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1  # Importing the necessary imports
2  import re
3  import uuid
4  from flask import Flask, render_template, request, send_file
5  from flask_cors import cross_origin
6
7  from Scheduler import ScheduleJob
8  from Logger import Logging
9
10 # Configuring the logger
11 logger_obj = Logging('Advance Image Downloader') # Creating a custom based logger
12 logger_obj.initialize_logger() # Instantiating the logger object
13
14 app = Flask(__name__) # Initializing the Flask App with the name 'app'
15
16
17 # Home Page Route
18 @app.route('/', methods=['GET'])
19 @cross_origin()
20 def index():
21     """
22     Function is responsible for showing the index page
23     """
24     try:
25         if request.method == 'GET':
26             logger_obj.print_log('Inside the index function', 'info')
27             logger_obj.print_log('Rendering the index.html template', 'info')
28             return render_template('index.html')
29         else:
30             logger_obj.print_log('(app.py) - Something went wrong Method not allowed', '
exception')
31             return render_template('error.html', msg='Method not allowed')
32     except Exception as e:
33         logger_obj.print_log('(app.py) - Something went wrong ' + str(e), 'exception')
34         return render_template('error.html', msg=str(e))
35
36
37 # Submitted Page Route
38 @app.route('/job_submitted', methods=['POST'])
39 @cross_origin()
40 def job_submitted():
41     """
42     The function is responsible for performing the various actions after the job is submitted by
the user
43     """
44     try:
45         if request.method == 'POST':
46             logger_obj.print_log('Inside the job_submitted function', 'info')
47
48             # Handling the user input
49             search_query = request.form['search-query'].lower()
50             date = request.form['date']

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51     time = request.form['time']
52     email = request.form['email'].lower()
53     no_images = request.form['images']
54
55     is_valid, error = validate_inputs(search_query, date, time, email, no_images)
56
57     if is_valid:
58         # Creating the unique ID for the request generated
59         req_id = uuid.uuid4()
60
61         # Creating a object for the scheduler
62         schedule_job = ScheduleJob()
63
64         # Adding the job in the scheduler
65         schedule_job.insert_request(search_query, date, time, int(no_images), email,
req_id)
66
67         logger_obj.print_log('Schedule is added for adding the job in queue', 'info')
68
69         # Rendering the Job Submitted template
70         logger_obj.print_log('Rendering the job_submitted.html template', 'info')
71         return render_template('job_submitted.html')
72     else:
73         logger_obj.print_log('(app.py) - Something went wrong ' + error, 'exception')
74         return render_template('error.html', msg=error)
75
76     else:
77         logger_obj.print_log('(app.py) - Something went wrong Method is not allowed', '
exception')
78         return render_template('error.html', msg='Method not allowed')
79
80     except ValueError:
81         logger_obj.print_log('(app.py) - Something went wrong. No of images must be a
number', 'exception')
82         return render_template('error.html', msg='No of images must be a number')
83
84     except Exception as e:
85         logger_obj.print_log('(app.py) - Something went wrong ' + str(e), 'exception')
86         return render_template('error.html', msg=str(e))
87
88
89 # Downloading the images route
90 @app.route('/download/<search_term>/<uuid:req_id>', methods=['GET'])
91 @cross_origin()
92 def download(search_term, req_id):
93     """
94     Function is responsible for sending the zip file to the user
95     :param search_term: Search query of the user
96     :param req_id: Unique request ID of the user
97     :return: Zip file created
98     """
99     try:

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100     logger_obj.print_log('Inside the download route', 'info')
101     str_req_id = str(req_id)
102
103     # Sending the downloadable file to the user
104     return send_file(str_req_id + '_zipfile.zip', as_attachment=True, attachment_filename=
search_term + '.zip')
105
106     except Exception as e:
107         logger_obj.print_log('(app.py) - Something went wrong ' + str(e), 'exception')
108         return render_template('error.html', msg='This link has expired')
109
110
111 def validate_inputs(search_query, date, time, email, no_images):
112     """
113     Function is responsible for validating the inputs given by the user
114     :param search_query: search term by the user
115     :param date: Date for scheduling the job
116     :param time: Time for scheduling the job
117     :param email: Email address of the user
118     :param no_images: No of images given by the user
119     :return: Boolean if the input's are valid
120     """
121     try:
122         # Checking if the queries passed are empty
123         if search_query != "" and date != "" and time != "" and email != "" and no_images != "":
124
125             no_images = int(no_images) # Converting into integer for further processing
126             # Number of images should be in between 1 and 500
127             if 1 <= no_images <= 500:
128                 # Validating the email address
129                 if re.search('[a-zA-Z0-9_.+]+@[a-zA-Z0-9-]+\.[a-zA-Z0-9-]+\$', email):
130                     return True, None
131                 else:
132                     logger_obj.print_log('(app.py (validate_inputs)) - Something went wrong. Email
address is invalid',
133                                     'exception')
134                     return False, 'Invalid email address'
135             else:
136                 logger_obj.print_log('(app.py (validate_inputs)) - Something went wrong. No of
images must be in '
137                                     'between 1 and 500',
138                                     'exception')
139                 return False, 'No of images must be in between 1 and 500'
140             else:
141                 logger_obj.print_log('(app.py (validate_inputs)) - Something went wrong. One of
the inputs is empty',
142                                     'exception')
143                 return False, 'One of inputs is empty'
144
145     except Exception as e:
146         raise Exception(e)
147

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148
149 if __name__ == '__main__':
150     app.debug = True
151     app.run()
152
```