Question Shuffling Allowed : No

Is Section Default? : null

Question Number : 124 Question Id : 640653770539 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "DIPLOMA LEVEL : MODERN APPLICATION DEVELOPMENT I (COMPUTER BASED EXAM)"

ARE YOU SURE YOU HAVE TO WRITE EXAM FOR THIS SUBJECT?
CROSS CHECK YOUR HALL TICKET TO CONFIRM THE SUBJECTS TO BE WRITTEN.

(IF IT IS NOT THE CORRECT SUBJECT, PLS CHECK THE SECTION AT THE TOP FOR THE SUBJECTS REGISTERED BY YOU)

Options :

6406532577460. ✓ YES

6406532577461. ✗ NO

Sub-Section Number : 2

Sub-Section Id : 640653112607

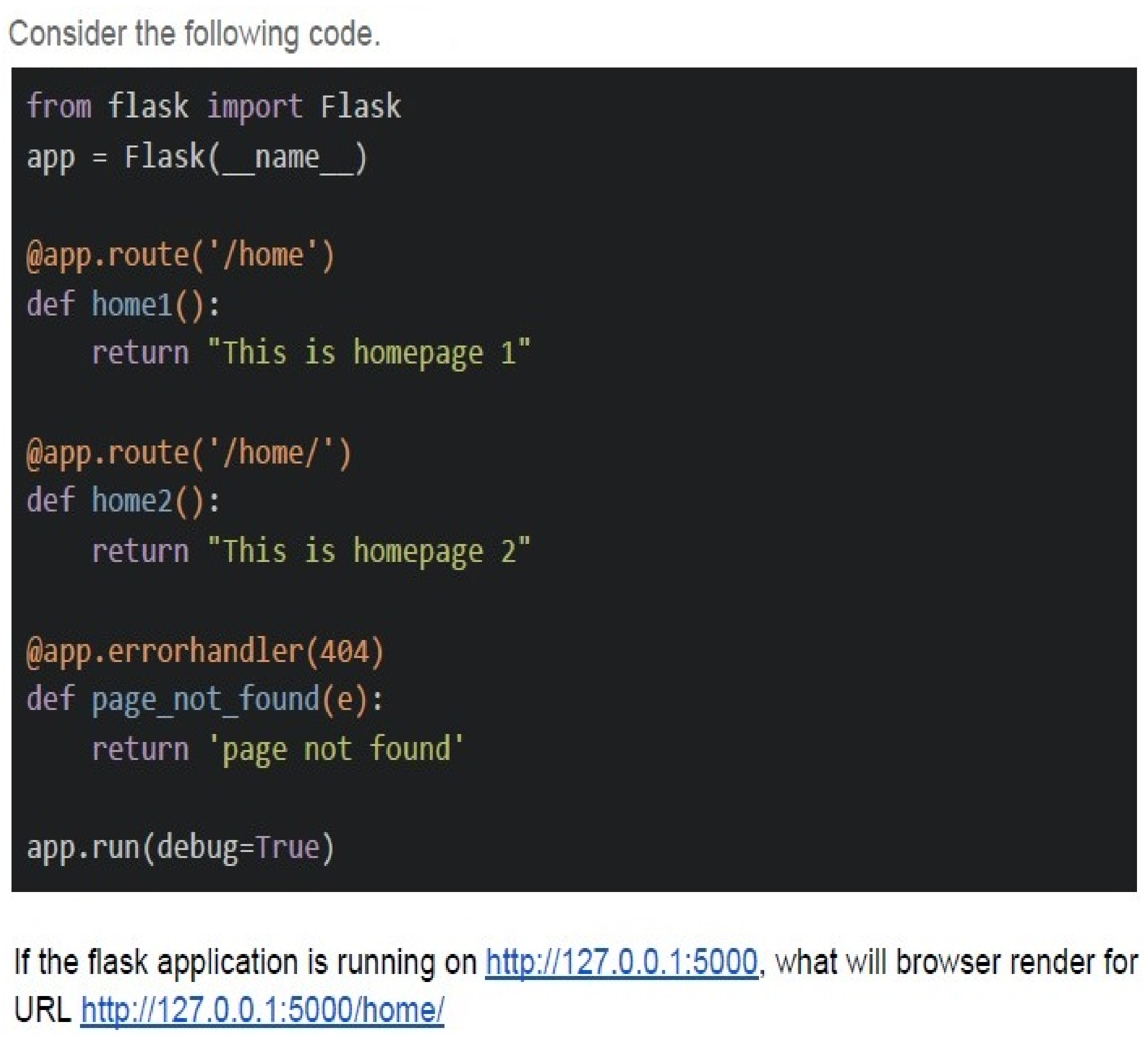
Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 125 Question Id : 640653770540 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question



Consider the following code.

```
from flask import Flask
app = Flask(__name__)

@app.route('/home')
def home1():
    return "This is homepage 1"

@app.route('/home/')
def home2():
    return "This is homepage 2"

@app.errorhandler(404)
def page_not_found(e):
    return 'page not found'

app.run(debug=True)
```

If the flask application is running on http://127.0.0.1:5000, what will browser render for URL http://127.0.0.1:5000/home/

Options :

6406532577462. ✖ Page not found

6406532577463. ✖ This is homepage 1

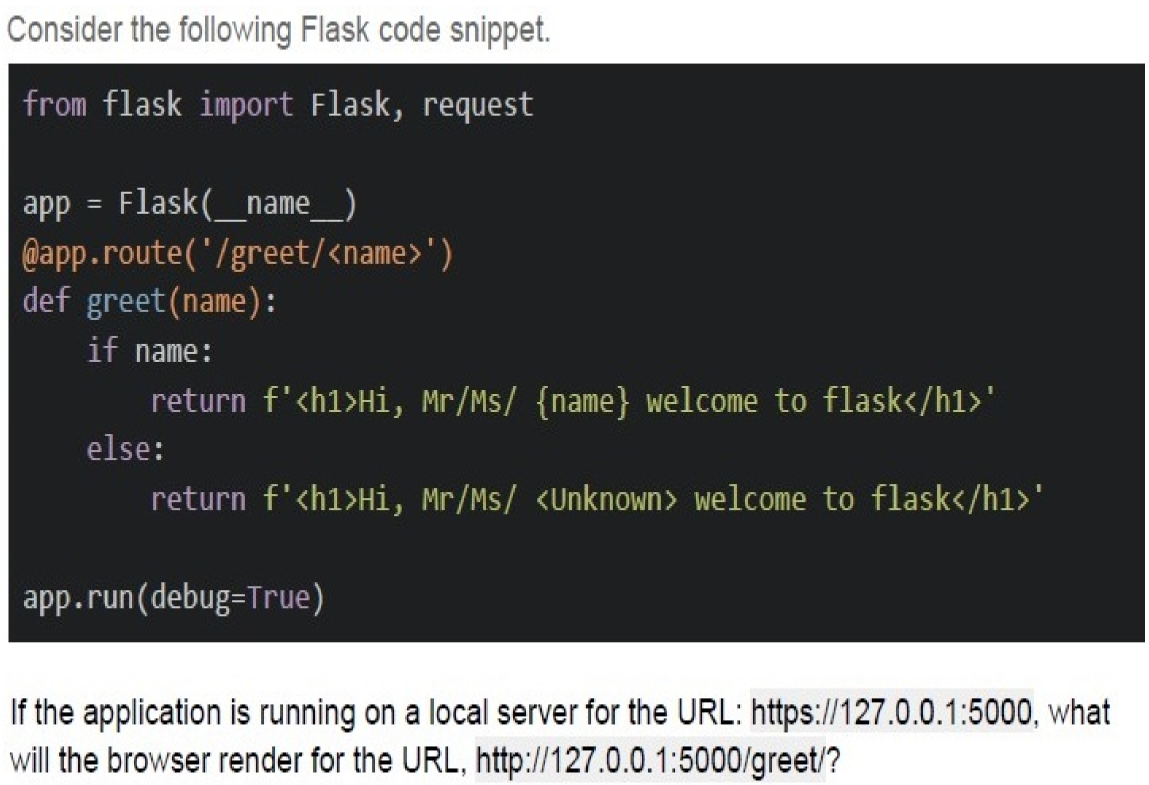
6406532577464. ✔ This is homepage 2

6406532577465. ✖ Code will throw error

Question Number : 126 Question Id : 640653770547 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question



Consider the following Flask code snippet.

```
from flask import Flask, request

app = Flask(__name__)
@app.route('/greet/<name>')
def greet(name):
    if name:
        return f'<h1>Hi, Mr/Ms/ {name} welcome to flask</h1>'
    else:
        return f'<h1>Hi, Mr/Ms/ <Unknown> welcome to flask</h1>'

app.run(debug=True)
```

If the application is running on a local server for the URL: https://127.0.0.1:5000, what will the browser render for the URL, http://127.0.0.1:5000/greet/?

Options :

6406532577490. ✖ Hi, Mr/Ms/ None welcome to flask

6406532577491. ✖ Hi, Mr/Ms/ <unknown> welcome to flask

6406532577492. ✖ Bad request, Invalid name provided

6406532577493. ✔ Not Found

Question Number : 127 Question Id : 640653770550 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

Consider the below statements about Cookies:

Statement 1: Cookies enable the web app to recognize the users

Statement 2: Cookies can include information about location, login data, and language etc.,

Which of the below is the correct option?

Options :

6406532577502. ✖ Statement 1 is correct and Statement 2 is incorrect

6406532577503. ✖ Statement 1 is incorrect and Statement 2 is correct

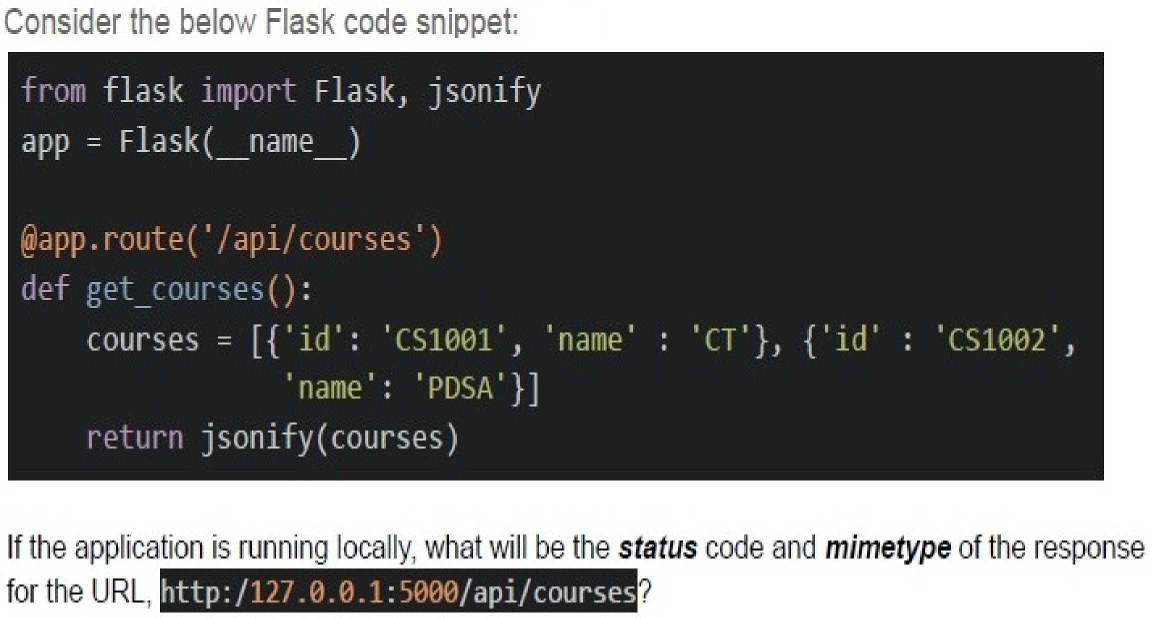
6406532577504. ✔ Both Statement 1 and Statement 2 are correct

6406532577505. ✖ Both Statement 1 and Statement 2 are incorrect

Question Number : 128 Question Id : 640653770551 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question



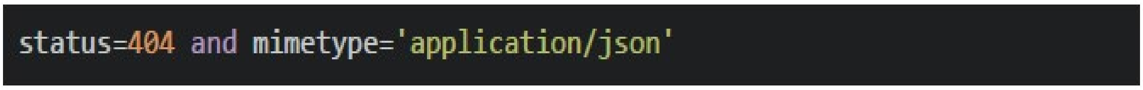
Consider the below Flask code snippet:

```
from flask import Flask, jsonify
app = Flask(__name__)

@app.route('/api/courses')
def get_courses():
    courses = [{'id': 'CS1001', 'name' : 'CT'}, {'id' : 'CS1002',
                'name': 'PDSA'}]
    return jsonify(courses)
```

If the application is running locally, what will be the ***status*** code and ***mimetype*** of the response for the URL, `http:/127.0.0.1:5000/api/courses`?

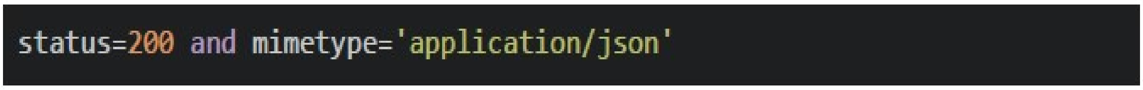
Options :

6406532577506. ✖

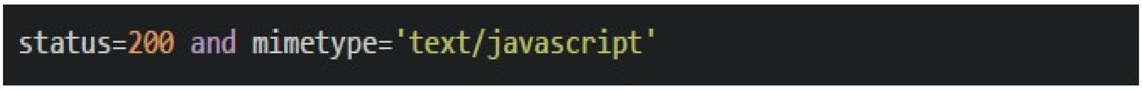


```
status=404 and mimetype='application/json'
```

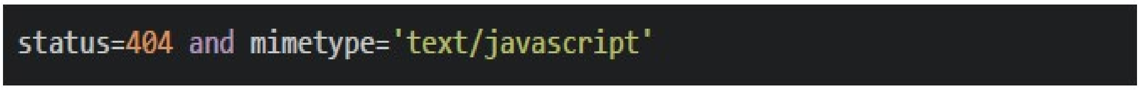
6406532577507. ✔



```
status=200 and mimetype='application/json'
```

6406532577508. ✗ 

```
status=200 and mimetype='text/javascript'
```

6406532577509. ✗ 

```
status=404 and mimetype='text/javascript'
```

Sub-Section Number :	3
Sub-Section Id :	640653112608
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 129 Question Id : 640653770544 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Consider a character set M, which consists of only those characters used in the statement, "sphinx of black quartz judge my vow" If this statement is to be saved in a document with minimum encoding, what will be the size of the document given that no other information or context is to be saved?

Options :

6406532577478. ✗ 145 bits

6406532577479. ✗ 245 bits

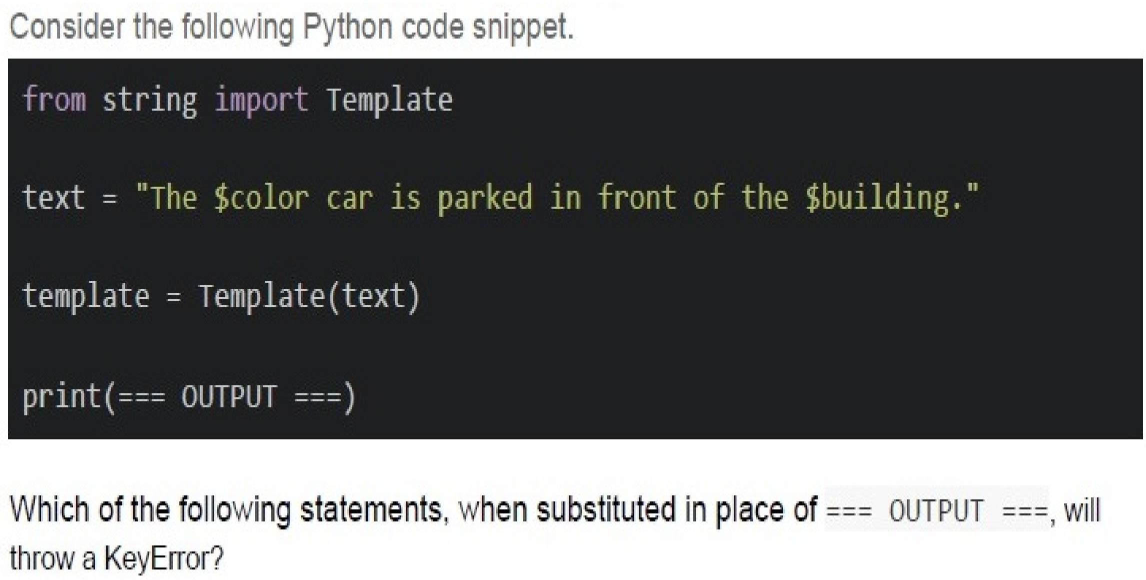
6406532577480. ✓ 175 bits

6406532577481. ✗ 256 bits

Question Number : 130 Question Id : 640653770545 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question



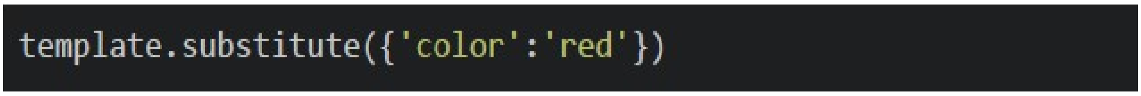
Consider the following Python code snippet.

```
from string import Template

text = "The $color car is parked in front of the $building."

template = Template(text)

print(=== OUTPUT ===)
```

Which of the following statements, when substituted in place of `=== OUTPUT ===`, will throw a KeyError?

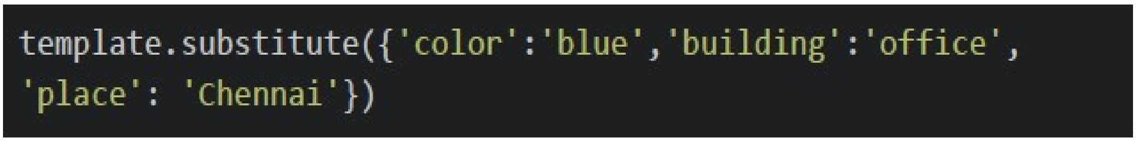
Options :

6406532577482. ✓



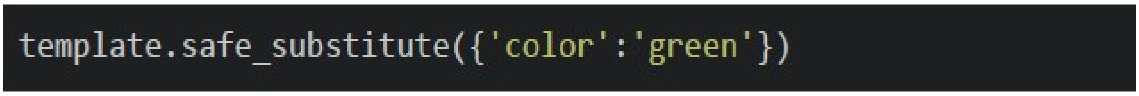
```
template.substitute({'color':'red'})
```

6406532577483. ✖



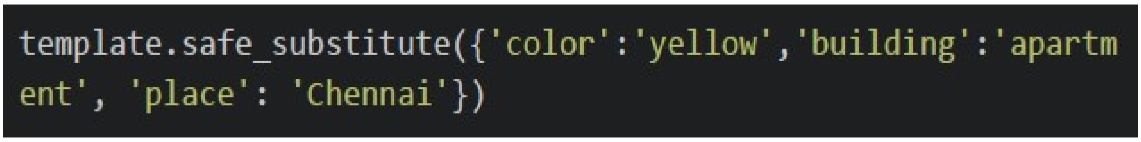
```
template.substitute({'color':'blue','building':'office',
'place': 'Chennai'})
```

6406532577484. ✖



```
template.safe_substitute({'color':'green'})
```

6406532577485. ✖



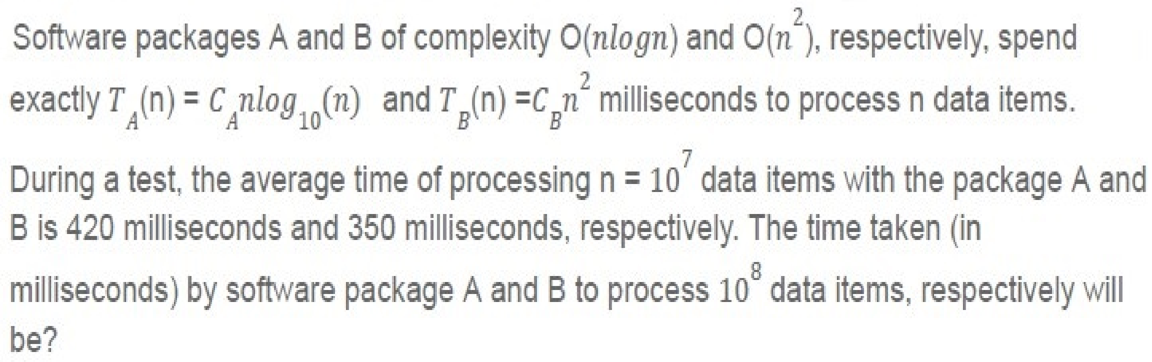
```
template.safe_substitute({'color':'yellow','building':'apartm
ent', 'place': 'Chennai'})
```

Question Number : 131 Question Id : 640653770546 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question



Software packages A and B of complexity O($nlogn$) and O(n^2), respectively, spend exactly T_A(n) = $C_A nlog_{10}(n)$ and T_B(n) =$C_B n^2$ milliseconds to process n data items.

During a test, the average time of processing n = 10^7 data items with the package A and B is 420 milliseconds and 350 milliseconds, respectively. The time taken (in milliseconds) by software package A and B to process 10^8 data items, respectively will be?

Options :

6406532577486. ✗ 48 and 35

6406532577487. ✗ 480 and 350

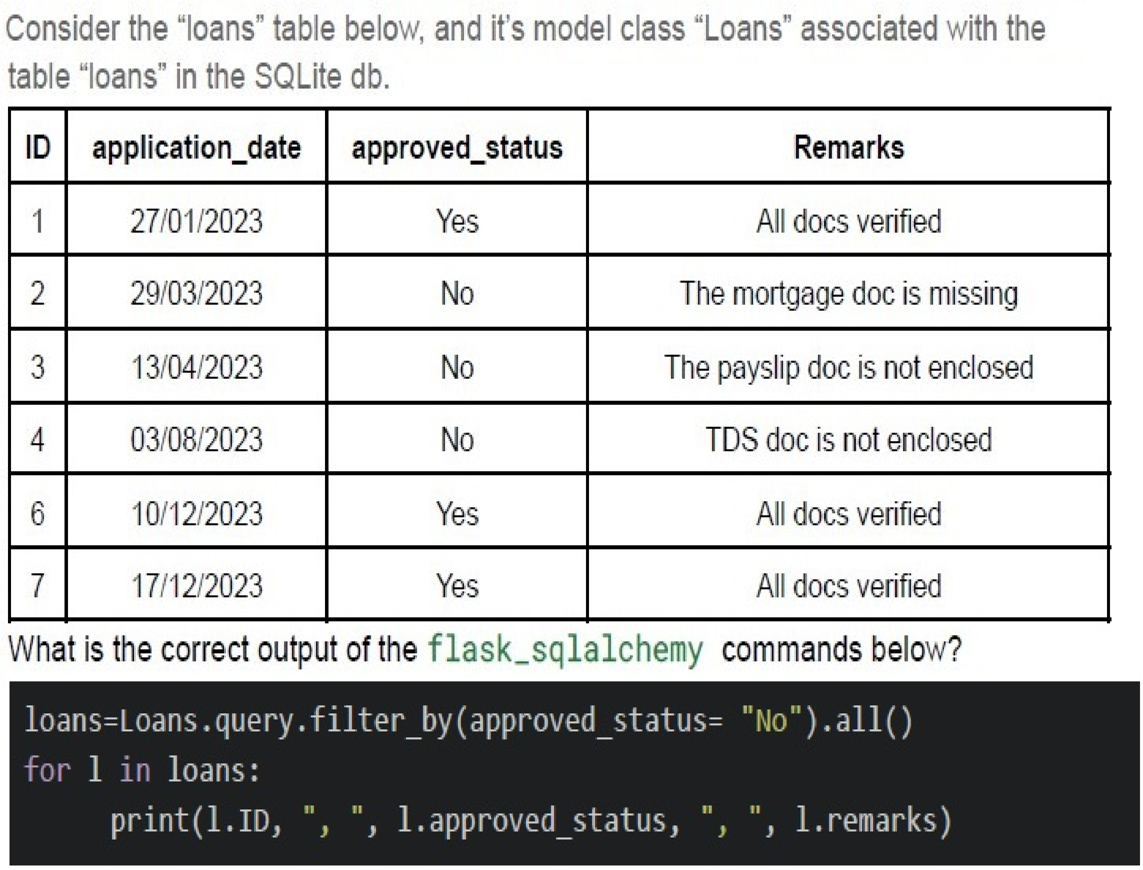
6406532577488. ✓ 480 and 35000

6406532577489. ✗ 48000 and 35000

Question Number : 132 Question Id : 640653770549 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question



Consider the “loans” table below, and it’s model class “Loans” associated with the table “loans” in the SQLite db.

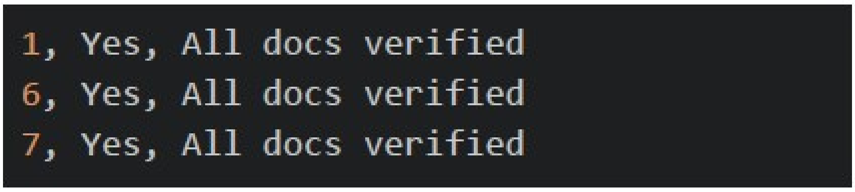
ID	application_date	approved_status	Remarks
1	27/01/2023	Yes	All docs verified
2	29/03/2023	No	The mortgage doc is missing
3	13/04/2023	No	The payslip doc is not enclosed
4	03/08/2023	No	TDS doc is not enclosed
6	10/12/2023	Yes	All docs verified
7	17/12/2023	Yes	All docs verified

What is the correct output of the flask_sqlalchemy commands below?

```
loans=Loans.query.filter_by(approved_status= "No").all()
for l in loans:
    print(l.ID, ", ", l.approved_status, ", ", l.remarks)
```

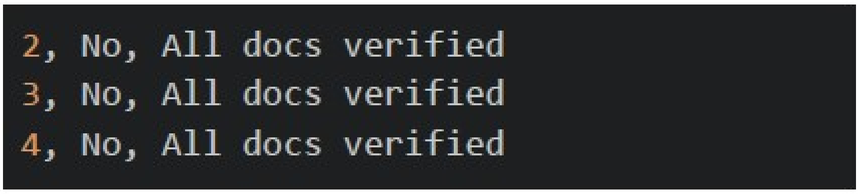
Options :

6406532577498. ✗



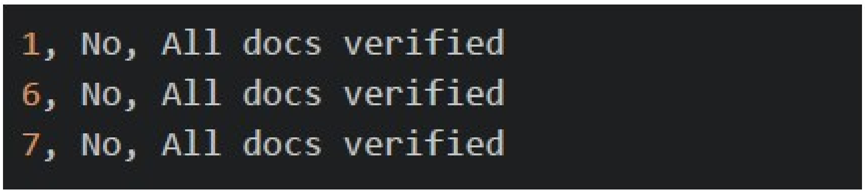
```
1, Yes, All docs verified
6, Yes, All docs verified
7, Yes, All docs verified
```

6406532577499. ✗



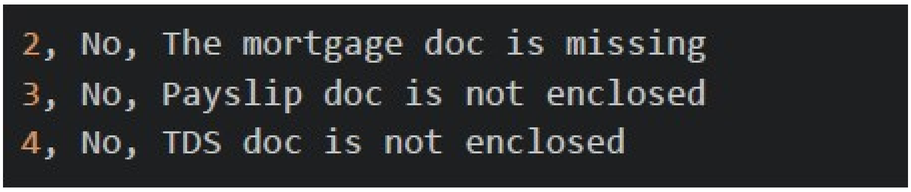
```
2, No, All docs verified
3, No, All docs verified
4, No, All docs verified
```

6406532577500. ✗



```
1, No, All docs verified
6, No, All docs verified
7, No, All docs verified
```

6406532577501. ✓

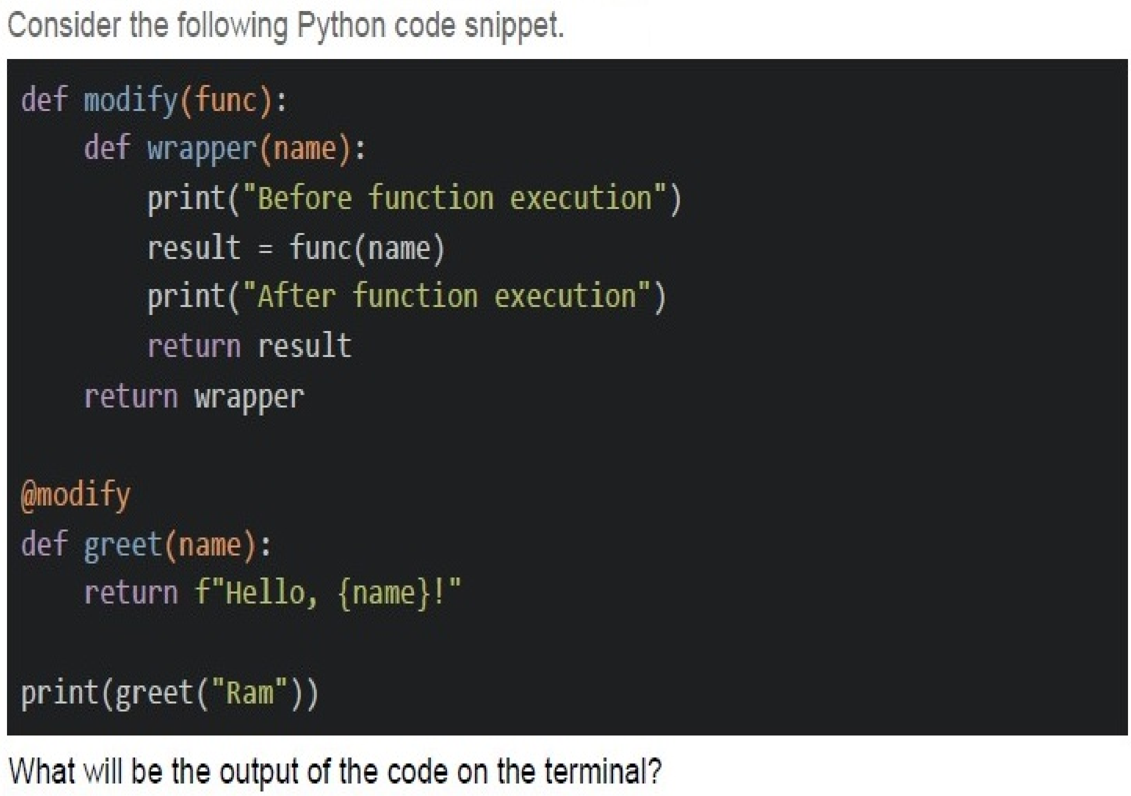


```
2, No, The mortgage doc is missing
3, No, Payslip doc is not enclosed
4, No, TDS doc is not enclosed
```

Question Number : 133 Question Id : 640653770552 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question



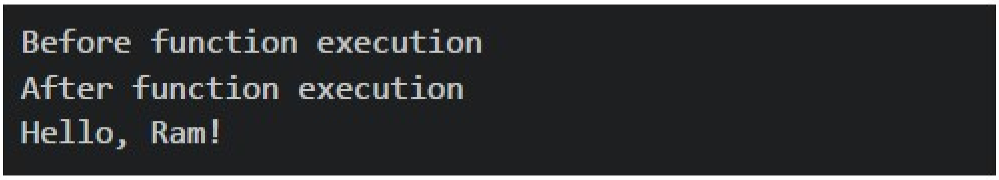
Consider the following Python code snippet.

```
def modify(func):
    def wrapper(name):
        print("Before function execution")
        result = func(name)
        print("After function execution")
        return result
    return wrapper

@modify
def greet(name):
    return f"Hello, {name}!"

print(greet("Ram"))
```

What will be the output of the code on the terminal?

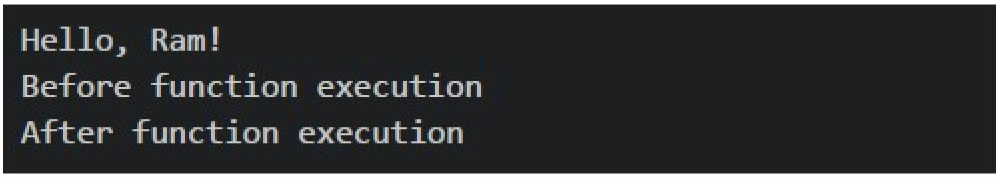
Options :

6406532577510. ✓



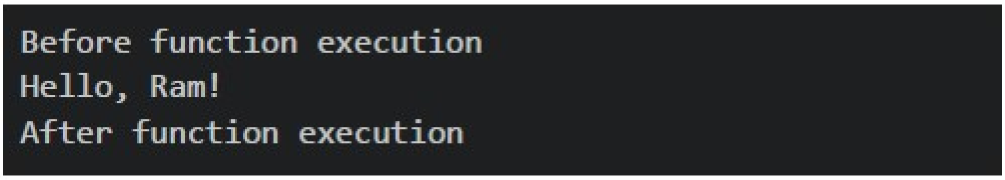
```
Before function execution
After function execution
Hello, Ram!
```

6406532577511. ✖



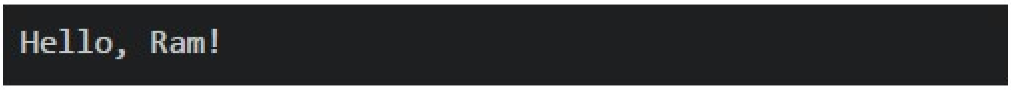
```
Hello, Ram!
Before function execution
After function execution
```

6406532577512. ✖



```
Before function execution
Hello, Ram!
After function execution
```

<span style="color:red">6406532577513.</span> ✖



```
Hello, Ram!
```

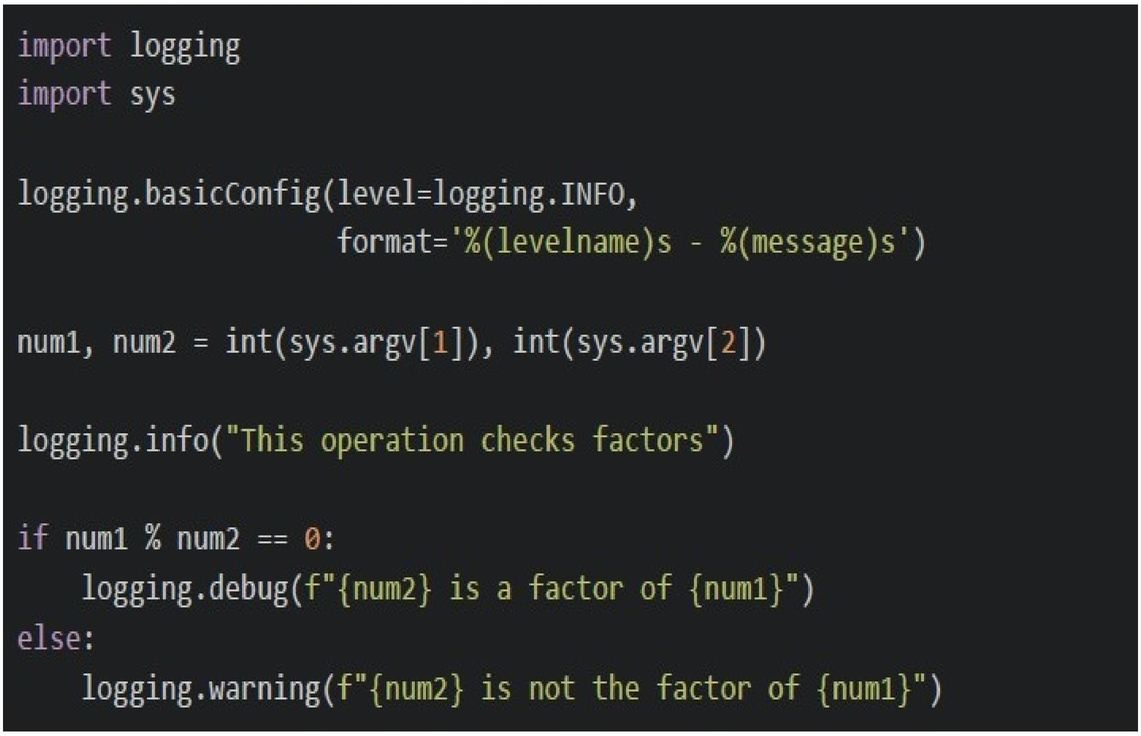
Sub-Section Number :	4
Sub-Section Id :	640653112609
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 134 Question Id : 640653770554 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4.5

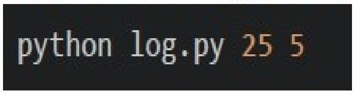
Question Label : Multiple Choice Question

Consider the following Python code snippet.



```
import logging
import sys

logging.basicConfig(level=logging.INFO,
                    format='%(levelname)s - %(message)s')

num1, num2 = int(sys.argv[1]), int(sys.argv[2])

logging.info("This operation checks factors")

if num1 % num2 == 0:
    logging.debug(f"{num2} is a factor of {num1}")
else:
    logging.warning(f"{num2} is not the factor of {num1}")
```

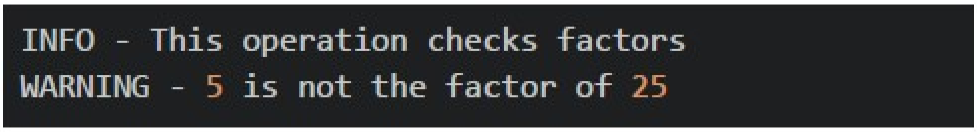
What will be the output of the above code on the terminal for the command:



```
python log.py 25 5
```

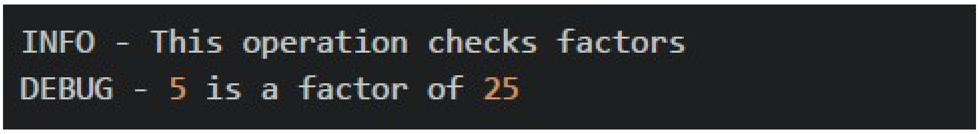
Options :

6406532577518. ✗



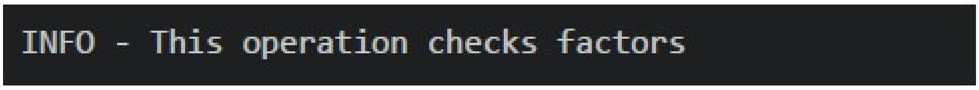
```
INFO - This operation checks factors
WARNING - 5 is not the factor of 25
```

6406532577519. ✗



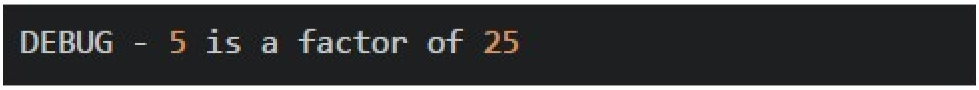
```
INFO - This operation checks factors
DEBUG - 5 is a factor of 25
```

6406532577520. ✓



```
INFO - This operation checks factors
```

6406532577521. ✗



```
DEBUG - 5 is a factor of 25
```

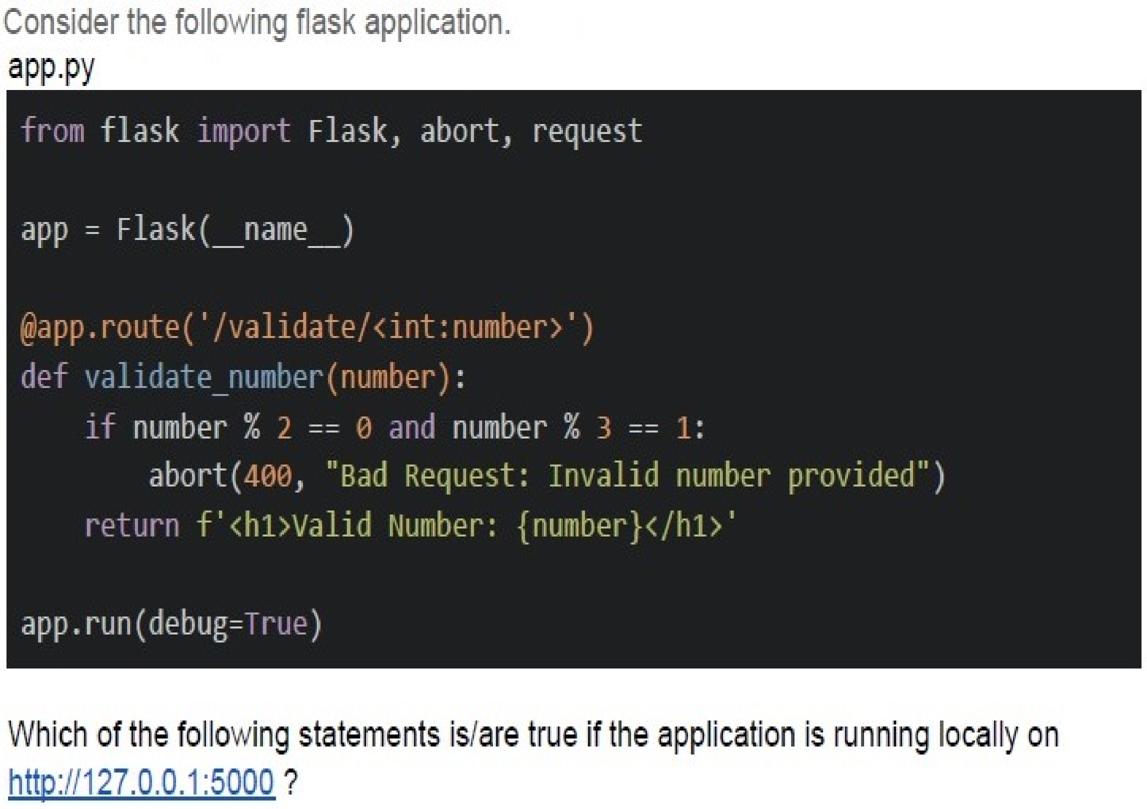
Sub-Section Number :	5
Sub-Section Id :	640653112610
Question Shuffling Allowed :	Yes

Is Section Default? : null

Question Number : 135 Question Id : 640653770541 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question



Consider the following flask application.

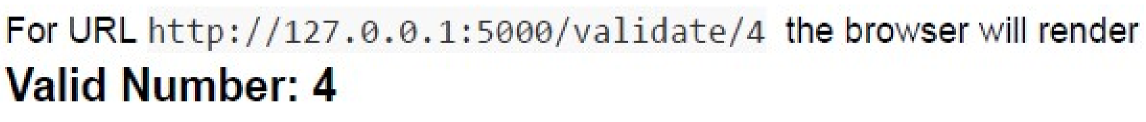
app.py

```
from flask import Flask, abort, request

app = Flask(__name__)

@app.route('/validate/<int:number>')
def validate_number(number):
    if number % 2 == 0 and number % 3 == 1:
        abort(400, "Bad Request: Invalid number provided")
    return f'<h1>Valid Number: {number}</h1>'

app.run(debug=True)
```

Which of the following statements is/are true if the application is running locally on http://127.0.0.1:5000 ?

Options :

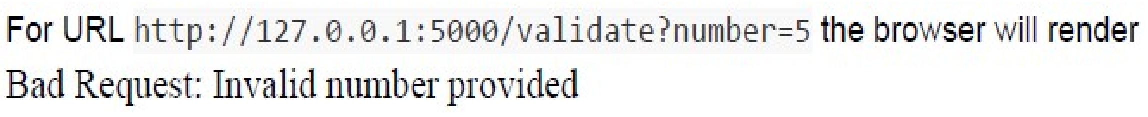
6406532577466. ✖



For URL `http://127.0.0.1:5000/validate/4` the browser will render

Valid Number: 4

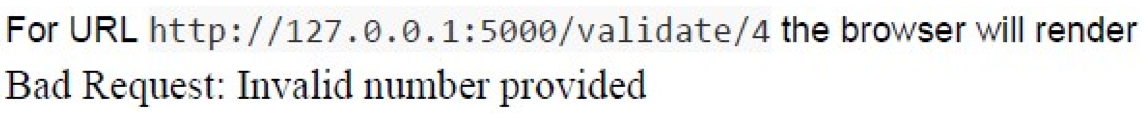
6406532577467. ✖



For URL `http://127.0.0.1:5000/validate?number=5` the browser will render

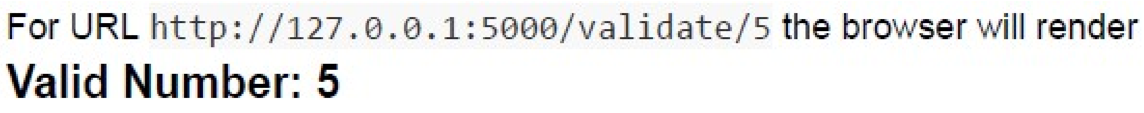
Bad Request: Invalid number provided

6406532577468. ✔



For URL `http://127.0.0.1:5000/validate/4` the browser will render

Bad Request: Invalid number provided

6406532577469. ✓ 

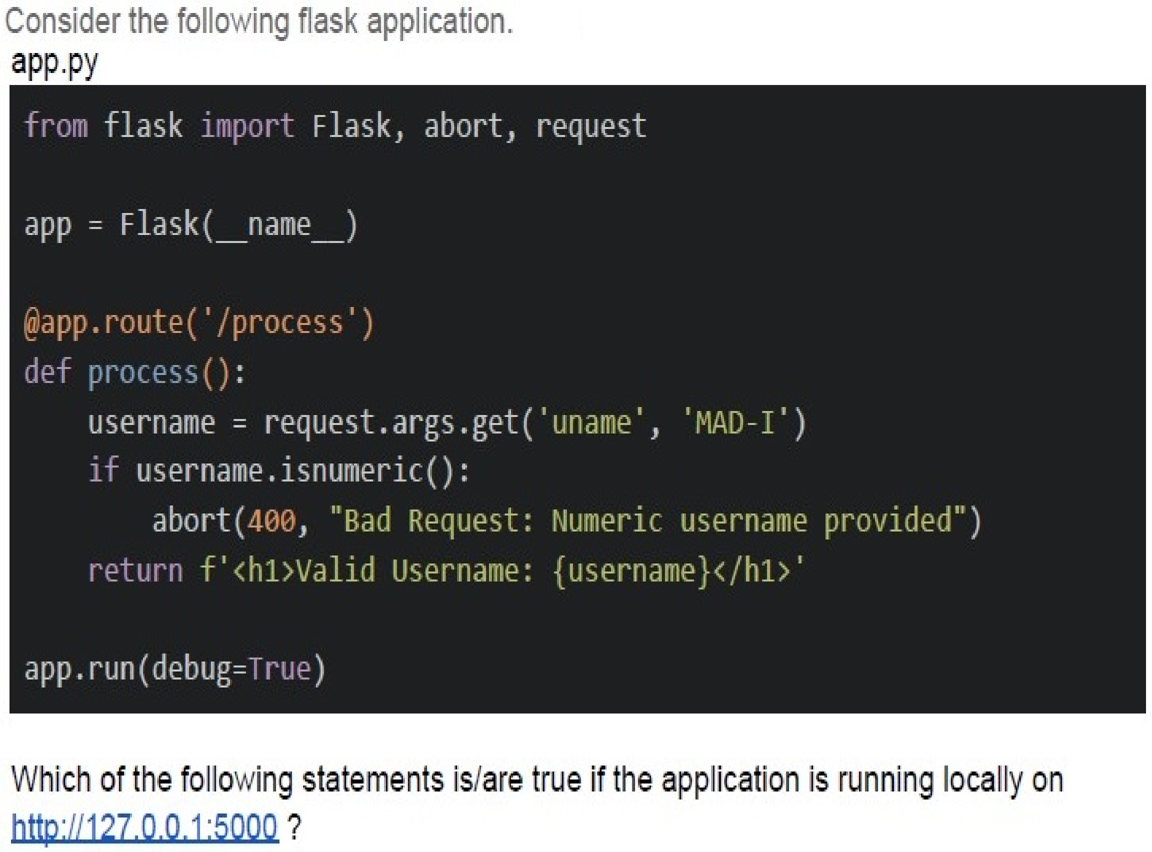
For URL `http://127.0.0.1:5000/validate/5` the browser will render

Valid Number: 5

Question Number : 136 Question Id : 640653770542 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question



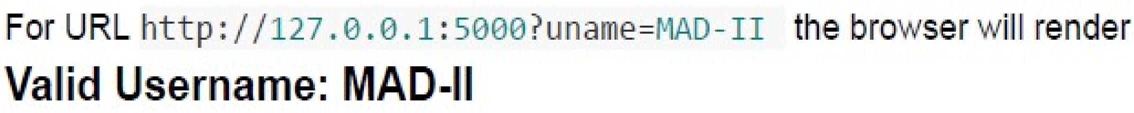
Consider the following flask application.

app.py

```
from flask import Flask, abort, request

app = Flask(__name__)

@app.route('/process')
def process():
    username = request.args.get('uname', 'MAD-I')
    if username.isnumeric():
        abort(400, "Bad Request: Numeric username provided")
    return f'<h1>Valid Username: {username}</h1>'

app.run(debug=True)
```

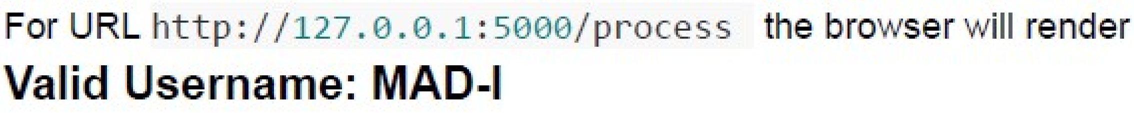
Which of the following statements is/are true if the application is running locally on http://127.0.0.1:5000 ?

Options :

6406532577470. ✗ 

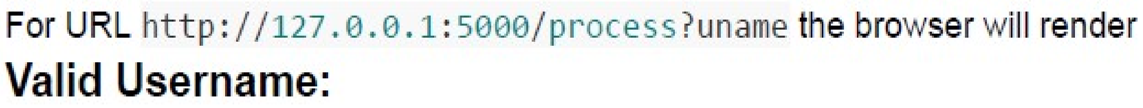
For URL `http://127.0.0.1:5000?uname=MAD-II` the browser will render

Valid Username: MAD-II

6406532577471. ✓ 

For URL `http://127.0.0.1:5000/process` the browser will render

Valid Username: MAD-I

6406532577472. ✓ 

For URL `http://127.0.0.1:5000/process?uname` the browser will render

Valid Username:

6406532577473. ✖ For URL `http://127.0.0.1:5000/process?uname=101MU` the browser will render Bad Request: Numeric username provided

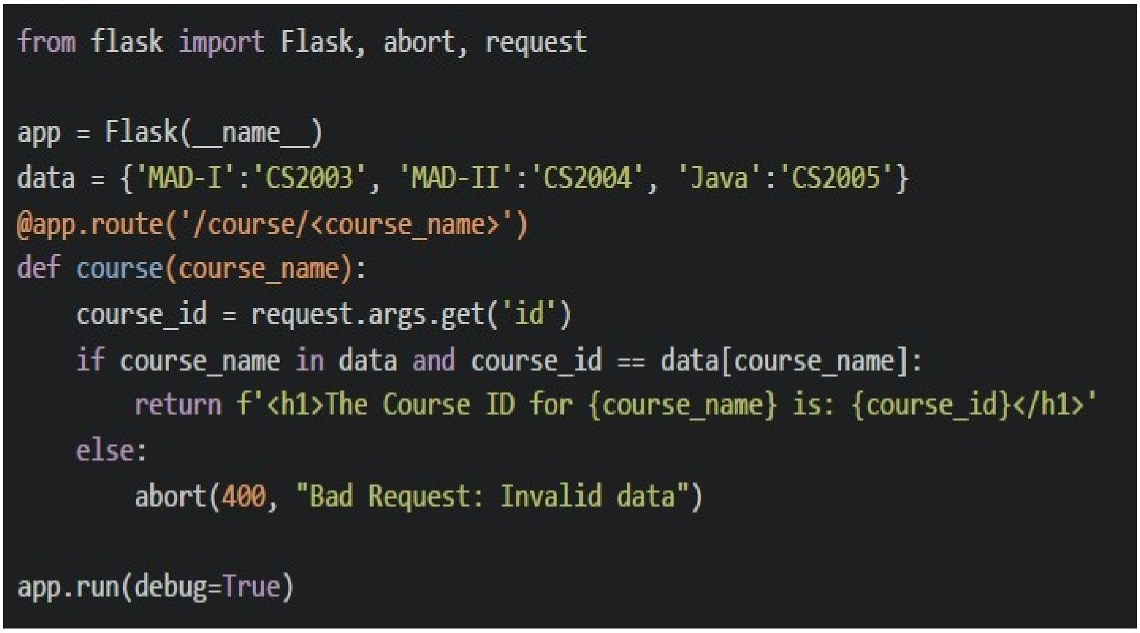
Question Number : 137 Question Id : 640653770543 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the following flask application.

app.py



```
from flask import Flask, abort, request

app = Flask(__name__)
data = {'MAD-I':'CS2003', 'MAD-II':'CS2004', 'Java':'CS2005'}
@app.route('/course/<course_name>')
def course(course_name):
    course_id = request.args.get('id')
    if course_name in data and course_id == data[course_name]:
        return f'<h1>The Course ID for {course_name} is: {course_id}</h1>'
    else:
        abort(400, "Bad Request: Invalid data")

app.run(debug=True)
```

Which of the following statements is/are true if the application is running locally on http://127.0.0.1:5000 ?

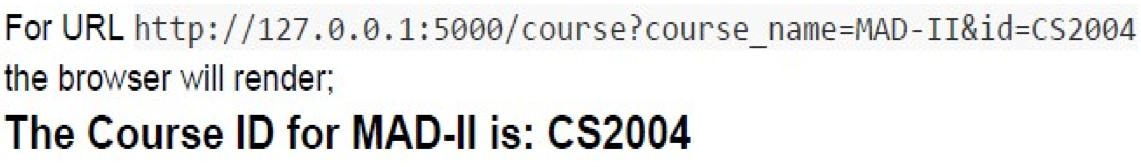
Options :

6406532577474. ✖ For URL `http://127.0.0.1:5000/MAD-I?id=CS2003` the browser will render;

The Course ID for MAD-I is: CS2003

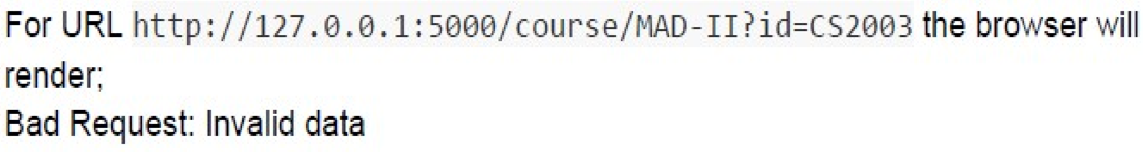
6406532577475. ✔ For URL `http://127.0.0.1:5000/course/Java?id=CS2005` the browser will render;

The Course ID for Java is: CS2005

6406532577476. ✖ 

For URL `http://127.0.0.1:5000/course?course_name=MAD-II&id=CS2004` the browser will render;

The Course ID for MAD-II is: CS2004

6406532577477. ✓ 

For URL `http://127.0.0.1:5000/course/MAD-II?id=CS2003` the browser will render;

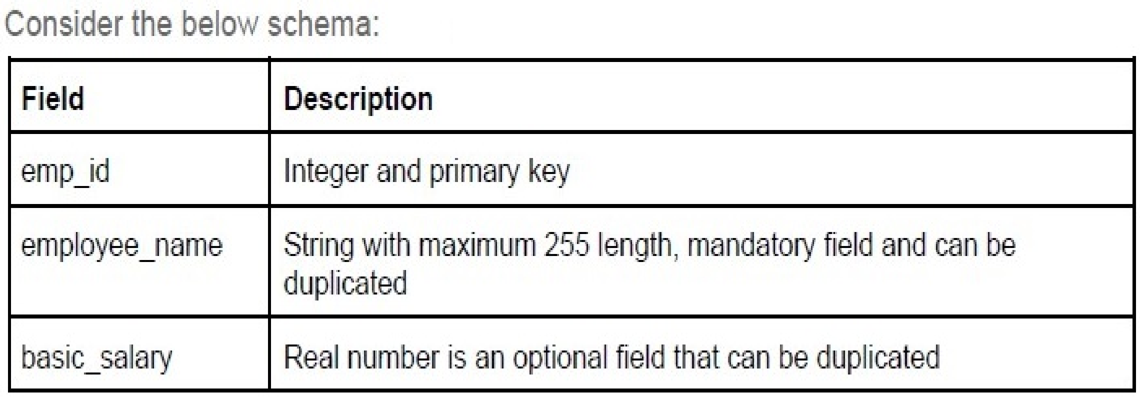
Bad Request: Invalid data

Sub-Section Number :	6
Sub-Section Id :	640653112611
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 138 Question Id : 640653770548 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

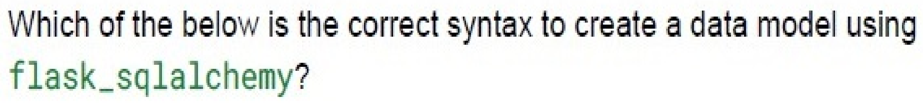
Correct Marks : 4.5 Max. Selectable Options : 0

Question Label : Multiple Select Question



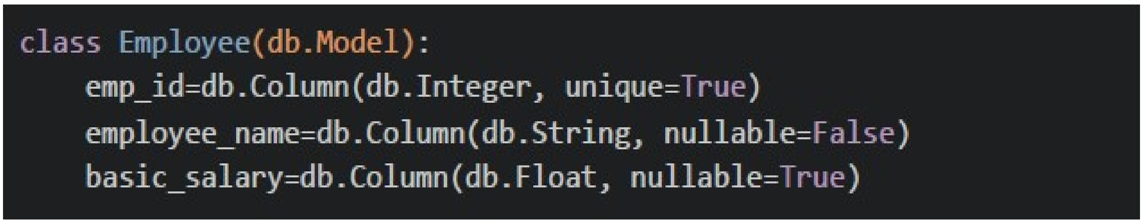
Consider the below schema:

Field	Description
emp_id	Integer and primary key
employee_name	String with maximum 255 length, mandatory field and can be duplicated
basic_salary	Real number is an optional field that can be duplicated



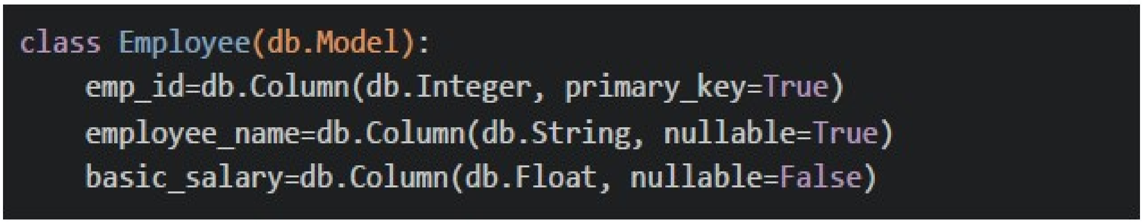
Which of the below is the correct syntax to create a data model using `flask_sqlalchemy`?

Options :

6406532577494. ✖ 

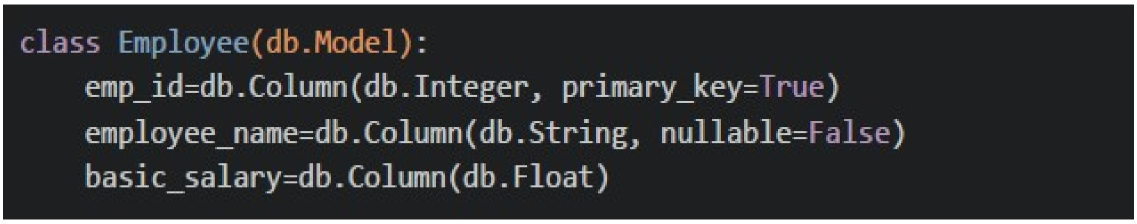
```
class Employee(db.Model):
    emp_id=db.Column(db.Integer, unique=True)
    employee_name=db.Column(db.String, nullable=False)
    basic_salary=db.Column(db.Float, nullable=True)
```

6406532577495. ✗



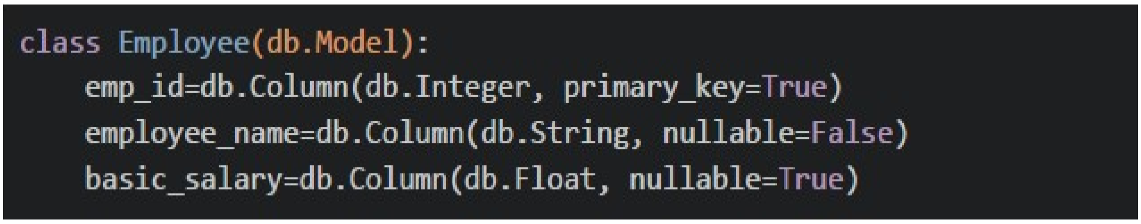
```
class Employee(db.Model):
    emp_id=db.Column(db.Integer, primary_key=True)
    employee_name=db.Column(db.String, nullable=True)
    basic_salary=db.Column(db.Float, nullable=False)
```

6406532577496. ✓



```
class Employee(db.Model):
    emp_id=db.Column(db.Integer, primary_key=True)
    employee_name=db.Column(db.String, nullable=False)
    basic_salary=db.Column(db.Float)
```

6406532577497. ✓



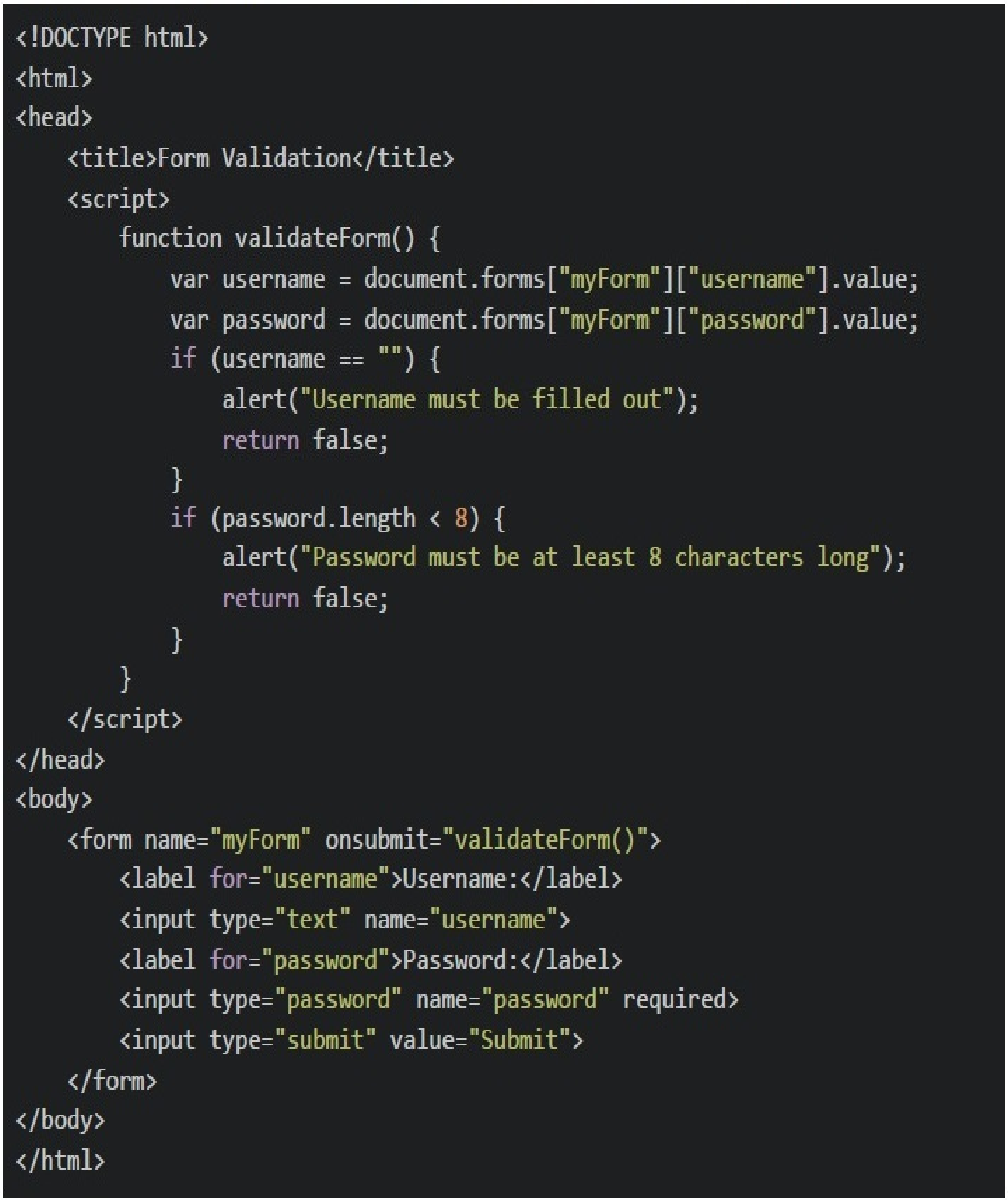
```
class Employee(db.Model):
    emp_id=db.Column(db.Integer, primary_key=True)
    employee_name=db.Column(db.String, nullable=False)
    basic_salary=db.Column(db.Float, nullable=True)
```

Question Number : 139 Question Id : 640653770553 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4.5 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the following HTML document and select the correct option(s).



```
<!DOCTYPE html>
<html>
<head>
    <title>Form Validation</title>
    <script>
        function validateForm() {
            var username = document.forms["myForm"]["username"].value;
            var password = document.forms["myForm"]["password"].value;
            if (username == "") {
                alert("Username must be filled out");
                return false;
            }
            if (password.length < 8) {
                alert("Password must be at least 8 characters long");
                return false;
            }
        }
    </script>
</head>
<body>
    <form name="myForm" onsubmit="validateForm()">
        <label for="username">Username:</label>
        <input type="text" name="username">
        <label for="password">Password:</label>
        <input type="password" name="password" required>
        <input type="submit" value="Submit">
    </form>
</body>
</html>
```

Options :

6406532577514. ✗ The JavaScript function, `'validateForm'` performs the backend processing of form data.

6406532577515. ✓ The JavaScript function, `'validateForm'` carries out the client side validation of form data.

6406532577516. ✓ If the password field is left empty, on submission, the user will get a prompt **"Please fill out this field."** near the password field.

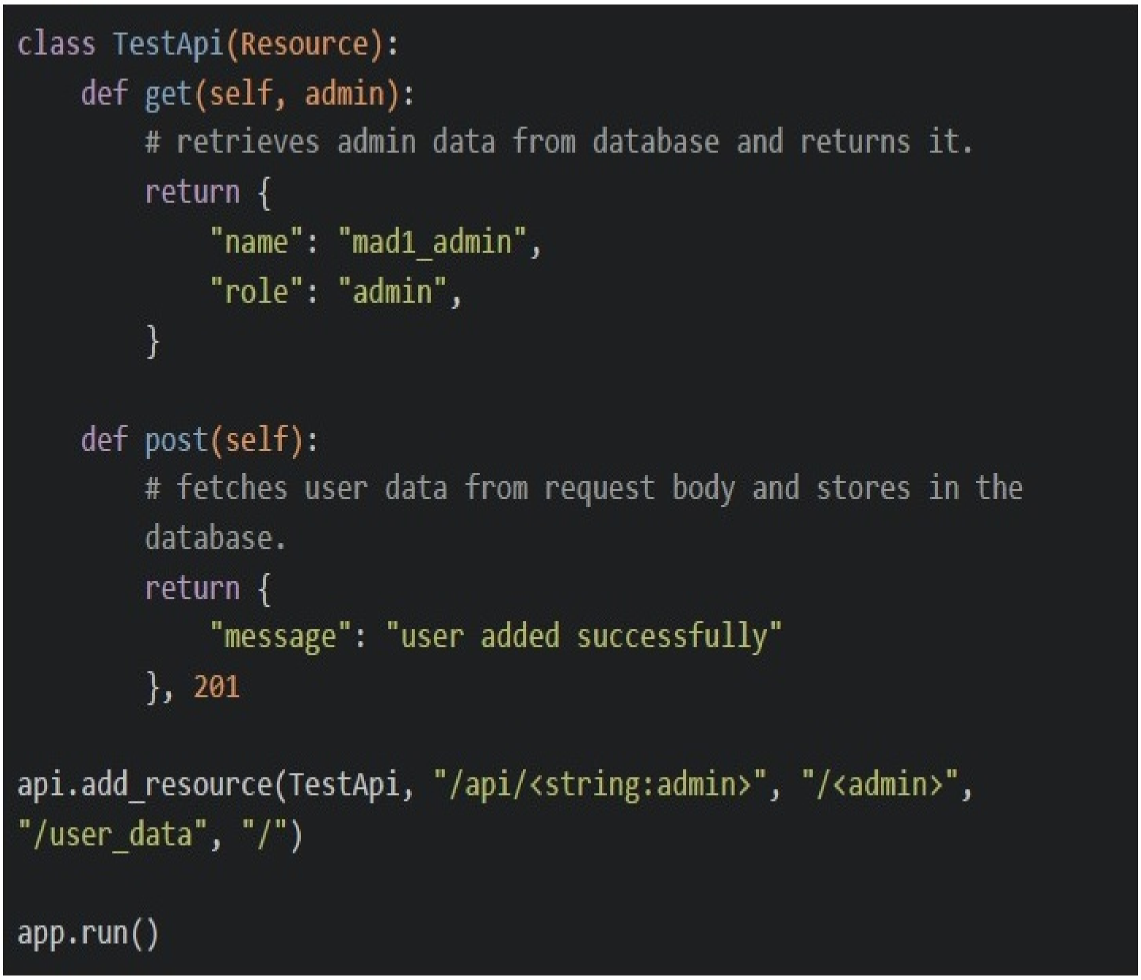
6406532577517. ✖ If the password field is left empty, on submission, the user will get a prompt "Password must be at least 8 characters long" from the browser.

Question Number : 140 Question Id : 640653770555 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4.5 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the following api resources created using flask_restful. Assume that the app is connected to the database and is running on one terminal. Select the correct option(s).

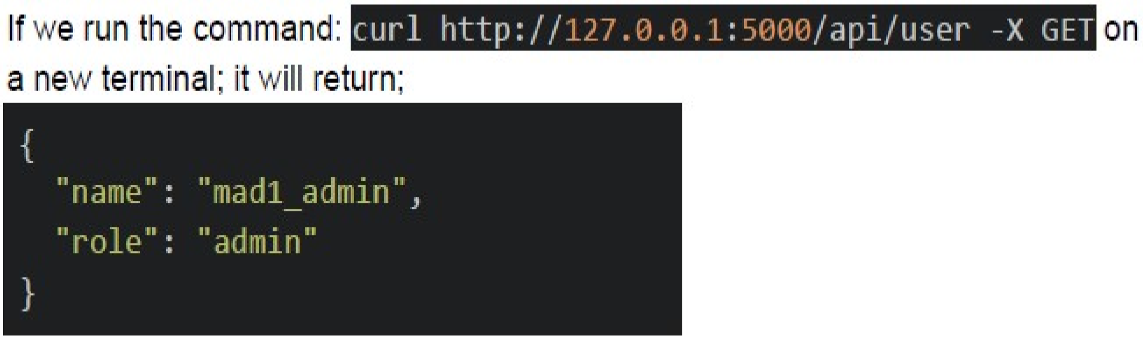


```
class TestApi(Resource):
    def get(self, admin):
        # retrieves admin data from database and returns it.
        return {
            "name": "mad1_admin",
            "role": "admin",
        }

    def post(self):
        # fetches user data from request body and stores in the
        database.
        return {
            "message": "user added successfully"
        }, 201

api.add_resource(TestApi, "/api/<string:admin>", "/<admin>",
"/user_data", "/")

app.run()
```

Options :

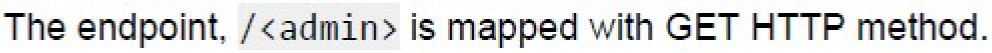
6406532577522. ✖ The base URL for the app is mapped with GET HTTP method.

6406532577523. ✔

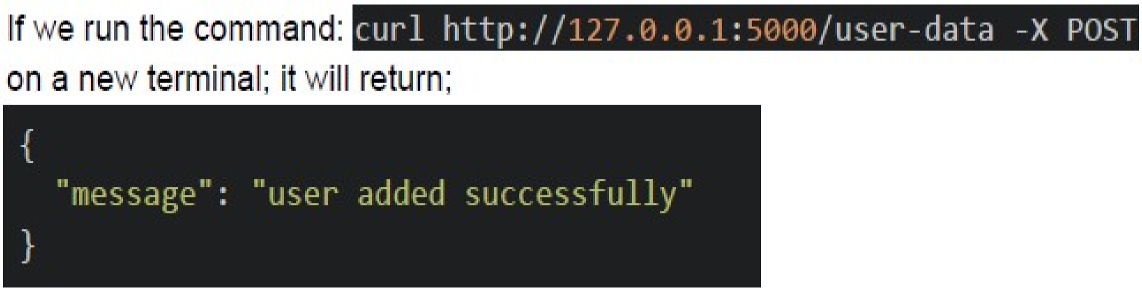


If we run the command: `curl http://127.0.0.1:5000/api/user -X GET` on a new terminal; it will return;

```
{
  "name": "mad1_admin",
  "role": "admin"
}
```

6406532577524. ✓ 

The endpoint, `/<admin>` is mapped with GET HTTP method.

6406532577525. ✓ 

If we run the command: `curl http://127.0.0.1:5000/user-data -X POST` on a new terminal; it will return;

```
{
  "message": "user added successfully"
}
```

MLF

Section Id :	64065353265
Section Number :	9
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	10
Number of Questions to be attempted :	10
Section Marks :	40
Display Number Panel :	Yes
Section Negative Marks :	0
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes