

# PROJECT REPORT

## 1.INTRODUCTION

### ➤ Overview

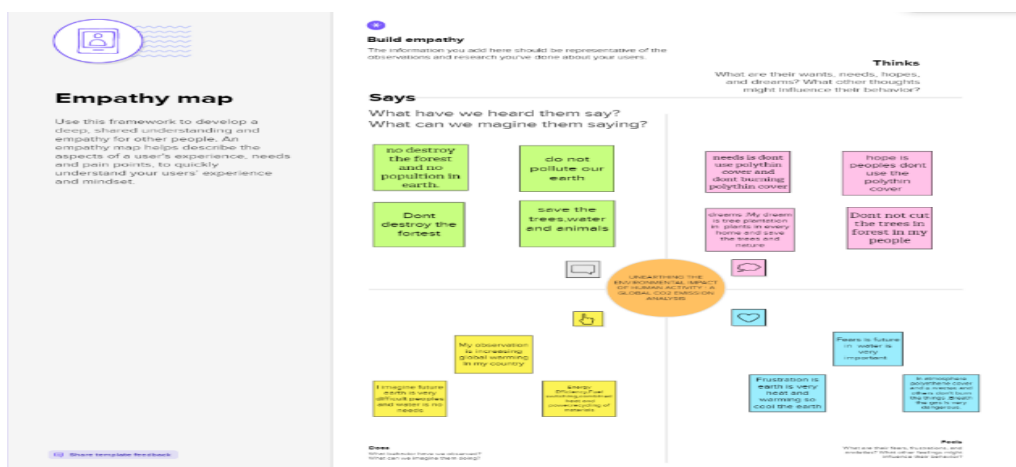
Carbon dioxide (chemical formula  $\text{CO}_2$ ) is a chemical compound made up of molecule that each has one carbon atom covalently double bonded to two oxygen atoms. It is found in the gas state at room temperature, and as the source of available carbon in carbon cycle, atmospheric  $\text{CO}_2$  is the primary carbon source for life on earth. In the air, carbon dioxide is transparent to visible light but absorbs infrared radiation, acting as a greenhouse gas. Carbon dioxide is soluble in water and is found in groundwater, lakes, ice caps and seawater.

### ➤ Purpose

Carbon is in Carbon dioxide, which is a greenhouse gas that traps heat close to Earth. It helps Earth hold some of the heat it receives from the sun so it doesn't all escape back into space.

## 2.Problem Definition &Design Thinking

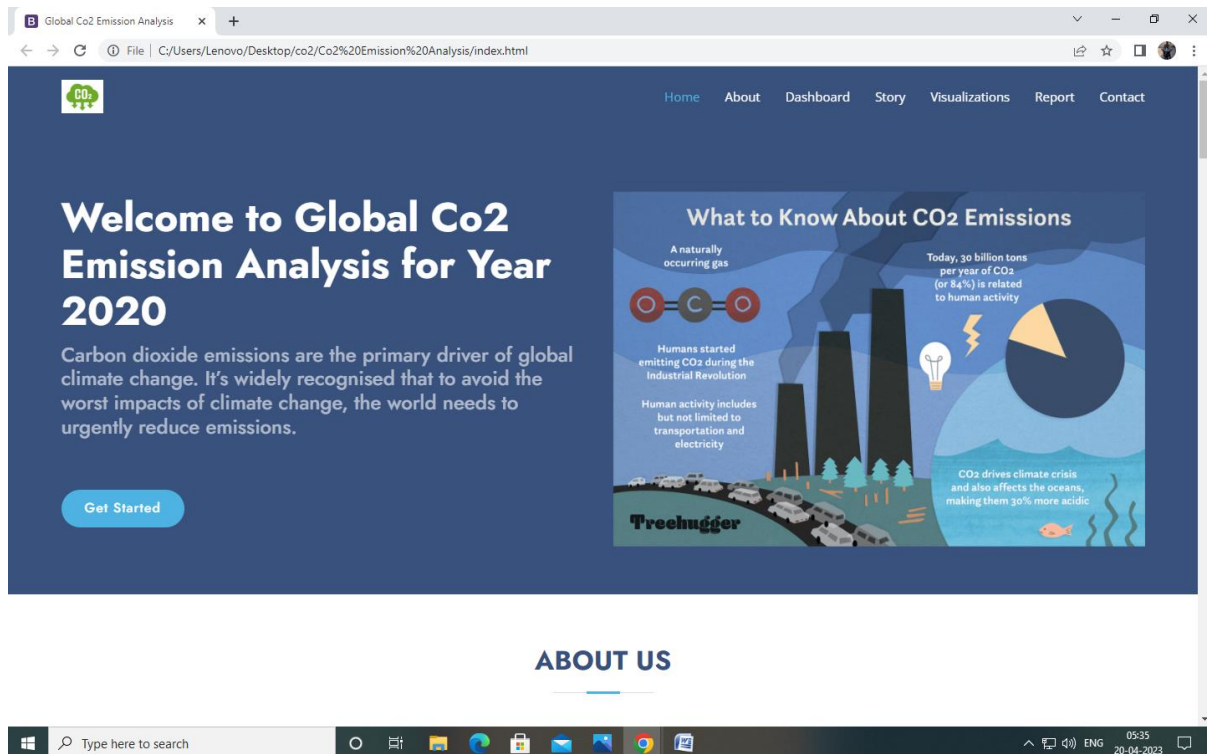
### Empathy map



## Ideation and Brainstorming Map



## RESULT



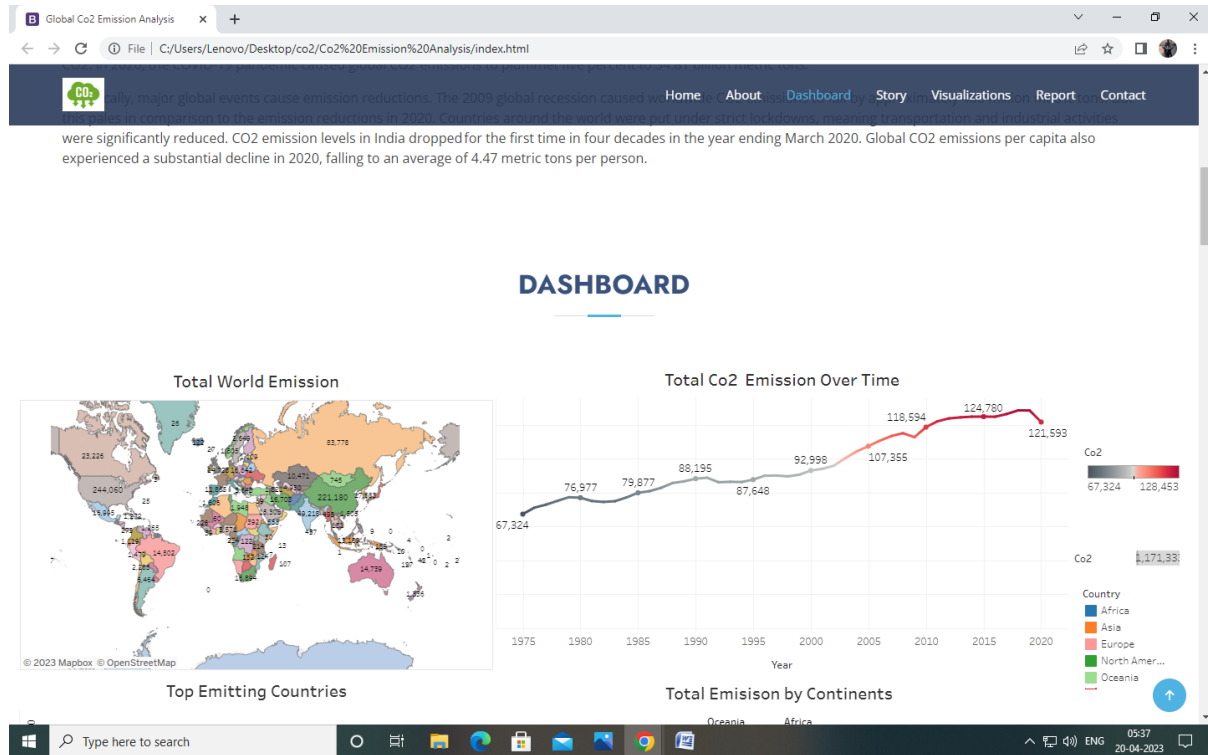
The screenshot displays the 'Global Co2 Emission Analysis' website. The main heading reads 'Welcome to Global Co2 Emission Analysis for Year 2020'. Below this, a paragraph states: 'Carbon dioxide emissions are the primary driver of global climate change. It's widely recognised that to avoid the worst impacts of climate change, the world needs to urgently reduce emissions.' A 'Get Started' button is visible.

To the right, an infographic titled 'What to Know About CO2 Emissions' provides key facts:

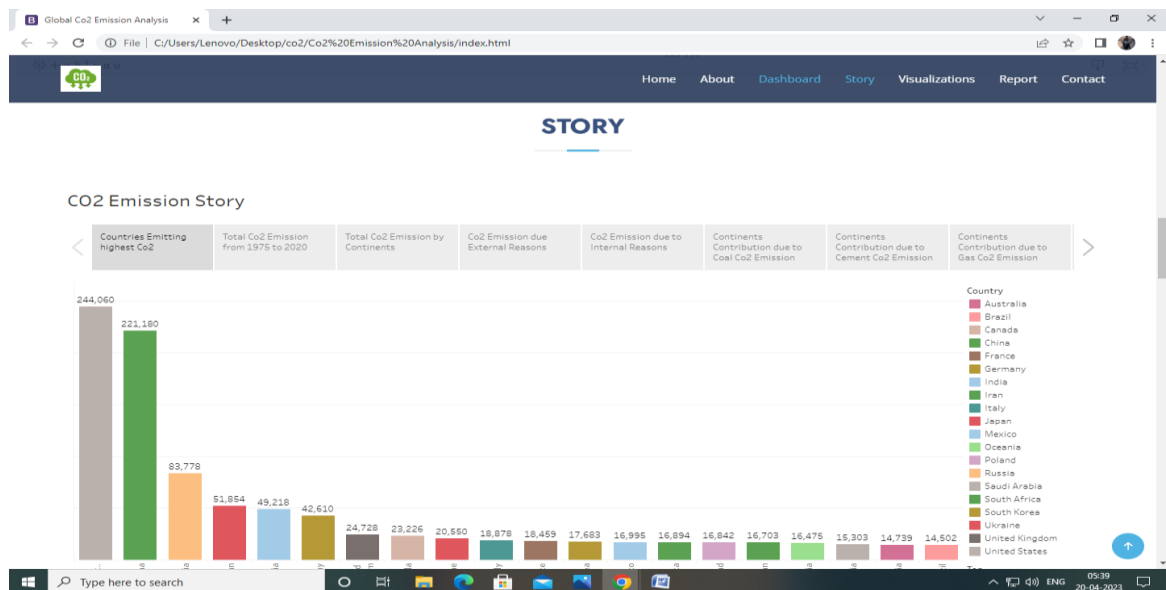
- A naturally occurring gas:** CO2 is a naturally occurring gas.
- Humans started emitting CO2 during the Industrial Revolution:** Human activity includes but not limited to transportation and electricity.
- Today, 30 billion tons per year of CO2 (or 84%) is related to human activity:** A pie chart shows that 84% of CO2 emissions are from human activity.
- CO2 drives climate crisis and also affects the oceans, making them 10% more acidic:** A text box explains the impact of CO2 on the climate and oceans.

The website footer includes a navigation menu with links: Home, About, Dashboard, Story, Visualizations, Report, and Contact. The 'ABOUT US' section is partially visible below the infographic.

## DASHBOARD



## STORY



## **ADVANTAGES & DISADVANTAGES**

### **❖ ADVANTAGES**

- Green plants grow faster with more CO<sub>2</sub>. Many also become more drought –resistant because higher CO<sub>2</sub> levels allow plants to use water more efficiently.
- More abundant vegetation from increased CO<sub>2</sub> is already apparent.

### **❖ DISADVANTAGES**

- These may include
- Headaches
- Dizziness
- Restlessness
- A tingling or pins or needles feeling
- Difficulty breathing
- Sweating
- Blood pressure
- Coma
- Asphyxia
- Convulsions

### **❖ APPLICATIONS**

#### **➤ MULTI-INDUSTRY USES FOR CO<sub>2</sub>**

- Carbon dioxide in solid and in liquid form is used for refrigeration and cooling . It is used as an inert gas in carbon powder and in fire extinguishers.

## ➤ **METALS INDUSTRY**

- Carbon dioxide is used in the manufacture of casting molds to enhance their hardness

## ➤ **MANUFACTURING AND CONSTRUCTION USES:**

- Carbon dioxide is used on a large scale as a shield gas in MIG/MAG welding, where the gas protects the weld puddle against oxidation by the surrounding.
- A mixture of argon and carbon dioxide is commonly used today to achieve a higher welding rate and reduce the need for post weld treatment.

## **CONCLUSION**

The rising level of atmospheric CO<sub>2</sub> could be the one global natural resource that is progressively increasing food production and total biological output, in a world of otherwise diminishing natural resources of land, water, energy, minerals and fertilizers.

## **FUTURE SCOPE**

- ✓ Global energy-related CO<sub>2</sub> emissions grew by 0.9% or 321 Mt in 2022, reaching a new high of over 36.8Gt.
- ✓ CO<sub>2</sub> growth in 2022 was well below global GDP growth of 3.2%
- ✓ Emission from oil grew even more than emission from coal, rising by 2.5% or 268 Mt to 11.2Gt.
- ✓ Emission from industry declined by 1.7% to 9.2 Gt last year.
- ✓ Emission from Asia emerging market and developing economies, excluding china, grew more than those from any other region in 2022.

# APPENDIX

## Source code

```
index.html - Visual Studio Code
C:\Users\Lenovo\Desktop\co2 > Co2 Emission Analysis > index.html > ...

1
2 <!DOCTYPE html>
3 <html lang="en">
4
5 <head>
6   <meta charset="utf-8">
7   <meta content="width=device-width, initial-scale=1.0" name="viewport">
8
9   <title>Global Co2 Emission Analysis</title>
10  <meta content="" name="description">
11  <meta content="" name="keywords">
12
13  <!-- Favicons -->
14  <link href="assets/img/favicon.png" rel="icon">
15  <link href="assets/img/apple-touch-icon.png" rel="apple-touch-icon">
16
17  <!-- Google Fonts -->
18  <link href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,600,600i,700,700i|Jost:300,300i,400,400i,500,500i,600,600i,700,700i|Po"
19
20
21  <!-- Vendor CSS Files -->
22  <link href="assets/vendor/aos/aos.css" rel="stylesheet">
23  <link href="assets/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
24  <link href="assets/vendor/bootstrap-icons/bootstrap-icons.css" rel="stylesheet">
25  <link href="assets/vendor/boxicons/css/boxicons.min.css" rel="stylesheet">
26  <link href="assets/vendor/plyr/plyr.min.css" rel="stylesheet">
27  <link href="assets/vendor/remixicon/remixicon.css" rel="stylesheet">
28  <link href="assets/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">
29
30  <!-- Template Main CSS File -->
31  <link href="assets/css/style.css" rel="stylesheet">
32
33  <!-- =====
34  * Template Name: Arsha - v4.10.0
35  * Template URL: https://bootstrapmade.com/arsha-free-bootstrap-html-template-corporate/
36  * Author: BootstrapMade.com
37  * License: https://bootstrapmade.com/license/
38  =====>
39 </head>
40
```

```
index.html - Visual Studio Code
C:\Users\Lenovo\Desktop\co2 > Co2 Emission Analysis > index.html > ...

38 </head>
39
40 <body>
41
42  <!-- ===== Header ===== -->
43  <header id="header" class="fixed-top">
44    <div class="container d-flex align-items-center justify-content-between">
45
46      <h1 class="logo">
48      <!-- <a href="index.html" class="logo me-auto"></a>-->
49
50      <nav id="navbar" class="navbar">
51        <ul>
52          <li><a class="nav-link scrollto active" href="#hero">Home</a></li>
53          <li><a class="nav-link scrollto" href="#about">About</a></li>
54          <li><a class="nav-link scrollto" href="#dash">Dashboard</a></li>
55          <li><a class="nav-link scrollto" href="#services">Story</a></li>
56          <li><a class="nav-link scrollto" href="#portfolio">Visualizations</a></li>
57          <li><a class="nav-link scrollto" href="#report">Report</a></li>
58          <li><a class="nav-link scrollto" href="#contact">Contact</a></li>
59        </ul>
60        <i class="bi bi-list mobile-nav-toggle"></i>
61      </nav>
62    <!-- .navbar -->
63  </div>
64 </header>
65 <!-- End Header -->
66
67  <!-- ===== Hero Section ===== -->
68  <section id="hero" class="d-flex align-items-center">
69
70    <div class="container">
71      <div class="row">
72        <div class="col-lg-6 d-flex flex-column justify-content-center pt-4 pt-lg-0 order-2 order-lg-1 data-aos="fade-up" data-aos-delay="200">
73          <h1>Welcome to Global Co2 Emission Analysis for Year 2020</h1>
74          <h2>Carbon dioxide emissions are the primary driver of global climate change. It's widely recognised that to avoid the worst impacts of
75          </h2>
76        </div>
77      </div>
78    </div>
79  </section>
80
```



```
File Edit Selection View Go Run Terminal Help
index.html - Visual Studio Code

C:\> Users > Lenovo > Desktop > co2 > Co2 Emission Analysis > index.html ...
148 vizElement.style.width = '100%';
149 vizElement.style.height = (divElement.offsetWidth * 0.75) + 'px';
150 } else if (divElement.offsetWidth > 500) {
151   vizElement.style.width = '90%';
152   vizElement.style.height = (divElement.offsetWidth * 0.75) + 'px';
153 } else {
154   vizElement.style.width = '100%';
155   vizElement.style.height = '147px';
156 }
157 var scriptElement = document.createElement('script');
158 scriptElement.src = 'https://public.tableau.com/javascripts/api/viz_v1.js';
159 vizElement.parentNode.insertBefore(scriptElement, vizElement);
160 </script>
161
162 </div>
163
164
165
166
167 <!-- End Why Us Section -->
168 <section id="services" class="services">
169   <div class="container" data-aos="fade-up">
170     <div class="section-title">
171       <h2>Story</h2>
172     </div>
173
174     <div class="tableauPlaceholder" id="viz1672206123585" style="position: relative">
175       <noscript>
176     </noscript><object class="tableauViz" style="display:none">
177       <param name="host url" value="https://public.tableau.com/viz1672206123585" />
178       <param name="embed code version" value="3" /> <param name="path" value="shared/G48/G47/G4Q80" />
179       <param name="toolbar" value="yes" />
180       <param name="static image" value="https://public.tableau.com/static/images/G48/G47/G4Q80/G48/G47/G4Q80/1.png" />
181       <param name="animate transition" value="yes" />
182       <param name="display static image" value="yes" />
183       <param name="display spinner" value="yes" />
184       <param name="display overlay" value="yes" />
185       <param name="display count" value="yes" />
186       <param name="language" value="en-US" /></object></div>
187     <script type="text/javascript">
```

```
File Edit Selection View Go Run Terminal Help
index.html - Visual Studio Code

C:\> Users > Lenovo > Desktop > co2 > Co2 Emission Analysis > index.html ...
185 <param name="display count" value="yes" />
186 <param name="language" value="en-US" /></object></div>
187 <script type="text/javascript">
188   var divElement = document.getElementById('viz1672206123585');
189   var vizElement = divElement.getElementsByTagName('object')[0];
190   vizElement.style.width = '100%';
191   vizElement.style.height = (divElement.offsetWidth * 0.75) + 'px';
192   var scriptElement = document.createElement('script');
193   scriptElement.src = 'https://public.tableau.com/javascripts/api/viz_v1.js';
194   vizElement.parentNode.insertBefore(scriptElement, vizElement);
195 </script>
196
197 </div>
198 </section>
199
200 <!-- ===== Skills Section ===== -->
201
202 <!-- End Skills Section -->
203
204
205 <!-- End Services Section -->
206
207 <!-- ===== Cta Section ===== -->
208
209 <!-- End Cta Section -->
210
211 <!-- ===== Portfolio Section ===== -->
212 <section id="portfolio" class="portfolio">
213   <div class="container" data-aos="fade-up">
214     <div class="section-title">
215       <h2>Visualizations</h2>
216     </div>
217
218     <div class="row portfolio-container">
219
220       <div class="col-lg-4 col-md-6 portfolio-item filter-web">
221         <div class="portfolio-wrap">
222           
223         </div>
224       </div>
```







```
File Edit Selection View Go Run Terminal Help
index.html - Visual Studio Code

C:\Users\Lenovo\Desktop\co2\Co2 Emission Analysis> index.html > ...
370 </div>
371 <div class="fst-italic">
372 <p>Co2 Emission in 1975 was 67324 (in metric tons).</p>
373 </div>
374 <div class="fst-italic">
375 <p>Co2 Emission in 2019 was 128423 (in metric tons) which was highest in the past years.</p>
376 </div>
377 <div class="fst-italic">
378 <p>Co2 Emission in 2020 was found to be 121593 (in metric tons).</p>
379 </div>
380 </div>
381 </div>
382 </div>
383 </div>
384 </div>
385 </div>
386 </div>
387 </div>
388 </div>
389 <!-- End Portfolio Section -->
390 </div>
391 <!-- ===== Team Section ===== -->
392 <!-- End Team Section -->
393 </div>
394 <!-- ===== Pricing Section ===== -->
395 <!-- End Pricing Section -->
396 </div>
397 <!-- ===== Contact Section ===== -->
398 <!-- End Contact Section -->
399 </div>
400 </div>
401 <div id="contact" class="contact">
402 <div class="container" data-aos="fade-up">
403 <div class="section-title">
404 <h2>Contact</h2>
405 </div>
406 </div>
407 </div>
408 </div>

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```

```
File Edit Selection View Go Run Terminal Help
index.html - Visual Studio Code

C:\Users\Lenovo\Desktop\co2\Co2 Emission Analysis> index.html > ...
409 </div>
410 <div class="row">
411 <div class="col-lg-5 d-flex align-items-stretch">
412 <div class="info">
413 <div class="address">
414 <i class="bi bi-geo-alt"></i>
415 <h4>Location:</h4>
416 <p>SmartBridge, Hyderabad,AndhraPradesh, India</p>
417 </div>
418 <div class="email">
419 <i class="bi bi-envelope"></i>
420 <h4>Email:</h4>
421 <p>info@smartbridge.com<br>contact@smartbridge.com</p>
422 </div>
423 <div class="phone">
424 <i class="bi bi-phone"></i>
425 <h4>Call:</h4>
426 <p>+11 1234 1234<br>+11 4321 4321</p>
427 </div>
428 </div>
429 </div>
430 </div>
431 </div>
432 </div>
433 </div>
434 </div>
435 <div class="col-lg-7 mt-5 mt-lg-0 d-flex align-items-stretch">
436 <form action="forms/contact.php" method="post" role="form" class="php-email-form">
437 <div class="row">
438 <div class="form-group col-md-6">
439 <label for="name">Your Name</label>
440 <input type="text" name="name" class="form-control" id="name" required>
441 </div>
442 <div class="form-group col-md-6">
443 <label for="email">Your Email</label>
444 <input type="email" class="form-control" name="email" id="email" required>
445 </div>
446 </div>
447 </div>
448 </div>
449 </div>
450 </div>
451 </div>
452 </div>
453 </div>
454 </div>
455 </div>

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```





```
File Edit Selection View Go Run Terminal Help • index.html - Visual Studio Code
C:\Users\Lenovo\Desktop\co2 > Co2 Emission Analysis > index.html > ...
517 <!-- Vendor JS Files -->
518 <script src="assets/vendor/aos/aos.js"></script>
519 <script src="assets/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>
520 <script src="assets/vendor/ghlightbox/js/ghlightbox.min.js"></script>
521 <script src="assets/vendor/isotope-layout/isotope.pkgd.min.js"></script>
522 <script src="assets/vendor/swiper/swiper-bundle.min.js"></script>
523 <script src="assets/vendor/waypoints/noframework.waypoints.js"></script>
524 <script src="assets/vendor/php-email-form/validate.js"></script>
525
526 <!-- Template Main JS File -->
527 <script src="assets/js/main.js"></script>
528
529 </body>
530
531 </html>
```

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