            <span class="input-group-text"><i class="fas fa-comment-dots"></i></span>
21                        </div>
22                        <textarea name="comment" id="comment" rows="5" class="form-control form-group"></textarea>
23                    </div>
24                </div>
25                <button class="btn btn-warning btn-lg">Submit</button>
26            </div>
27        <div id="ketqua"></div>
28    </form>
29
30
31
32
33

```

8.8.3 Contact Us – Geolocation/Google Map



HTML code:

A screenshot of Visual Studio Code showing the file "contact_us.html". An orange callout box highlights the text "We embeded the code from Google map to use to show our office location". The code editor shows the following HTML and CSS code:

```
<address class="mt-2">
  <strong> AskMe!Mobile ltd. </strong> <br>
  FPT Aptech Computer Education <br>
  590 CMT Street, District 3, HCMC <br>
  70000, Vietnam <br>
</address>

<div class="col-md-4 col-sm-12 thumbnail mb-5">
  
</div>
</div>

<div class="row">
  <div class="col-md-8 offset-md-2">
    <iframe
      src="https://www.google.com/maps/embed?pb=!1m18!1m12!1m3!1d3919.322629018092!2d106.663913!
      width="100%" height="500px" frameborder="0" style="border:0;" allowfullscreen="" aria-hidden="false" tabindex="0" class="w-100"></iframe>
  </div>
</div>
</div>
```

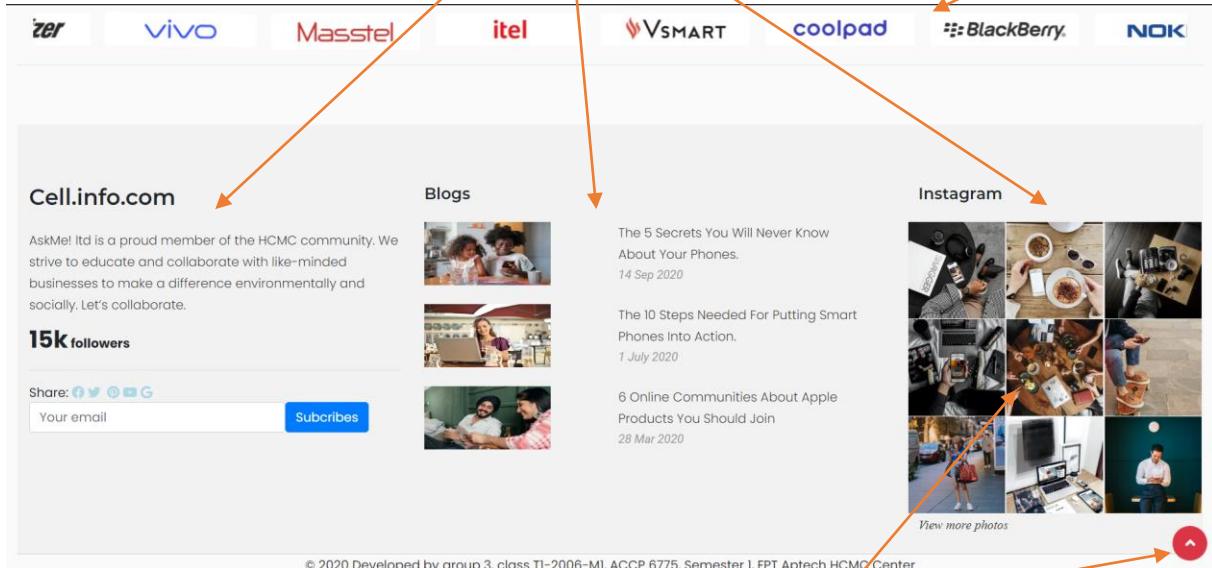
The URL in the iframe's src attribute is: https://www.google.com/maps/embed?pb=!1m18!1m12!1m3!1d3919.322629018092!2d106.663913!

Using Bootstrap grid system, we created a visually stimulating footer session

8.9 Footer

This part use owl carousel

8.9.1 Footer – Bootstrap Layout



HTML code:

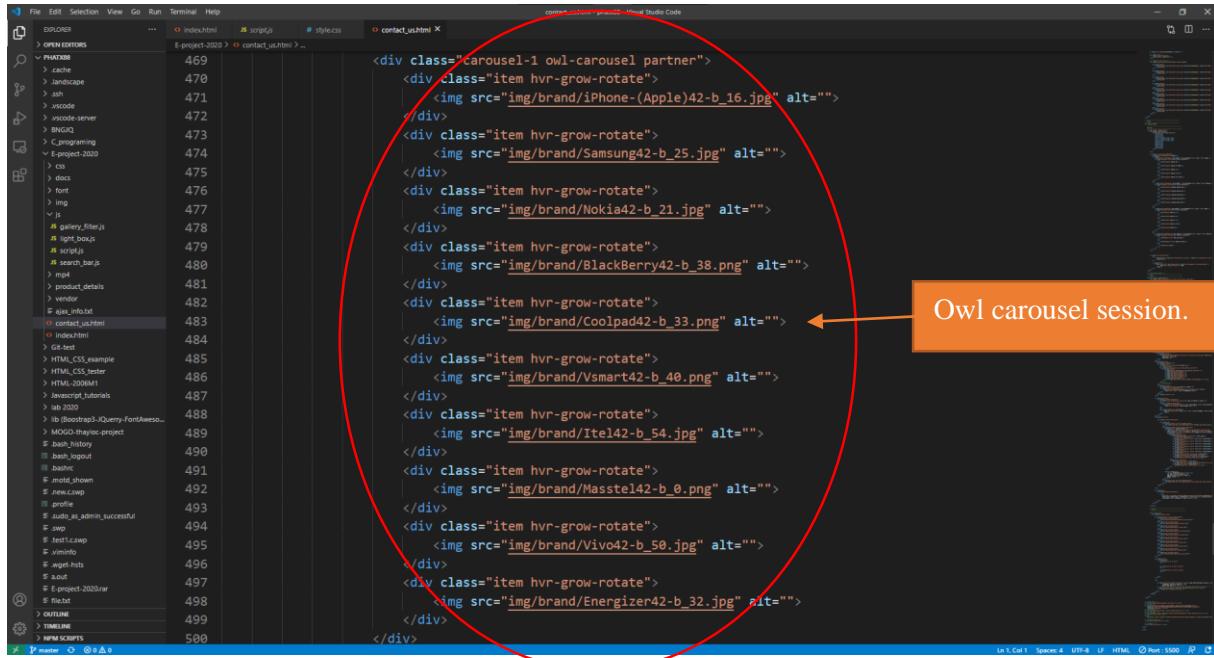
```

<!-- footer.html -->
<div id="footer">
    <div class="container-fluid">
        <div class="row">
            <div class="col-12 col-sm-6 col-md-4 col-lg-4">
                <div class="partner">
                    <div class="owl-carousel owl-carousel partner">
                        <div>...</div>
                        <div>...</div>
                        <div>...</div>
                    </div>
                </div>
            </div>
            <div class="col-12 col-sm-6 col-md-4 col-lg-4">
                <div class="social">
                    <div class="row">
                        <div class="col-12 col-lg-4">
                            ...
                        </div>
                        <div class="col-12 col-sm-6 col-lg-4">
                            ...
                        </div>
                        <div class="col-12 col-sm-6 col-lg-3">
                            ...
                        </div>
                    </div>
                </div>
            </div>
            <div class="col-12 col-sm-6 col-md-4 col-lg-4">
                <div class="text-center footer_bottom">
                    <p>&copy; 2020 Developed by group 3, class T1-2006-M1, ACCP 6775, Semester 1, FPT Aptech HCMC Center</p>
                    <!-- <a href="javascript:void()" class="btn btn-danger back-to-top hvr-icon-up"> -->
                    <a href="javascript:void(0)" class="btn btn-danger back-to-top hvr-icon-up">
                        <i class="fas fa-angle-up hvr-icon"></i>
                    </a>
                </div>
            </div>
        </div>
    </div>
</div>

```

Built-in light box gallery &
Back_to_top button

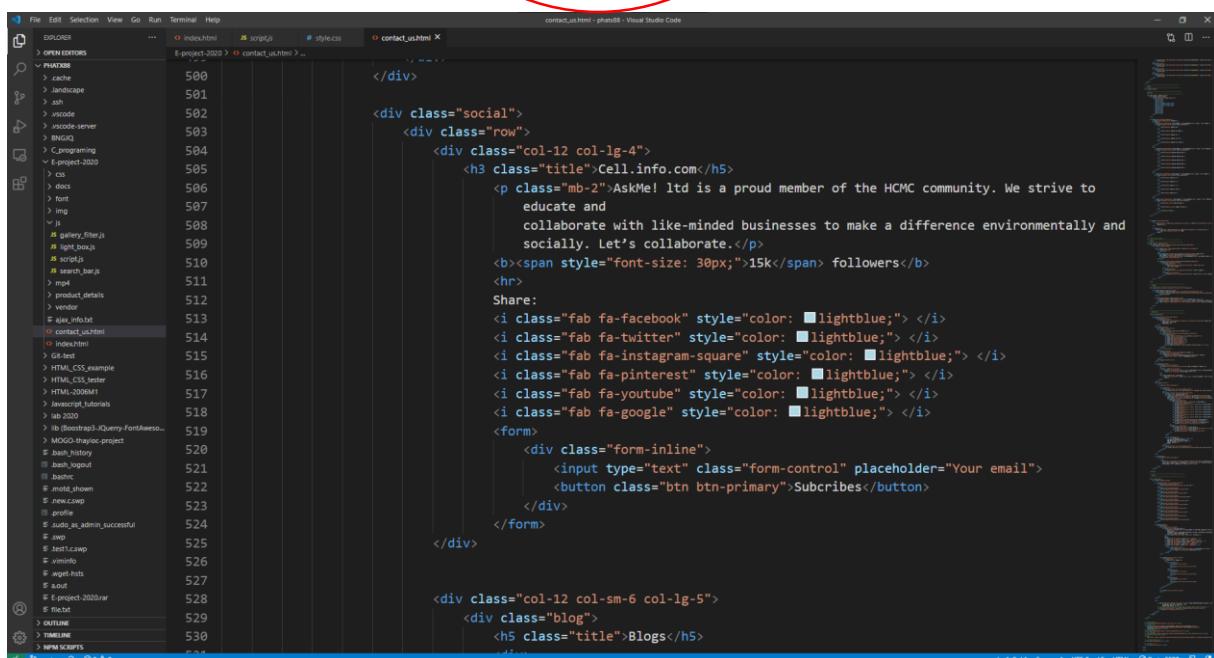
Owl carousel session.



```

<div class="carousel-1 owl-carousel partner">
    <div class="item hvr-grow-rotate">
        
    </div>
    <div class="item hvr-grow-rotate">
        
    </div>
</div>

```



```

<div class="social">
    <div class="row">
        <div class="col-12 col-lg-4">
            <h3 class="title">Cell.info.com</h3>
            <p class="mb-2">AskMe! ltd is a proud member of the HCMC community. We strive to educate and collaborate with like-minded businesses to make a difference environmentally and socially. Let's collaborate.</p>
            <b><span style="font-size: 30px;">15k</span> followers</b>
            <hr>
            Share:
            <i class="fab fa-facebook" style="color: #lightblue;"></i>
            <i class="fab fa-twitter" style="color: #lightblue;"></i>
            <i class="fab fa-instagram-square" style="color: #lightblue;"></i>
            <i class="fab fa-pinterest" style="color: #lightblue;"></i>
            <i class="fab fa-youtube" style="color: #lightblue;"></i>
            <i class="fab fa-google" style="color: #lightblue;"></i>
        </div>
        <form>
            <div class="form-inline">
                <input type="text" class="form-control" placeholder="Your email">
                <button class="btn btn-primary">Subscribe</button>
            </div>
        </form>
    </div>
<div class="col-12 col-sm-6 col-lg-5">
    <div class="blog">
        <h5 class="title">Blogs</h5>
        ...
    </div>

```

```

<div class="col-12 col-sm-6 col-lg-5">
    <div class="blog">
        <h5 class="title">Blogs</h5>
        <div>
            <div class="row">
                <div class="col-6 col-sm-5">...</div>
                <div class="col-6 col-sm-7 pl-0 pr-5 mb-1">...</div>
            </div>
            <div class="row">
                <div class="col-6 col-sm-5">...</div>
                <div class="col-6 col-sm-7 pl-0 pr-5 mb-1">...</div>
            </div>
            <div class="row">
                <div class="col-6 col-sm-5">...</div>
                <div class="col-6 col-sm-7 pl-0 pr-5 mb-1">...</div>
            </div>
        </div>
    </div>
</div>
<div class="col-12 col-sm-6 col-lg-3">

```

JS code:

```

$(document).ready(function() {
    $(".carousel-1").owlCarousel({
        items: 7,
        rtl: true,
        dots: false,
        margin: 20,
        loop: true,
        autoplay: true,
        autoplayHoverPause: false,
        slideTransition: 'linear',
        autoplaySpeed: 5000,
        autoplayTimeout: 5000,
        responsive: {
            0: {
                items: 1,
                nav: false
            },
            600: {
                items: 3,
                nav: false
            },
            1000: {
                items: 5,
                nav: false
            },
            1200: {
                items: 7,
                nav: false
            }
        }
    });
});

```

Custom owl carousel
 jQuery for footer

8.9.2 Footer – Lightbox Gallery

Ce
Clicking here will open a
lightbox gallery. We used
W3C sample code to built
the modal.

Blogs

The 5 Secrets You Will Never Know About Your Phones.
14 Sep 2020

The 10 Steps Needed For Putting Smart Phones into Action.
1 July 2020

6 Online Communities About Apple Products You Should Join
28 Mar 2020

Instagram

View more photos

Share: [Facebook](#) [Twitter](#) [LinkedIn](#) [Email](#)

Your email Subscribes

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Energizer vivo Masstel itel VSMART coolpad BlackBerry

Cell.info.com

AskMe! It is a proud member of the HCMC community. We strive to educate and collaborate with like-minded businesses to make a difference environmentally and socially. Let's collaborate!

15k followers

Share: [Facebook](#) [Twitter](#) [LinkedIn](#) [Email](#)

Your email Subscribes

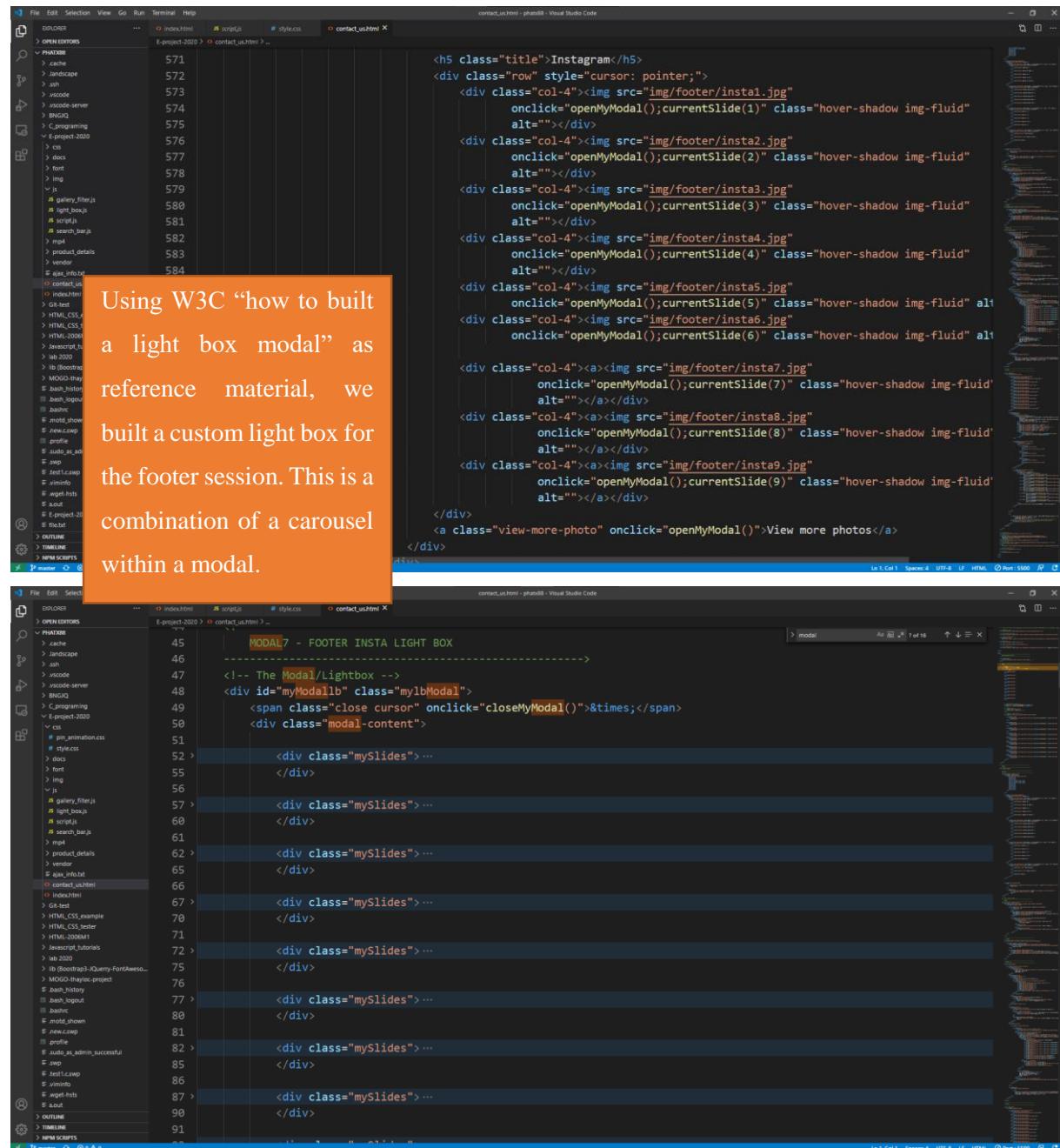
Insta5

Instagram

View more photos

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HTML code:



The image shows two side-by-side screenshots of Visual Studio Code. Both screenshots have the title bar "contact_us.html - phat88 - Visual Studio Code".

Left Screenshot: This screenshot shows the code for a modal. A large orange box highlights the first few lines of the code. The code starts with an H5 tag and several DIV tags with class="col-4". The highlighted text is as follows:

```
<h5 class="title">Instagram</h5>
<div class="row" style="cursor: pointer;">
  <div class="col-4"></div>
```

Right Screenshot: This screenshot shows the code for a footer insta lightbox. A search bar at the top right of the editor window has the word "modal" typed into it. The code starts with a comment and a div with id="myModal". The highlighted text is as follows:

```
<!-- The Modal/Lightbox -->
<div id="myModal" class="myLbModal">
  <span class="close cursor" onclick="closeMyModal()">&times;</span>
  <div class="modal-content">
```

The code continues with multiple nested DIVs with class="mySlides".

Using W3C “how to built a light box modal” as reference material, we built a custom light box for the footer session. This is a combination of a carousel within a modal.

CSS

code:

```

1252 /* light Box */
1253
1254 /* Hide the slides by default */
1255
1256 .mySlides {
1257 |   display: none;
1258 }
1259
1260 /* Next & previous buttons */
1261
1262 .prev, .next {
1263 |   cursor: pointer;
1264 |   position: absolute;
1265 |   top: 50%;
1266 |   width: auto;
1267 |   padding: 16px;
1268 |   margin-top: -50px;
1269 |   color: #white;
1270 |   font-weight: bold;
1271 |   font-size: 20px;
1272 |   transition: 0.6s ease;
1273 |   border-radius: 0 3px 3px 0;
1274 |   user-select: none;
1275 |   -webkit-user-select: none;
1276 }
1277
1278 /* Position the "next button" to the right */
1279
1280 .next {
1281 |   right: 0;
1282 |   border-radius: 3px 0 0 3px;
1283 }

```

JS code:

```

11
12 var slideIndex = 1;
13 showSlides(slideIndex);
14
15 // Next/previous controls
16 function plusSlides(n) {
17 |   showSlides(slideIndex += n);
18 }
19
20 // Thumbnail image controls
21 function currentSlide(n) {
22 |   showSlides(slideIndex = n);
23 }
24
25 function showSlides(n) {
26 |   var i;
27 |   var slides = document.getElementsByClassName("mySlides");
28 |   var dots = document.getElementsByClassName("dots");
29 |   var captionText = document.getElementById("caption");
30 |   if (n > slides.length) {slideIndex = 1}
31 |   if (n < 1) {slideIndex = slides.length}
32 |   for (i = 0; i < slides.length; i++) {
33 |     slides[i].style.display = "none";
34 |   }
35 |   for (i = 0; i < dots.length; i++) {
36 |     dots[i].className = dots[i].className.replace(" active", "");
37 |   }
38 |   slides[slideIndex-1].style.display = "block";
39 |   dots[slideIndex-1].className += " active";
40 |   captionText.innerHTML = dots[slideIndex-1].alt;
41 }

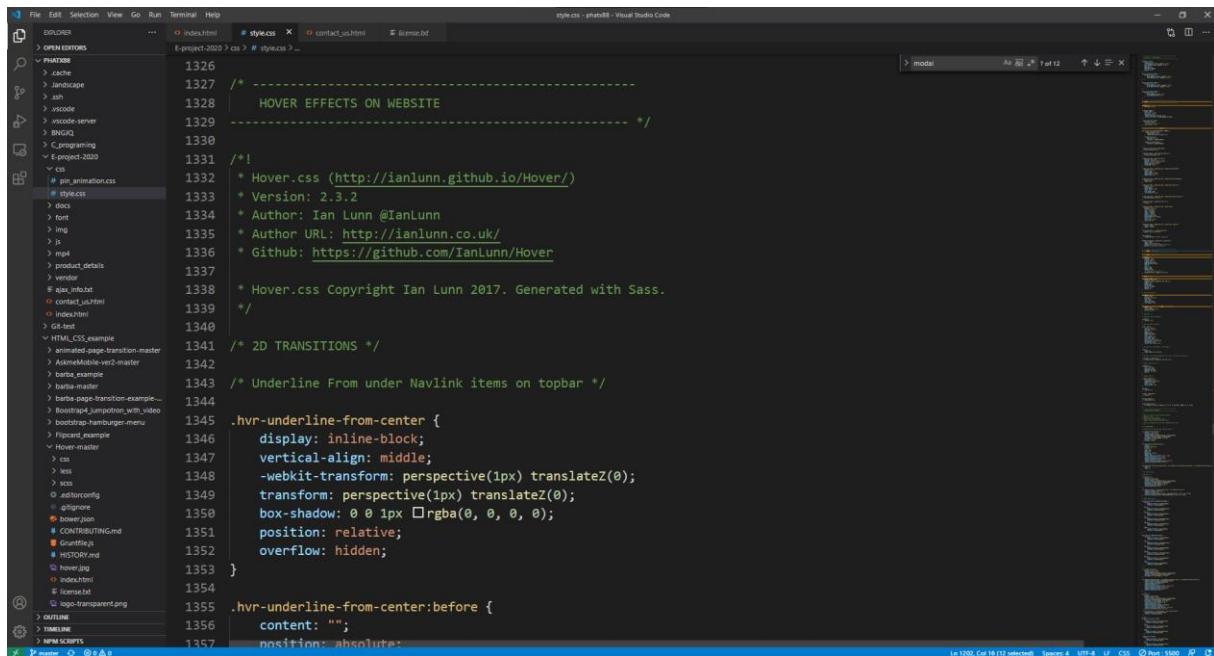
```

8.10 Miscellaneous CSS/Animation Modules

8.10.1 Hover.css by Ian Lunn

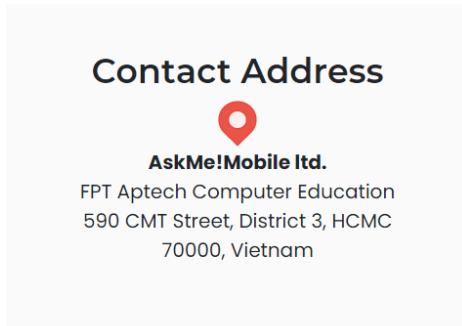
MIT lincesed css library we use on some of our hovering animation.

CSS code:



```
1326 /* -----
1327 | HOVER EFFECTS ON WEBSITE
1328 |
1329 ----- */
1330 /*!
1331 * Hover.css (http://ianlunn.github.io/Hover/)
1332 * Version: 2.3.2
1333 * Author: Ian Lunn @IanLunn
1334 * Author URL: http://ianlunn.co.uk/
1335 * Github: https://github.com/IanLunn/Hover
1336 *
1337 * Hover.css Copyright Ian Lunn 2017. Generated with Sass.
1338 */
1339 /* 2D TRANSITIONS */
1340 /* Underline From under Navlink items on topbar */
1341 .hvr-underline-from-center {
1342   display: inline-block;
1343   vertical-align: middle;
1344   -webkit-transform: perspective(1px) translateZ(0);
1345   transform: perspective(1px) translateZ(0);
1346   box-shadow: 0 0 1px 0 rgba(0, 0, 0, 0);
1347   position: relative;
1348   overflow: hidden;
1349 }
1350 .hvr-underline-from-center:before {
1351   content: "";
1352   position: absolute;
```

8.10.2 Pin Construction Animation by Nikolay Talanov



A little svg animation found on codepen, we emailed the author for permission to put it in our website for fun and giggle.

HTML code:

```
<svg class="pin" xmlns:rdf="http://www.w3.org/1999/02/rdf" xmlns="http://www.w3.org/2000/svg" xmlns:xlink="http://www.w3.org/1999/xlink" viewBox="0 0 60 60" version="1.1">
  <g class="pin_group">
    <g class="pin_grayGroup">
      <path class="pin_square" fill="none" stroke-width="1" d="M0,0,60,60,60,0z" />
      <path class="pin_line pin_line-1" fill="none" stroke-width="1" d="M15,0 15,60" />
      <path class="pin_line pin_line-2" fill="none" stroke-width="1" d="M30,0 30,60" />
      <path class="pin_line pin_line-3" fill="none" stroke-width="1" d="M45,0 45,60" />
      <path class="pin_line pin_line-4" fill="none" stroke-width="1" d="M0,45 60,45" />
      <path class="pin_line pin_line-5" fill="none" stroke-width="1" d="M0,30 60,30" />
      <path class="pin_line pin_line-6" fill="none" stroke-width="1" d="M0,15 60,15" />
      <path class="pin_circleBig" fill="none" stroke-width="1" d="M60,30 a30,30 0 0,1 -60,0 a30,30 0 0,1 60,0" />
      <path class="pin_circleSmall" fill="none" stroke-width="1" d="M45,30 a15,15 0 0,1 -30,0 a15,15 0 0,1 30,0" />
    </g>
    <g class="pin_greenGroup">
      <path class="pin_outer" stroke-width="2" d="M30,0 a30,30 0 0,1 30,30 L60,60 30,60 a30,30 0 0,1 0,-60" />
      <path class="pin_innen" stroke-width="2" d="M45,30 a15,15 0 0,1 -30,0 a15,15 0 0,1 30,0" />
    </g>
  </g>
</svg>
```

The code is an SVG definition for a pin construction animation. It uses several paths to create a pin shape and two circles at the top. The paths are styled with 'fill="none"' and 'stroke-width="1"'. The first group ('pin_group') contains a square path and five line paths. The second group ('pin_greenGroup') contains two circle paths. The entire SVG is defined with 'viewBox="0 0 60 60"' and 'version="1.1"'.

8.10.3 Chrome Native Lazy Load

By adding the HTML property loading="lazy" on img tag, we was able to utilize Chrome/Edge built-in browser support for "lazy" loading for pictures, iframe, youtube videos assets. We optimized the loading time on our site at the same time save a great deal on band-width. A simple waterfall test will show how much time and bandwidth amount we save after using lazy load.

The image shows two screenshots of a mobile browser's DevTools Network tab. The top screenshot shows a full page load with many resources, including numerous images and CSS files. The bottom screenshot shows a much faster load time and fewer requests, indicating the use of native lazy loading. A large orange callout box highlights the difference in request counts and load times between the two tabs.

Name	Status	Type	Initiator	Size	Time	Waterfall
index.html	200	document	Other	269 kB	72 ms	
bootstrap.min.css	200	stylesheet	index.html	161 kB	60 ms	
owl.carousel.min.css	200	stylesheet	index.html	988 B	41 ms	
jquery.mCustomScrollbar.min.css	200	stylesheet	index.html	35 kB	49 ms	
headline_animation.css	200	stylesheet	index.html	4.7 kB	41 ms	
style.css	200	stylesheet	index.html	47.3 kB	45 ms	
alias	200	stylesheet	index.html	30.2 kB	49 ms	
widget-loader-lg-en.gif	200	gif	index.html	43.2 kB	45 ms	
apple-iphone-11-pro-max.jpg	200	jpeg	index.html	15.6 kB	54 ms	
apple-iphone-11-pro.jpg	200	jpeg	index.html	16.0 kB	53 ms	
apple-iphone-11.jpg	200	jpeg	index.html	14.5 kB	58 ms	
apple-iphone-se-2020.jpg	200	jpeg	index.html	12.9 kB	54 ms	
apple-iphone-xr-new.jpg	200	jpeg	index.html	11.9 kB	50 ms	
samsung-galaxy-note20-ultra.jpg	200	jpeg	index.html	10.5 kB	40 ms	
roki83-5g.jpg	200	jpeg	index.html	9.3 kB	53 ms	
samsung-galaxy-a21s-jpg	200	jpeg	index.html	13.2 kB	54 ms	
samsung-galaxy-a31.jpg	200	jpeg	index.html	12.2 kB	55 ms	
samsung-galaxy-m31-sm-m315f.jpg	200	jpeg	index.html	14.6 kB	65 ms	
samsung-galaxy-m31s.jpg	200	jpeg	index.html	12.2 kB	60 ms	
samsung-galaxy-x20-fe-5g-r.jpg	200	jpeg	index.html	13.9 kB	62 ms	
casfamily-hoppins300.400.500.600.700	200	stylesheet	style.css	1.1 kB	61 ms	
casfamily-Dancing+Scriptwght0.400...	200	stylesheet	style.css	539 B	67 ms	
casfamily-Montserratwght0.400...	200	stylesheet	style.css	1.2 kB	65 ms	
roki23.jpg	200	jpeg	index.html	8.7 kB	53 ms	
roki53.jpg	200	jpeg	index.html	9.9 kB	52 ms	

104 requests | 24.8 MB transferred | 25.6 MB resources | Finish: 5.79 s | DOMContentLoaded: 1.39 s | Load: 1.75 s

Name	Status	Type	Initiator	Size	Time	Waterfall
index.html	200	document	Other	27.8 kB	39 ms	
jquery-UA-179085454-1	200	script	index.html	365 kB	96 ms	
bootstrap.min.css	200	stylesheet	index.html	24.4 kB	49 ms	
owl.carousel.min.css	200	stylesheet	index.html	941 B	53 ms	
jquery.mCustomScrollbar.min.css	200	stylesheet	index.html	35 kB	52 ms	
headline_animation.css	200	stylesheet	index.html	945 B	45 ms	
style.css	200	stylesheet	index.html	8.7 kB	44 ms	
alias	200	stylesheet	index.html	30.2 kB	48 ms	
widget-loader-lg-en.gif	200	gif	index.html	43.1 kB	58 ms	
apple-iphone-11-pro-max.jpg	200	jpeg	index.html	15.6 kB	63 ms	
apple-iphone-11-pro.jpg	200	jpeg	index.html	15.8 kB	63 ms	
apple-iphone-11.jpg	200	jpeg	index.html	14.5 kB	63 ms	
apple-iphone-se-2020.jpg	200	jpeg	index.html	12.7 kB	42 ms	
apple-iphone-xr-new.jpg	200	jpeg	index.html	11.8 kB	69 ms	
samsung-galaxy-note20-ultra.jpg	200	jpeg	index.html	10.4 kB	69 ms	
roki83-5g.jpg	200	jpeg	index.html	9.1 kB	69 ms	
samsung-galaxy-a21s-jpg	200	jpeg	index.html	13.0 kB	66 ms	
samsung-galaxy-a31.jpg	200	jpeg	index.html	12.0 kB	70 ms	
samsung-galaxy-m31-sm-m315f.jpg	200	jpeg	index.html	14.6 kB	76 ms	
samsung-galaxy-m31s.jpg	200	jpeg	index.html	12.0 kB	73 ms	
samsung-galaxy-x20-fe-5g-r.jpg	200	jpeg	index.html	13.9 kB	73 ms	
roki23.jpg	200	jpeg	index.html	8.5 kB	66 ms	
roki53.jpg	200	jpeg	index.html	9.8 kB	67 ms	
roki72.jpg	200	jpeg	index.html	10.8 kB	66 ms	

73 requests | 1.6 MB transferred | 3.0 MB resources | Finish: 5.91 s | DOMContentLoaded: 1.01 s | Load: 1.28 s

In conclusion, using what we learned from inside and outside of the class-room. We was able to built a usefull website that was optimized for mobile devices in relative short amount of time. It was a very educational opportunity to work on such a fun project like AskMeMobile.

9 TASK SHEET 2

Project Ref No.	Project Title – Ask Me Mobile	Activity Plan Prepared by	Date of preparation of Activity Plan			
			Actual Start Date	Actual Days	Teammate Names	Status
Brainstorming ideas for layouts and Project Objectives.		Phát, Triệu, Nghĩa	05/09/2020	1 day	Phát, Triệu, Nghĩa	Completed
Draw site maps and architecture design.		Phát	03/09/2020	1 days	Phát	Completed
Wire framing general page layout.		Phát, Triệu	05/09/2020	4 days	Phát, Triệu	Completed
Collect static assets (pictures, mp4, documentation)		Phát, Triệu, Nghĩa	05/09/2020	3 days	Phát, Triệu, Nghĩa	Completed
Design & Build Home Page.		Phát	03/09/2020	12 days	Phát	Completed
Design & Build Contact Us Page.	Triệu, Nghĩa	05/09/2020	4 days	Nghĩa	Completed	
Design & Build About Us Page.	Nghĩa	08/09/2020	4 days	Triệu, Nghĩa	Completed	
Design & Build Footer Session.	Triệu	12/09/2020	5 days	Triệu	Completed	
Design & Build Product Detail Pages.	Phát, Nghĩa, Triệu	19/09/2020	7 days	Phát, Nghĩa, Triệu	Completed	
Write project report Review 1	Phát	09/09/2020	3 days	Phát	Completed	
Testing UI.	Triệu, Nghĩa	15/09/2020	3 days	Triệu	Completed	
Testing Responsiveness.	Phát, Triệu, Nghĩa	15/09/2020	10 days	Triệu, Nghĩa	Completed	
Final Testing.	Triệu, Nghĩa	26/09/2020	3 days	Triệu, Nghĩa	Completed	
Write project report Review 2	Phát	17/09/2020	8 days	Phát	Completed	

10 CHECKLIST VALIDATION

Task No.	Requirement	Validation
1	The Home Page should be neatly created with proper logo, menu and images.	Yes
2	A Menu should be created which would categorize all the information about the features provided in the Site For e.g. a Menu for Various Cell phones, a Menu for Features of Cell phones etc. etc. something like that.	Yes
3	The information should be categorized according to the Brand names of Mobiles like if a User wants to see only Nokia Phones then he click on Some Nokia Link/button etc. and he will see only That Brand phones and so on.	Yes
4	A Brief summary of features of Individual phones should be displayed on the Web Page along with the Cell phone but detailed Features should be stored in Individual Word documents which can be downloaded or viewed by the User who wishes to see the same.	Yes
5	A Comparison Web Page should also be there where there is Phone comparisons done with various models of same brand or various models of various brands.	Yes
6	The Comparison information should be provided in Tabular format comparing the features of different phones.	Yes
7	This information would be for 5 Phones of similar brands and 2 phones of different brands for 1 month and then it will change so for the time being the Page should handle the above requirement.	Yes
8	The Colour Schemes should be soothing, more of Pastel Colours can be chosen for the same.	Yes
9	When a particular brand phones are being displayed the background image of the Web page should show the Logo of that brand for e.g. if Nokia Phones are being displayed then that page should have the Logo of NOKIA as the background image and the same in case of other Brands.	Yes
10	There should be a “Contact Us” page which will have the Address of the Company and the mail address which when clicked will invoke the local mail client from where they can send an email. Address of the Company should be displayed using GeoLocation API (eg. GoogleMaps)	Yes
11	The information on the mobile phones and all can be picked up from the Sites of Nokia, Samsung etc.	Yes
12	Make use of layers, buttons and modals components of Bootstrap & HTML to avoid creation of html pages.	Yes
13	Review the appearance and organization of the site.	Yes
14	Checking Responsive for small and medium screen.	Yes

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