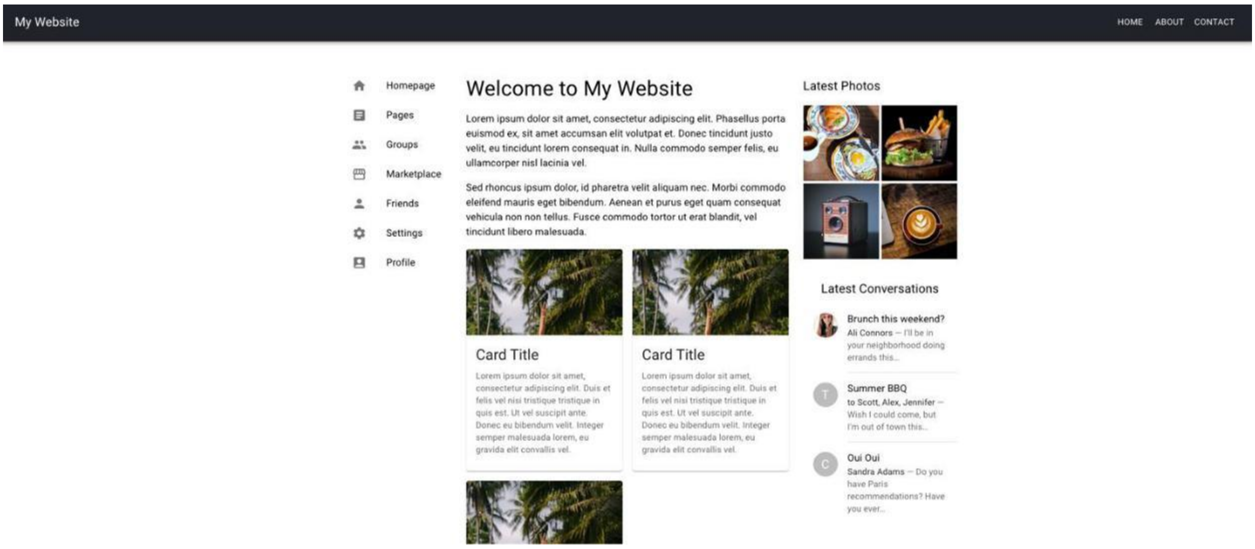
# Assignment 1: MUI Component

Objective:

- Use MUI component

This is website that we going to create today.



Welcome to My Website

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Card Title

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Latest Photos

Latest Conversations

Brunch this weekend?
Ali Connors — I'll be in your neighborhood doing errands this...

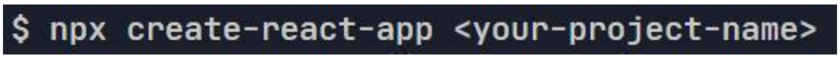
T
Summer BBQ
to Scott, Alex, Jennifer — Wish I could come, but I'm out of town this...

C
Oui Oui
Sandra Adams — Do you have Paris recommendations? Have you ever...

## Init React Application

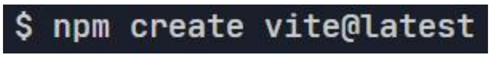
There are 2 ways that you can create your react application

1. Create React Application via create-react-app



```
$ npx create-react-app <your-project-name>
```

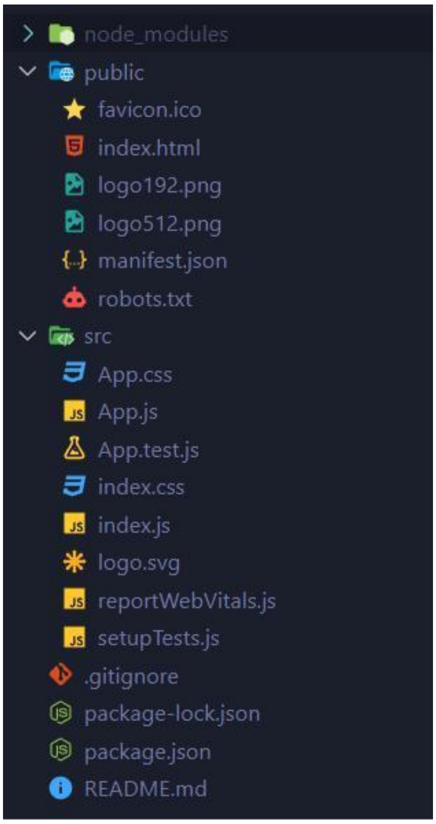
2. You can use vite to create your react application (which is faster) (Recommended)



```
$ npm create vite@latest
```

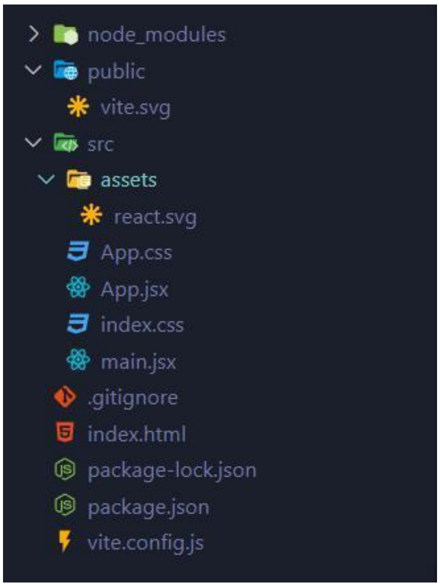
## Project Structure

1. Project structure created by create-react-app



```
> node_modules
v public
    favicon.ico
    index.html
    logo192.png
    logo512.png
    manifest.json
    robots.txt
v src
    App.css
    App.js
    App.test.js
    index.css
    index.js
    logo.svg
    reportWebVitals.js
    setupTests.js
  .gitignore
  package-lock.json
  package.json
  README.md
```

2. Project structure created by vite



```
> node_modules
v public
    vite.svg
v src
  v assets
      react.svg
    App.css
    App.jsx
    index.css
    main.jsx
  .gitignore
  index.html
  package-lock.json
  package.json
  vite.config.js
```

## What can be remove from these template code?

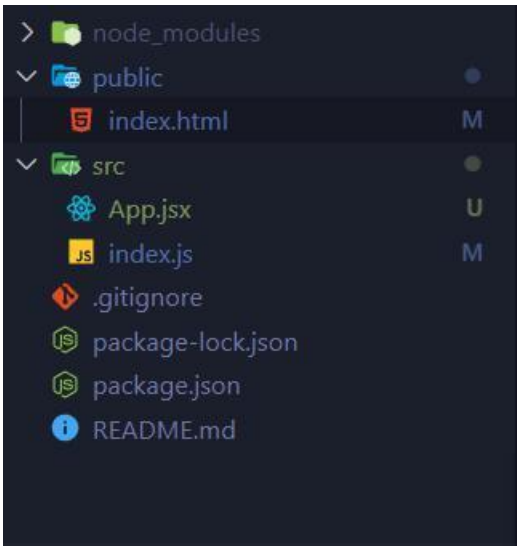
**(Please remove template code before you start coding/developing below are basic example how to remove template both create-react-app and vite)**

**(If you're using vite skip to page 5)**

1. create-react-app

- Everything in public folder can be remove **except** index.html
- Everything in src folder can be remove **except** for these file
    1. index.js
    2. App.js
- Start developing with only index.js and App.js are recommended

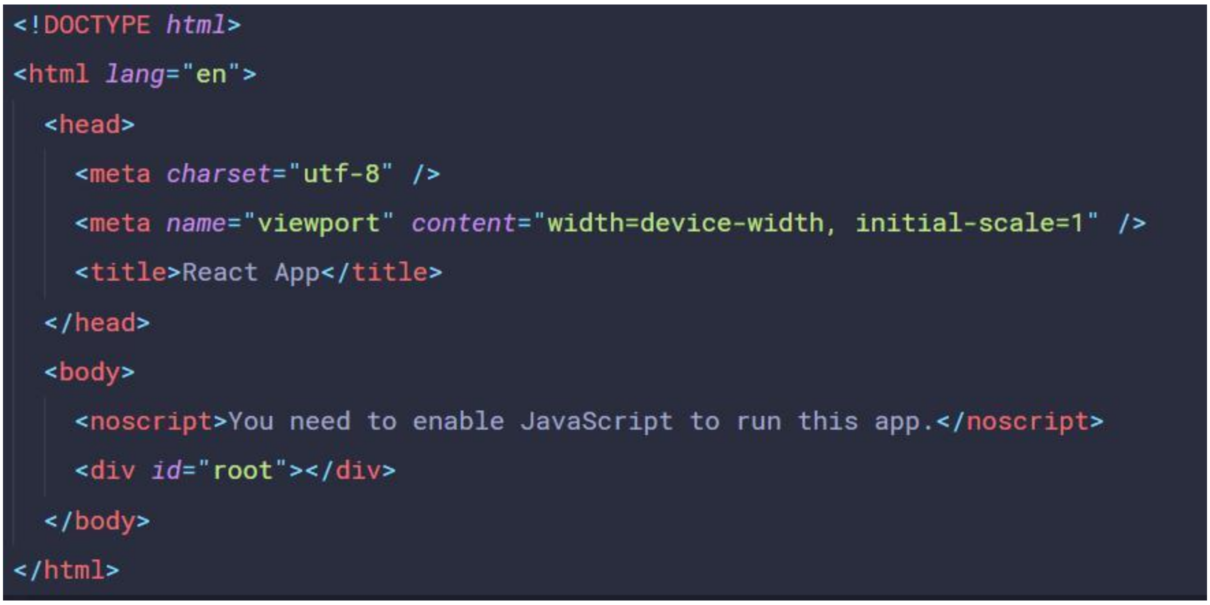
After you delete the template code, your project structure should look like this.



```
> node_modules
v public
    index.html        M
v src
    App.jsx           U
    index.js          M
  .gitignore
  package-lock.json
  package.json
  README.md
```

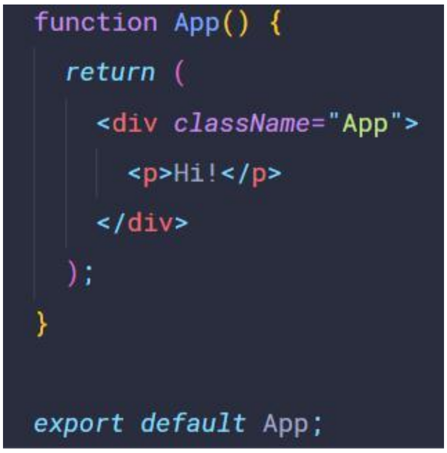
**NOTE:** App.js change to App.jsx because it will trigger JSX snippet provided by VSCode. Every file that you want to write JSX should be in .jsx

Your **index.html** file should look like this



```html
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1" />
    <title>React App</title>
  </head>
  <body>
    <noscript>You need to enable JavaScript to run this app.</noscript>
    <div id="root"></div>
  </body>
</html>
```

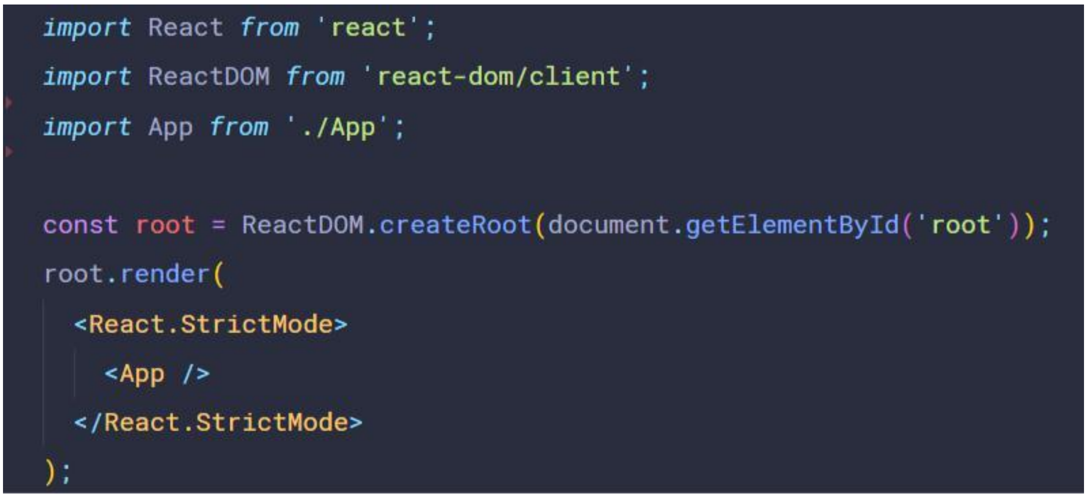
Your **App.jsx** (Don’t create App.jsx just rename your file)



```jsx
function App() {
  return (
    <div className="App">
      <p>Hi!</p>
    </div>
  );
}

export default App;
```

Your **index.js**



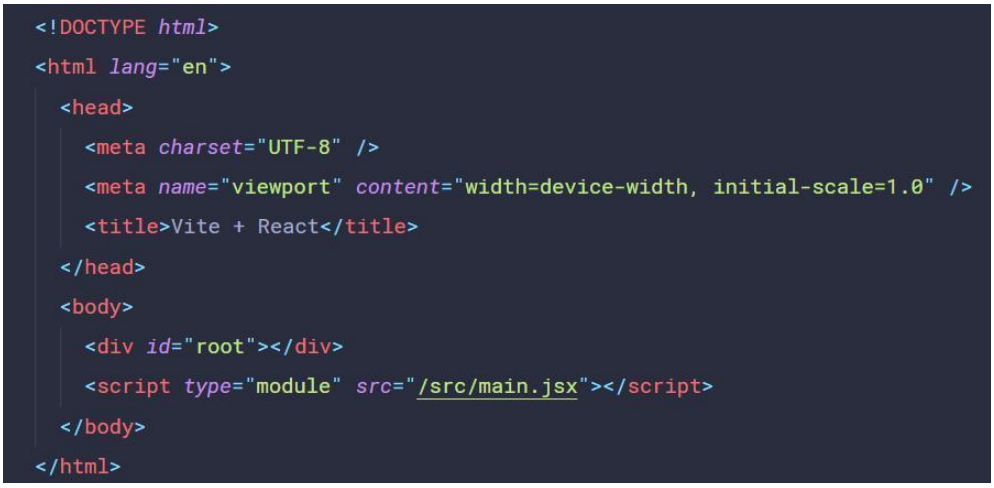
```js
import React from 'react';
import ReactDOM from 'react-dom/client';
import App from './App';

const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
  <React.StrictMode>
    <App />
  </React.StrictMode>
);
```

2. vite

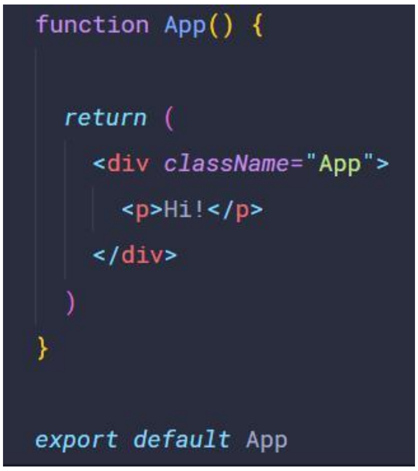
2.1 Remove .svg from assets folder and public folder

2.2 Your index.html



```html
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Vite + React</title>
  </head>
  <body>
    <div id="root"></div>
    <script type="module" src="/src/main.jsx"></script>
  </body>
</html>
```

2.3 Your App.jsx

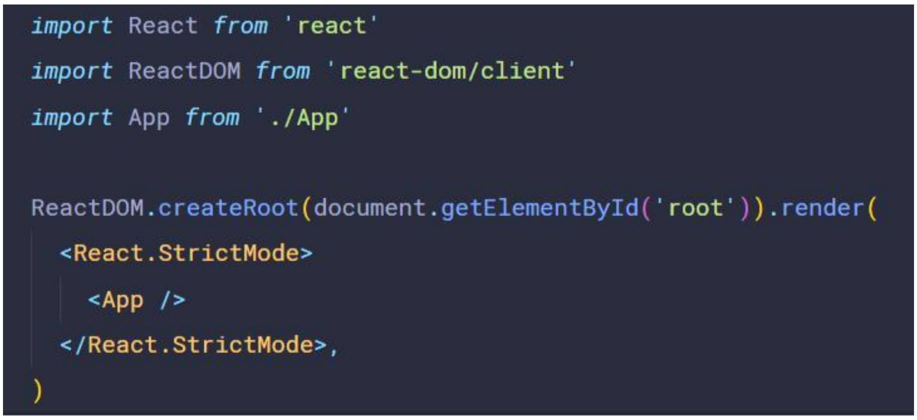


```jsx
function App() {

  return (
    <div className="App">
      <p>Hi!</p>
    </div>
  )
}

export default App
```

2.4 Your main.jsx



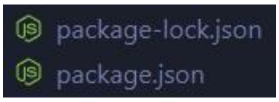
```jsx
import React from 'react'
import ReactDOM from 'react-dom/client'
import App from './App'

ReactDOM.createRoot(document.getElementById('root')).render(
  <React.StrictMode>
    <App />
  </React.StrictMode>,
)
```

What ever you do **DO NOT REMOVE index.html, index.js/main.jsx**. It is your application’s entry point.

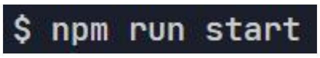
## **Your project should contain**:

- .gitignore for ignoring the file that you don’t want your git to track
- package.json and package-lock.json contain script and what library, package or dependency your application is using/depend on. (you mainly look at package.json)
- node_modules contain your library/dependency codes. This folder would appear after you run npm install (in case of create-react-app it’s already there) NOTE: if you have a look at your .gitignore file node_modules is in there because you don’t want to push library code into your githup repository. The node_modules is HUGE. If you want to send this project to other do not add node_modules when sending to them



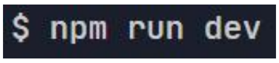
## Running your react application by using npm script:

1. create-react-app:



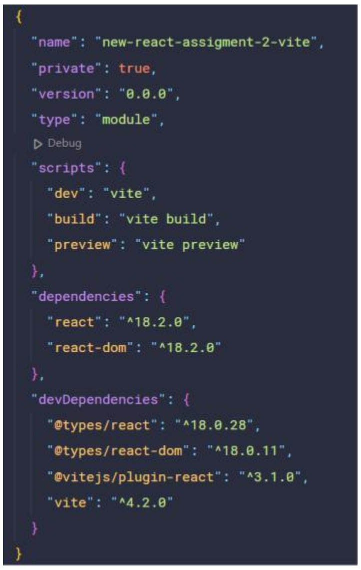
```
$ npm run start
```

2. vite:



```
$ npm run dev
```

If you’re not sure what script can be run have a look at your package.json



```
{
  "name": "new-react-assigment-2-vite",
  "private": true,
  "version": "0.0.0",
  "type": "module",
  "scripts": {
    "dev": "vite",
    "build": "vite build",
    "preview": "vite preview"
  },
  "dependencies": {
    "react": "^18.2.0",
    "react-dom": "^18.2.0"
  },
  "devDependencies": {
    "@types/react": "^18.0.28",
    "@types/react-dom": "^18.0.11",
    "@vitejs/plugin-react": "^3.1.0",
    "vite": "^4.2.0"
  }
}
```

1. scripts: what script can be run with your project.
2. dependencies: library/package that your application depend on (those packages that installed via npm install <package-name>)
3. devDependencies: library/package that is for development of your application (those packages that installed via npm install <package-name> --save-dev)

## Default installation

Run one of the following commands to add Material UI to your project:

```
npm install @mui/material @emotion/react @emotion/styled
```

## With styled-components

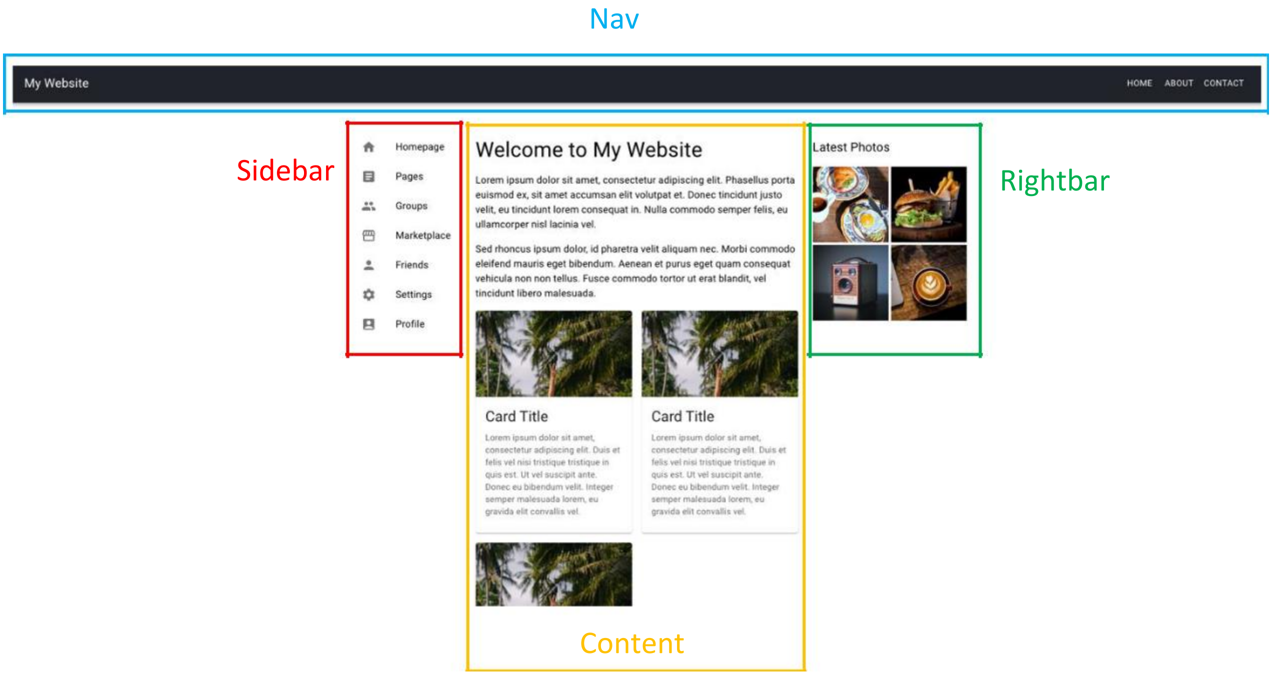
```
npm install @mui/material @mui/styled-engine-sc styled-components
```

## Icons

```
npm install @mui/icons-material
```

Create another folder in src folder called “components” where you’re going to store your components in this assignments.

We separate the main components of the web into 4 main sections.



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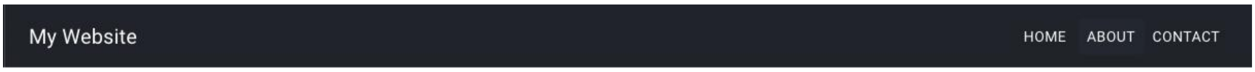
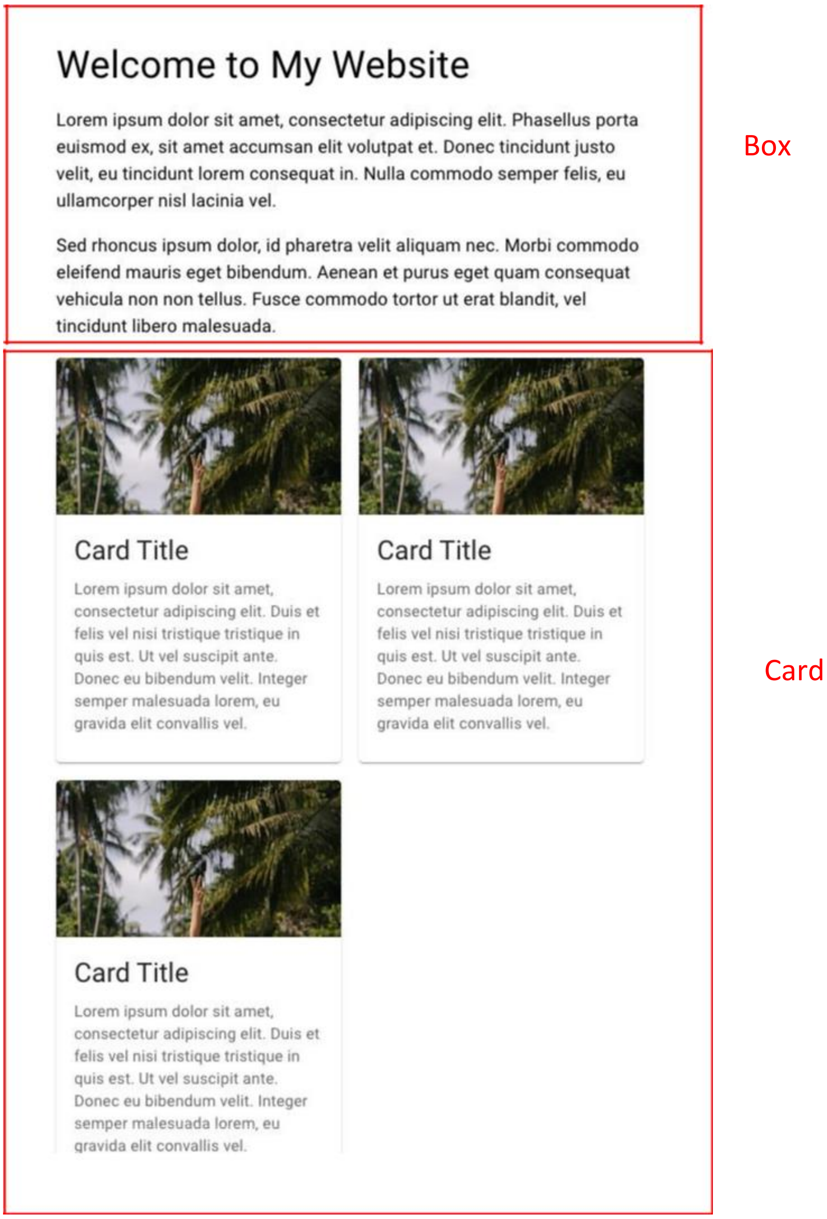
First, we start at Nav.

Create “Nav” file. and Create Appbar component that displays information like this. And set Appbar Color: "#20232a"



## In part of Content

Create “Content” file. and Create Content component that displays information like this.



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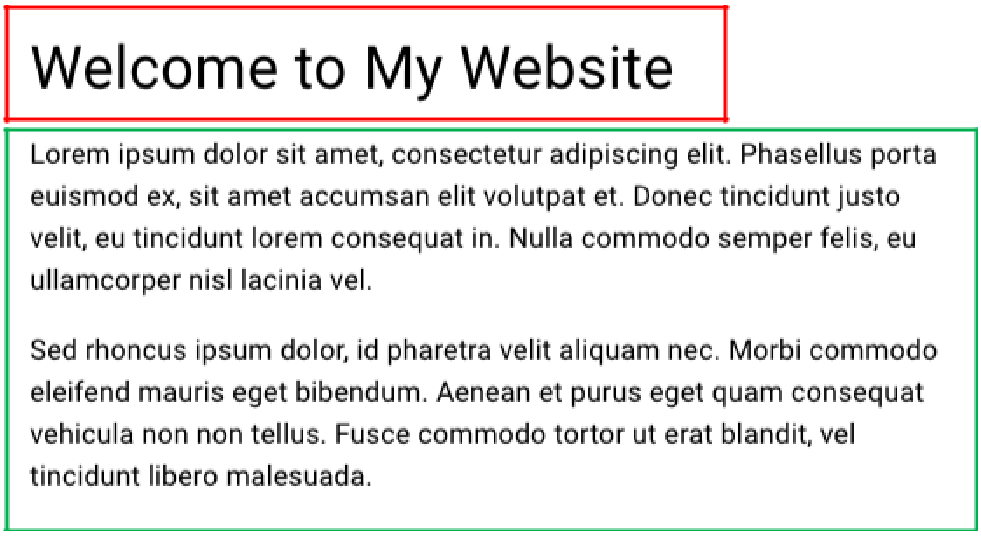
1. Create <Box> tag that contains <Typography> tag and shows the same text as in the red box.

2. Create <Card> tag that contains an image, card title, and card description. Create at least 3 cards with image height set to 140, all in <Grid>.

3. Wrap all of these components with <Grid>. And set the direction Column

Use variant="h4"



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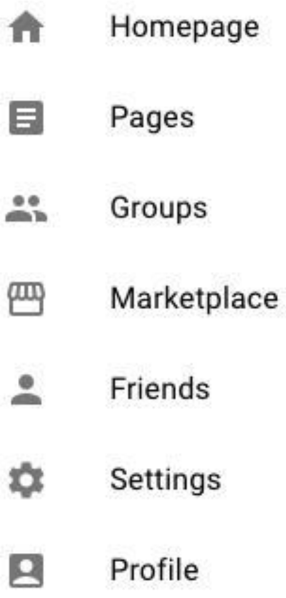
variant="body1"

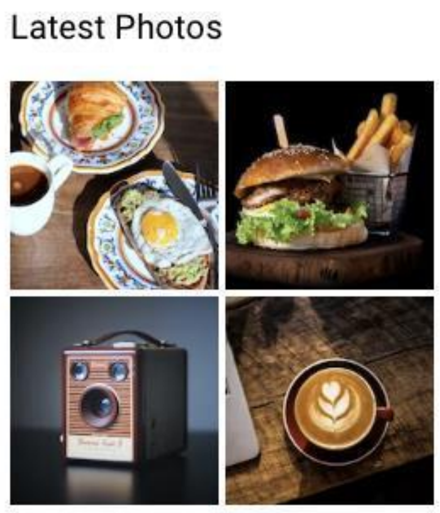
## Sidebar

1. Create "Sidebar" file and create Sidebar Component contains <List> tag that has 7 Icon like the picture. All of them are wrapped inside <Box> tag. and make it be a flex-end.

(Icon component: https://mui.com/material-ui/material-icons )



## Rightbar

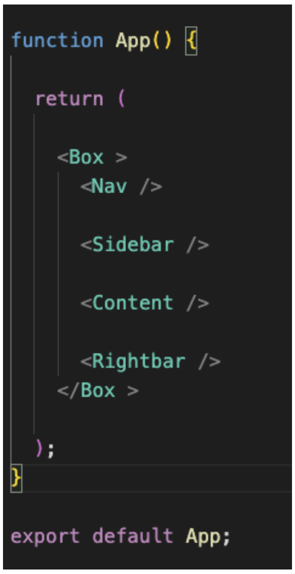


1. Create a “Rightbar” file and create a Sidebar Component with a

<Typography> and <ImageList> tags inside it, with at least 4 images set to width 250.

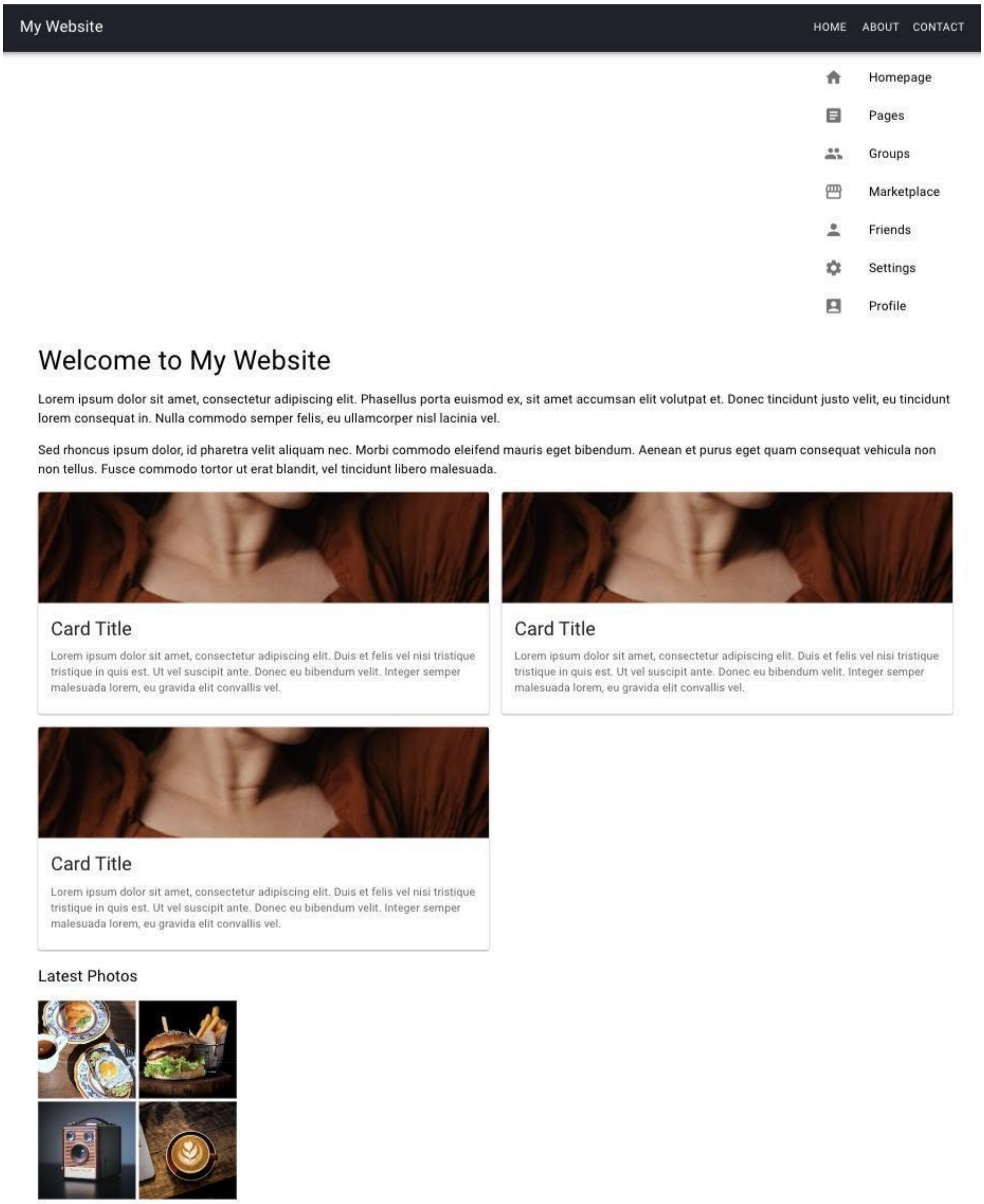
All of them are wrapper inside <Box> tag. and make it display vertically using flex Direction: 'column’.

Bring all of those components (Nav, Sidebar, Content , Rightbar) into App.jsx.



```
function App() {

  return (

    <Box >
      <Nav />

      <Sidebar />

      <Content />

      <Rightbar />
    </Box >

  );
}

export default App;
```

After following step the result should be like this!!



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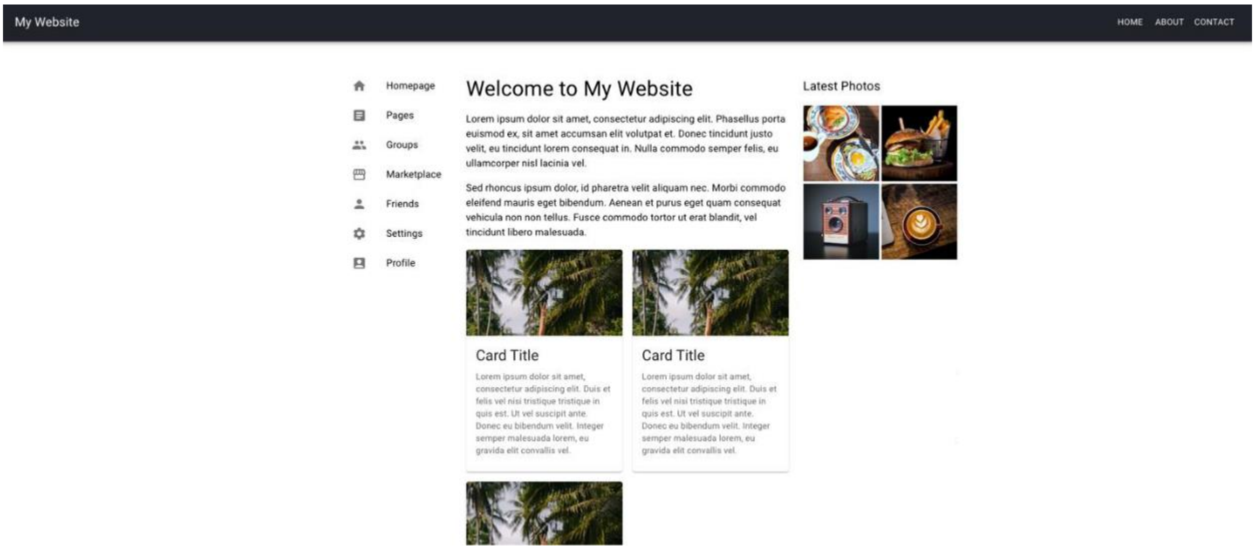
Latest Photos

**Hint:** Use Container and Grid to set layout on App.jsx.

After using Container and Grid, the result going to be like this.



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# Assignment 2: Responsive, breakpoint

Objective:

- Be able to understand Responsive Website.
- Be able to use breakpoint.

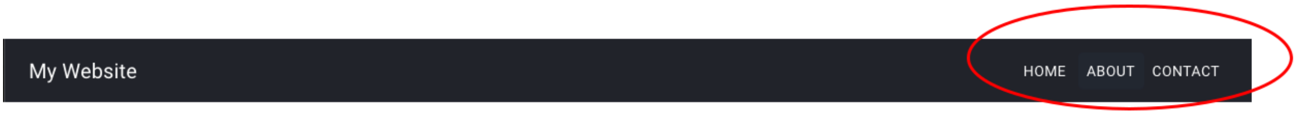
## Default breakpoints

Each breakpoint (a key) matches with a fixed screen width (a value):

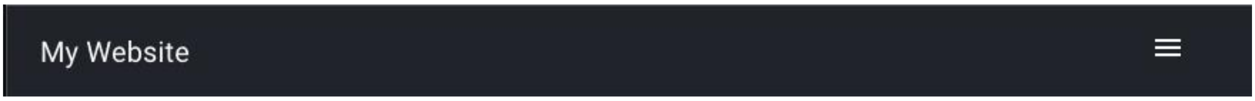
- xs, extra-small: 0px
- sm, small: 600px
- md, medium: 900px
- lg, large: 1200px
- xl, extra-large: 1536px

## In part of Nav

Make Nav responsive. After resizing the page length to less than 900px, hide the red circle content and show the menu bar instead.

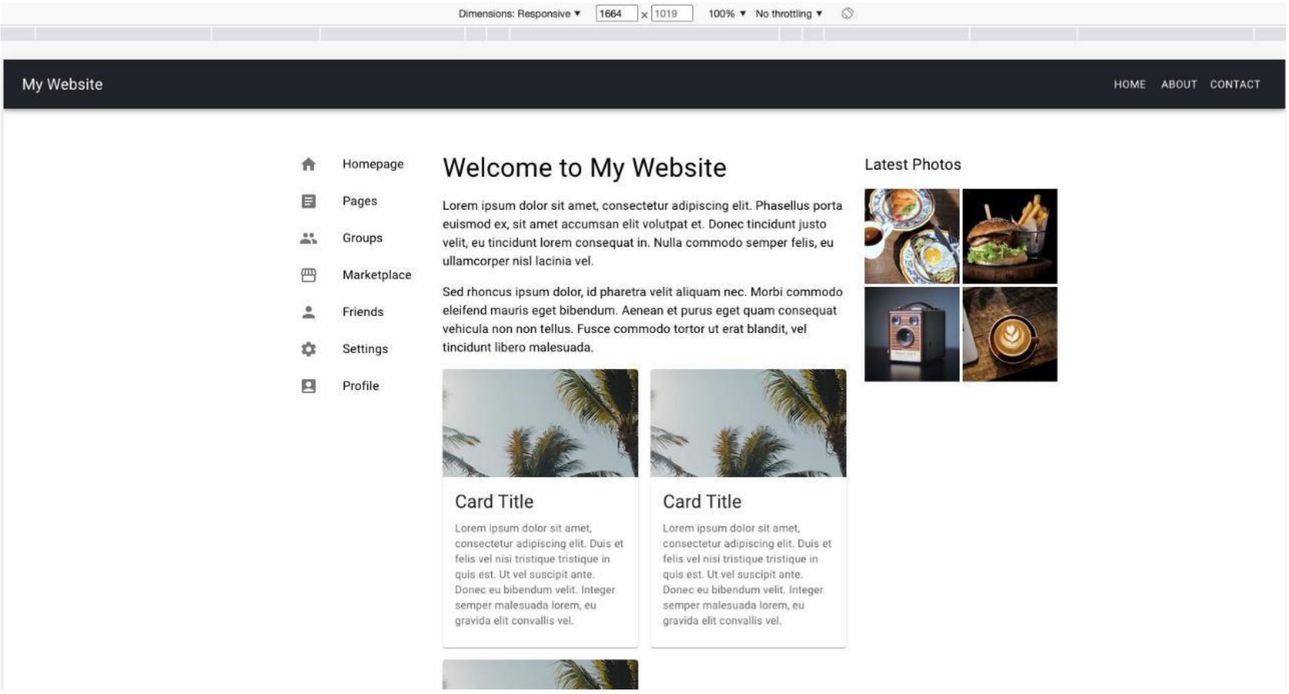


After page length to less than 900px



## In part of Sidebar and Rightbar

Make Sidebar and Rightbar disappear if resize the page length to less than 900px. if page length is higher than or equal 900px make it appear.



Welcome to My Website

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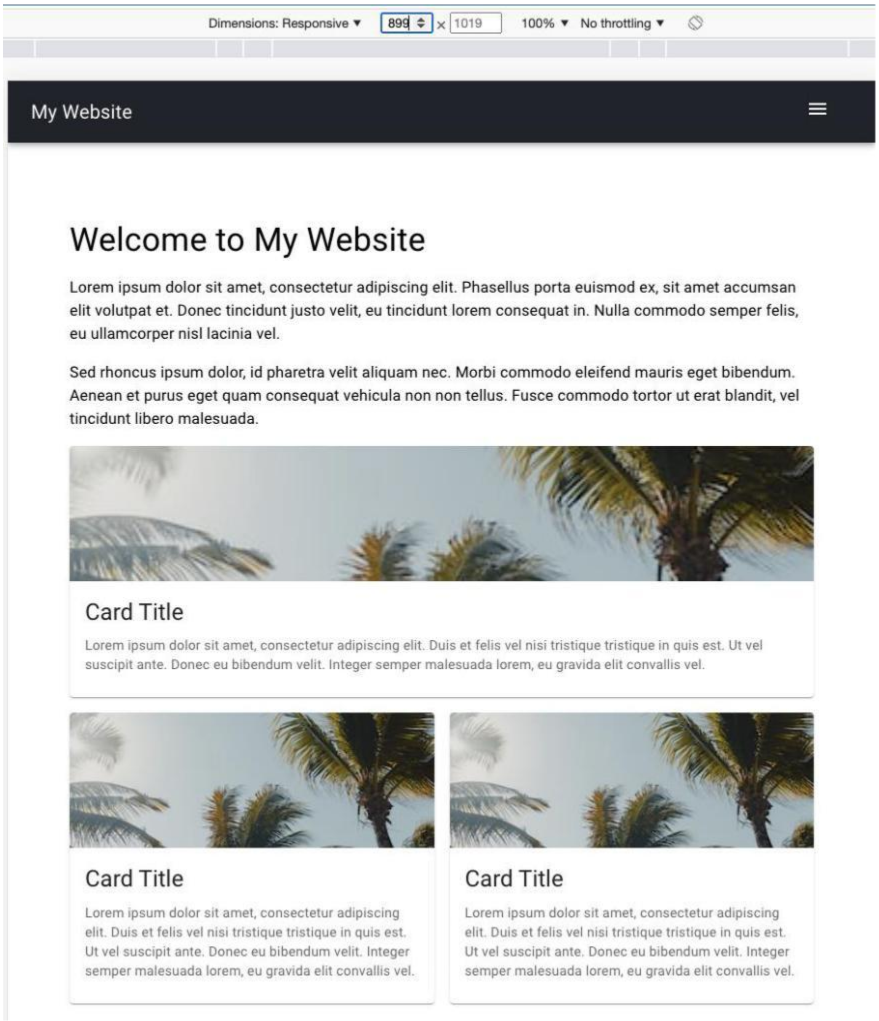
Web should like this When the page length is less than 900px.



Dimensions: Responsive ▾ 899 × 1019 100% ▾ No throttling ▾

My Website

Welcome to My Website

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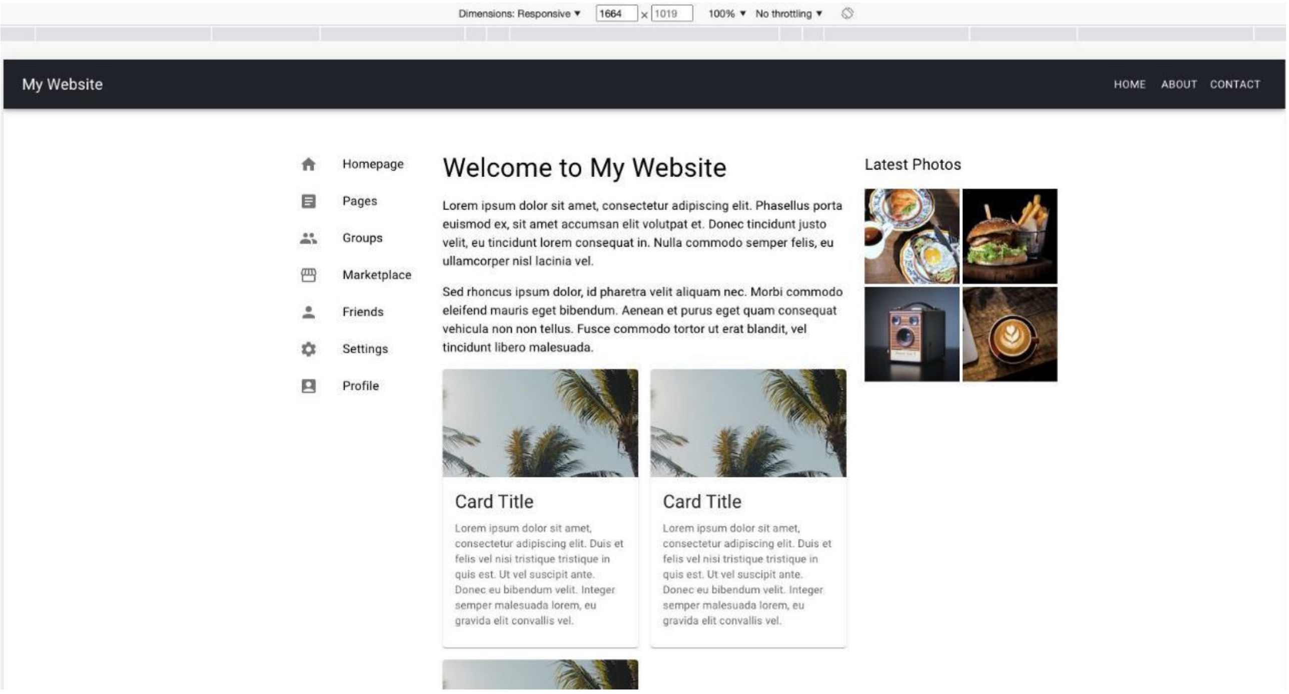
## In part of Content

If display size over 900px, Display the Card into 2 columns.


Dimensions: Responsive ▾ 1664 × 1019 100% ▾ No throttling ▾

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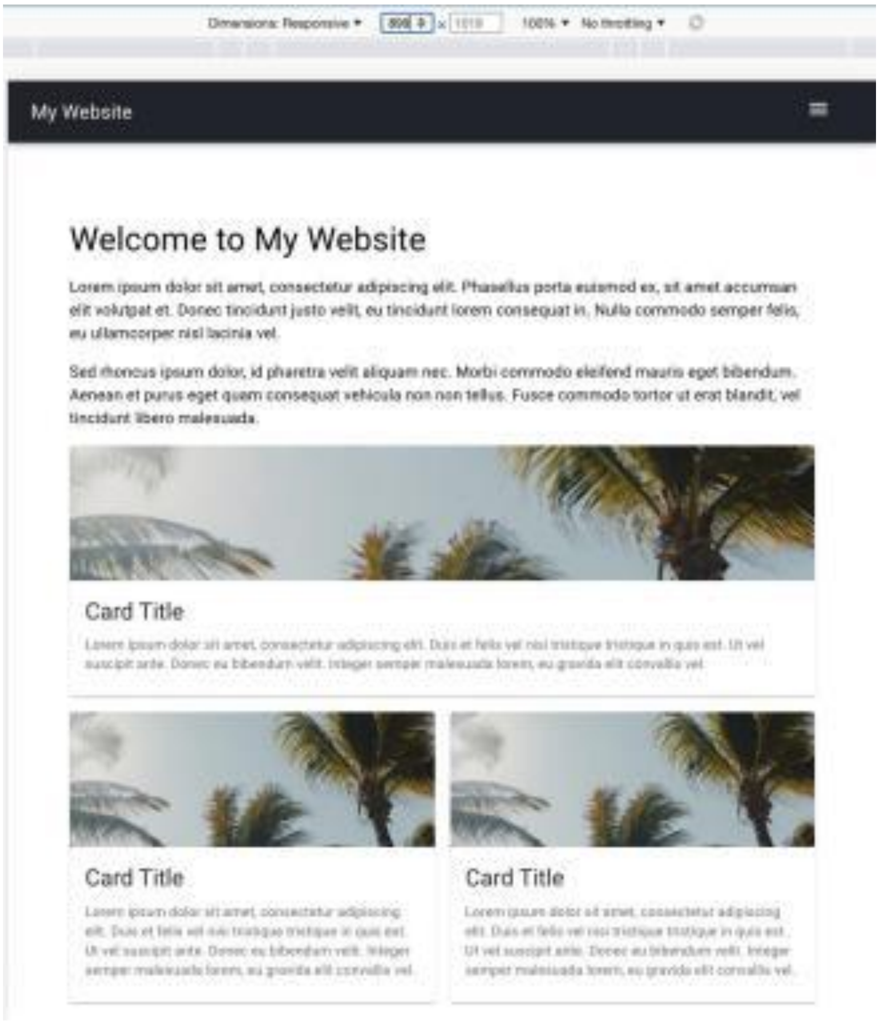
If the display size less than 900px, let the size of the first card display full width of Grid of that row. But the other cards still display the same as the previous.



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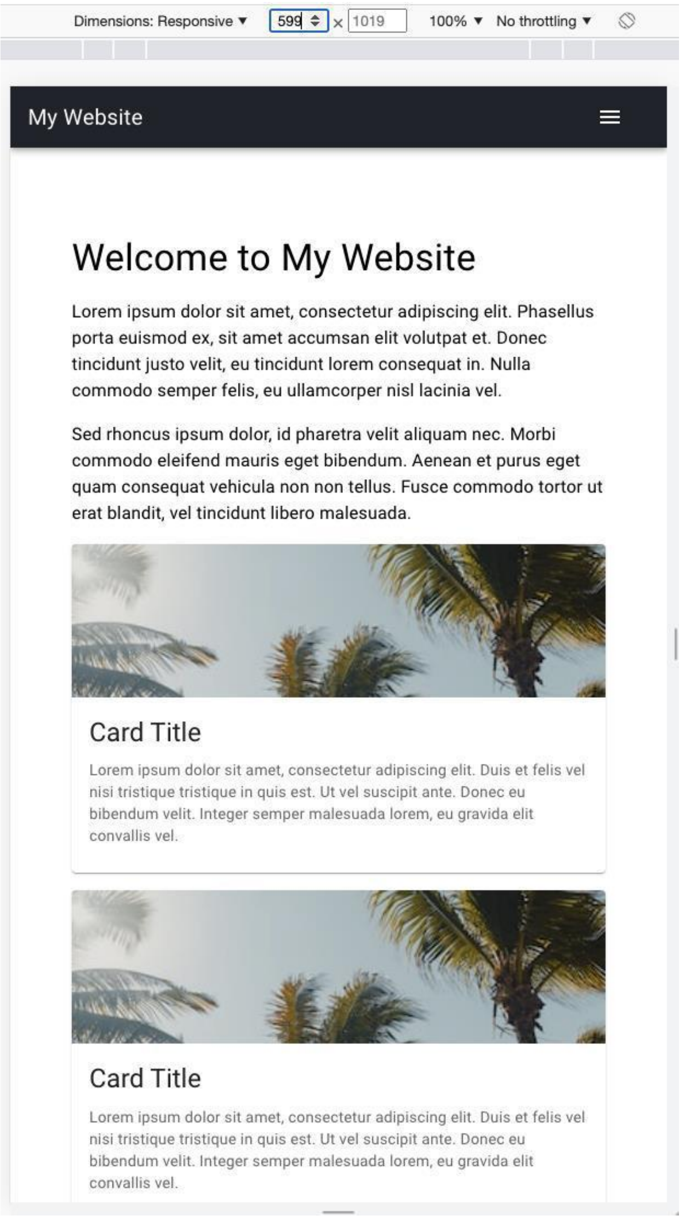
If the display size less than 600px, set all of the cards display in full width of grid (only 1 card per row).



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