



# Handling 404 Error in Flask

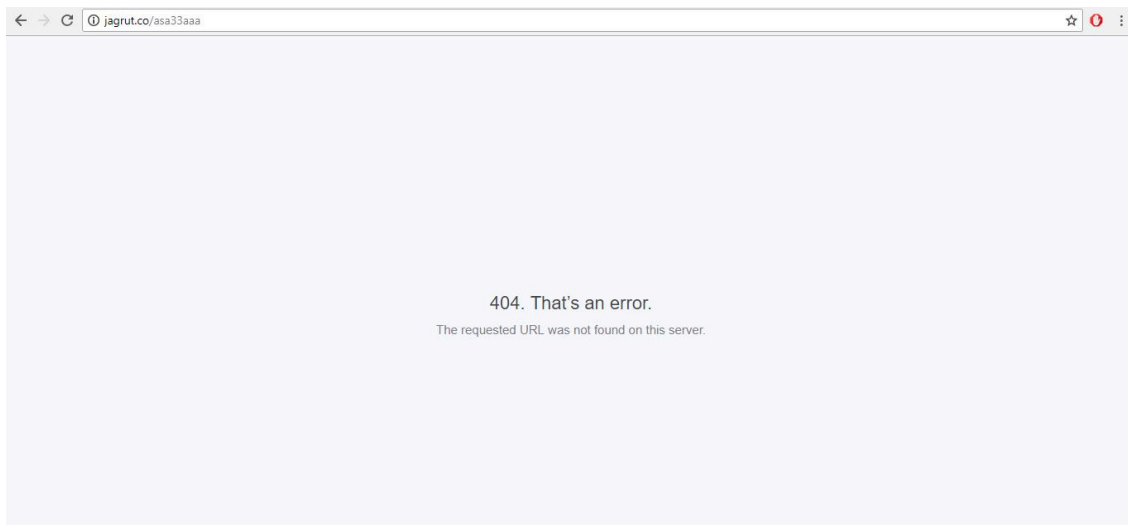
Last Updated : 15 Oct, 2020

Prerequisite: [Creating simple application in Flask](#)

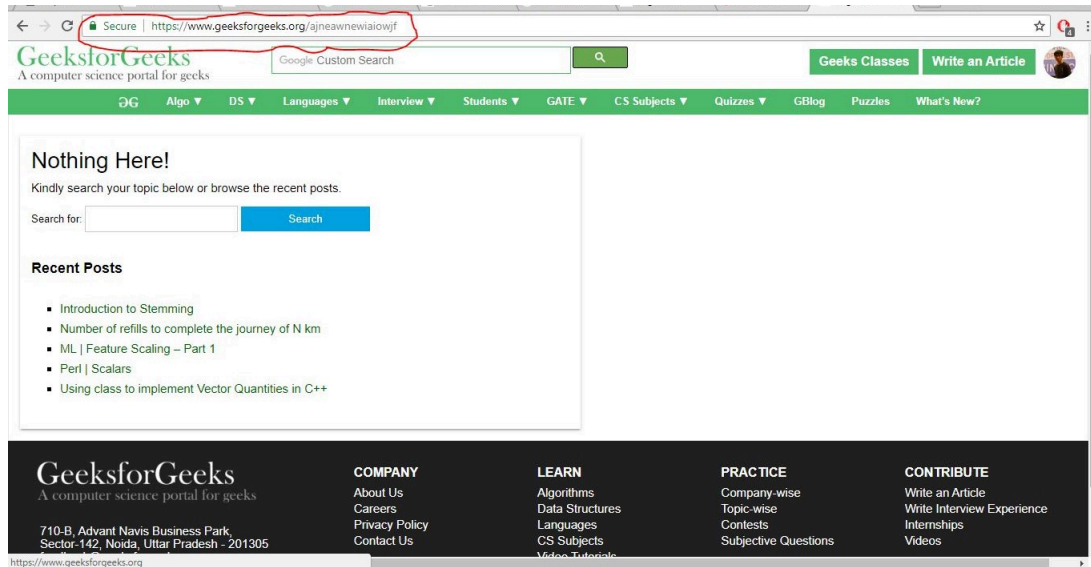
A 404 Error is showed whenever a page is not found. Maybe the owner changed its URL and forgot to change the link or maybe they deleted the page itself. Every site needs a Custom Error page to avoid the user to see the default Ugly Error page.

GeeksforGeeks also has a customized error page. If we type a URL like [www.geeksforgeeks.org/ajneawnewiaiwjf](http://www.geeksforgeeks.org/ajneawnewiaiwjf)

## Default 404 Error



## GeeksForGeeks Customized Error Page



It will show an Error 404 page since this URL doesn't exist. But an error page provides a beautiful layout, helps the user to go back, or even takes them to the homepage after a specific time interval. That is why Custom Error pages are necessary for every website.

Flask provides us with a way to handle the error and return our Custom Error page.

For this, we need to download and import flask. Download the flask through the following commands on CMD.

```
pip install flask
```

Using app.py as our Python file to manage templates, 404.html be the file we will return in the case of a 404 error and header.html be the file with header and navbar of a website.

### app.py

Flask allows us to make a python file to define all routes and functions. In app.py we have defined the route to the main page ('/') and error handler function which is a flask function and we passed 404 error as a parameter.

```
from flask import Flask, render_template
```

```
app = Flask(__name__)
```

```
# app name
```

```
@app.errorhandler(404)
```

```
# inbuilt function which takes error as parameter
def not_found(e):

# defining function
    return render_template("404.html")
```

The above python program will return 404.html file whenever the user opens a broken link.

## 404.html

The following code exports header and navbar from header.html. Both files should be stored in templates folder according to the flask.

```
{% extends "header.html" %}
<!-- Exports header and navbar from header.html
      or any file you want-->
{% block title %}Page Not Found{% endblock %}
{% block body %}

    <h1>Oops! Looks like the page doesn't exist anymore</h1>
    <a href="{{ url_for('index') }}"><p>Click Here</a>To go to the Home Page</p>

<!-- {{ url_for('index') }} is a var which returns url of index.html-->
{% endblock %}
```

## Automatically Redirecting to the Home page after 5 seconds

The app.py code for this example stays the same as above.

The following code Shows the Custom 404 Error page and starts a countdown of 5 seconds.

After 5 seconds are completed, it redirects the user back to the homepage.

## 404.html

The following code exports header and navbar from header.html.

Both files should be stored in the templates folder according to the flask.

After 5 seconds, the user will get redirected to the Home Page Automatically.

```
<html>
<head>
<title>Page Not Found</title>
<script language="JavaScript" type="text/javascript">
```

```

var seconds =6;
// countdown timer. took 6 because page takes approx 1 sec to load

var url="{url_for(index)}";
// variable for index.html url

function redirect(){
  if (seconds <=0){

    // redirect to new url after counter  down.
    window.location = url;
  } else {
    seconds--;
    document.getElementById("pageInfo").innerHTML="Redirecting to Home Page after "
+seconds+" seconds."
    setTimeout("redirect()", 1000)
  }
}
</script>
</head>

{% extends "header.html" %}
//exporting navbar and header from header.html
{% block body %}

  <body onload="redirect()">
<p id="pageInfo"></p>
{% endblock %}

</html>

```

## Sample header.html

This is a sample header.html which includes a navbar just like shown in the image.

It's made up of bootstrap. You can also make one of your own.

For this one, refer the bootstrap [documentation](#).

```

<!DOCTYPE html>
<html>
<head>

<!-- LINKING ALL SCRIPTS/CSS REQUIRED FOR NAVBAR -->

  <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/

```

```

css/bootstrap.min.css"
  integrity="sha384-Gn5384xqQ1aoWXA+058RXPxPg6fy4IWvTNh0E26
  3XmFcJlSAwiGgFAW/dAiS6JXm" crossorigin="anonymous">

  <title>Flask</title>
</head>
<body>
<script src="https://code.jquery.com/jquery-3.2.1.slim.min.js" integrity=
"sha384-KJ3o2DKtIkvYIK3UEJmM7KCKRr/rE9/Qpg6aAZGJwFDMVNA/GpGFF93hXpG5KkN"
crossorigin="anonymous"></script>

<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd
/popper.min.js" integrity="sha384-ApNbgh9B+Y1QKtv3Rn7W3mgPxhU9K
/ScQsAP7hUibX39j7fakFPskvXusvfa0b4Q" crossorigin="anonymous"></script>

<script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"
integrity="sha384-JZR6Spejh4U02d8jOt6vLEHfe/JQGiRRSQQxSfFWpi1MquVdAyjUar5+76PVCm\
crossorigin="anonymous"></script>

<header>
  <!-- Starting header -->

  <nav class="navbar navbar-expand-lg navbar-light bg-light">
    <a class="navbar-brand" href="#">Navbar</a>
    <!-- bootstrap classes for navbar -->
    <button class="navbar-toggler" type="button" data-toggle="collapse" data-target
"#navbarSupportedContent" aria-controls="navbarSupportedContent"
aria-expanded="false" aria-label="Toggle navigation">
      <span class="navbar-toggler-icon"></span>
    </button>

    <div class="collapse navbar-collapse" id="navbarSupportedContent">
      <ul class="navbar-nav mr-auto">
        <li class="nav-item active">
          <a class="nav-link" href="#">Home <span class="sr-only">(current)</span><
        </li>
        <li class="nav-item">
          <a class="nav-link" href="#">Link</a>
        </li>
        <li class="nav-item dropdown">
          <a class="nav-link dropdown-toggle" href="#" id="navbarDropdown"
role="button" data-toggle="dropdown" aria-haspopup="true" aria-expanded="false">
            Dropdown
          </a>
          <div class="dropdown-menu" aria-labelledby="navbarDropdown">
            <a class="dropdown-item" href="#">Action</a>
            <a class="dropdown-item" href="#">Another action</a>
            <div class="dropdown-divider"></div>
            <a class="dropdown-item" href="#">Something else here</a>
          </div>
        </li>
      </ul>
    </div>
  </nav>

```

```

    </div>
  </li>
  <li class="nav-item">
    <a class="nav-link disabled" href="#">Disabled</a>
  </li>
</ul>
<form class="form-inline my-2 my-lg-0">
  <input class="form-control mr-sm-2" type="search"
    placeholder="Search" aria-label="Search">
  <button class="btn btn-outline-success my-2 my-sm-0"
    type="submit">Search</button>
</form>
</div>
</nav>
</head>

<body >

  {%block body%}

  {%endblock%}

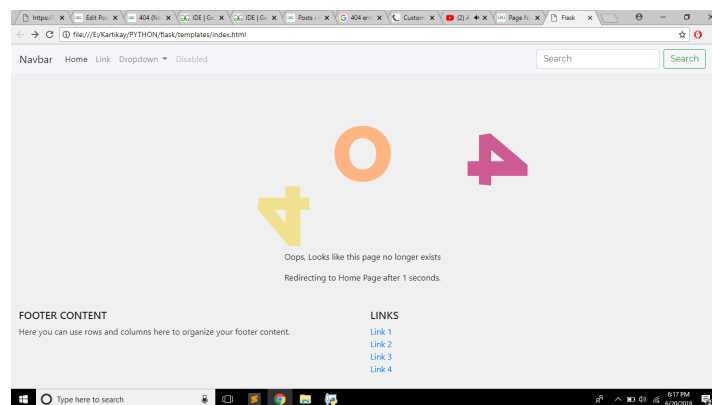
</body>
</html>

```

## Output:

The output will be a custom error page with header.html that the user exported.

The following is an example output with my custom header, footer, and 404.html file.



Looking to dive into the world of programming or sharpen your Python skills? Our [Master Python: Complete Beginner to Advanced Course](#) is your ultimate guide to becoming proficient in Python. This course covers everything you need to build a solid foundation from fundamental programming concepts to advanced techniques. With **hands-on projects**, real-world examples, and expert guidance, you'll gain the confidence to tackle complex **coding challenges**. Whether you're starting from scratch or aiming to enhance your skills, this course is the perfect fit. Enroll now and master Python, the language of the future!

K Karti... [+ Follow](#)



6

### Previous Article

[Subdomain in Flask | Python](#)

### Next Article

[Deploy Python Flask App on Heroku](#)

## Similar Reads

### History of The 404 Error

HTTP stands for HyperText Transfer Protocol. It is invented by Tim Berners. HyperText is the type of text which is specially coded with the help of some...

2 min read

### How to add a 404 Error Page in the Express ?

Express.js is a powerful framework for node.js. One of the main advantages of this framework is defining different routes or middleware to handle the client's...

1 min read

### Django - Creating a 404 Error Page

The 404 error is raised when the URL called upon doesn't exist or has not been defined yet. This is commonly referred to as Page does not exist error. To handle...

4 min read

### How to Customize the WordPress 404 Error Page?

A 404 error page is what your visitors see when they try to access a page that doesn't exist on your website. A well-designed 404 error page can enhance use...

5 min read

### How to Create 404 Error Page in Bootstrap ?

Every website encounters errors sometimes, so it becomes important to show these errors in a presentable manner to the users. Creating a custom 404 error...

2 min read

### Error Handling with Error Boundary Hooks

In the world of web development handling errors effectively is crucial for providing a seamless user experience. React one of the most popular JavaScript...

2 min read

### Documenting Flask Endpoint using Flask-Autodoc

Documentation of endpoints is an essential task in web development and being able to apply it in different frameworks is always a utility. This article discusses...

4 min read

### How to use Flask-Session in Python Flask ?

Flask Session - Flask-Session is an extension for Flask that supports Server-side Session to your application. The Session is the time between the client logs in to...

4 min read

### How to Integrate Flask-Admin and Flask-Login

In order to merge the admin and login pages, we can utilize a short form or any other login method that only requires the username and password. This is know...

8 min read

### Minify HTML in Flask using Flask-Minify

Flask offers HTML rendering as output, it is usually desired that the output HTML should be concise and it serves the purpose as well. In this article, we would...

12 min read



Article Tags :

Python

Web Technologies

Practice Tags :

python



Corporate & Communications Address:-  
A-143, 9th Floor, Sovereign Corporate  
Tower, Sector- 136, Noida, Uttar Pradesh  
(201305) | Registered Address:- K 061,  
Tower K, Gulshan Vivante Apartment,  
Sector 137, Noida, Gautam Buddh  
Nagar, Uttar Pradesh, 201305



Company

- About Us
- Legal
- In Media
- Contact Us
- Advertise with us
- GFG Corporate Solution
- Placement Training Program
- GeeksforGeeks Community

DSA

- Data Structures
- Algorithms
- DSA for Beginners
- Basic DSA Problems
- DSA Roadmap
- Top 100 DSA Interview Problems
- DSA Roadmap by Sandeep Jain
- All Cheat Sheets

Web Technologies

Languages

- Python
- Java
- C++
- PHP
- GoLang
- SQL
- R Language
- Android Tutorial
- Tutorials Archive

Data Science & ML

- Data Science With Python
- Data Science For Beginner
- Machine Learning
- ML Maths
- Data Visualisation
- Pandas
- NumPy
- NLP
- Deep Learning

Python Tutorial

HTML  
CSS  
JavaScript  
TypeScript  
ReactJS  
NextJS  
Bootstrap  
Web Design

Python Programming Examples  
Python Projects  
Python Tkinter  
Web Scraping  
OpenCV Tutorial  
Python Interview Question  
Django

## Computer Science

Operating Systems  
Computer Network  
Database Management System  
Software Engineering  
Digital Logic Design  
Engineering Maths  
Software Development  
Software Testing

## System Design

High Level Design  
Low Level Design  
UML Diagrams  
Interview Guide  
Design Patterns  
OOAD  
System Design Bootcamp  
Interview Questions

## School Subjects

Mathematics  
Physics  
Chemistry  
Biology  
Social Science  
English Grammar  
Commerce  
World GK

## DevOps

Git  
Linux  
AWS  
Docker  
Kubernetes  
Azure  
GCP  
DevOps Roadmap

## Interview Preparation

Competitive Programming  
Top DS or Algo for CP  
Company-Wise Recruitment Process  
Company-Wise Preparation  
Aptitude Preparation  
Puzzles

## GeeksforGeeks Videos

DSA  
Python  
Java  
C++  
Web Development  
Data Science  
CS Subjects

@GeeksforGeeks, Sanchhaya Education Private Limited, All rights reserved