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Answer: By Using Flask I am Creating my API
Setup:

- Our Toy Data.
- Initialize A Flask API.
- Endpoints
- Running A Local Server>

Writing Our API.

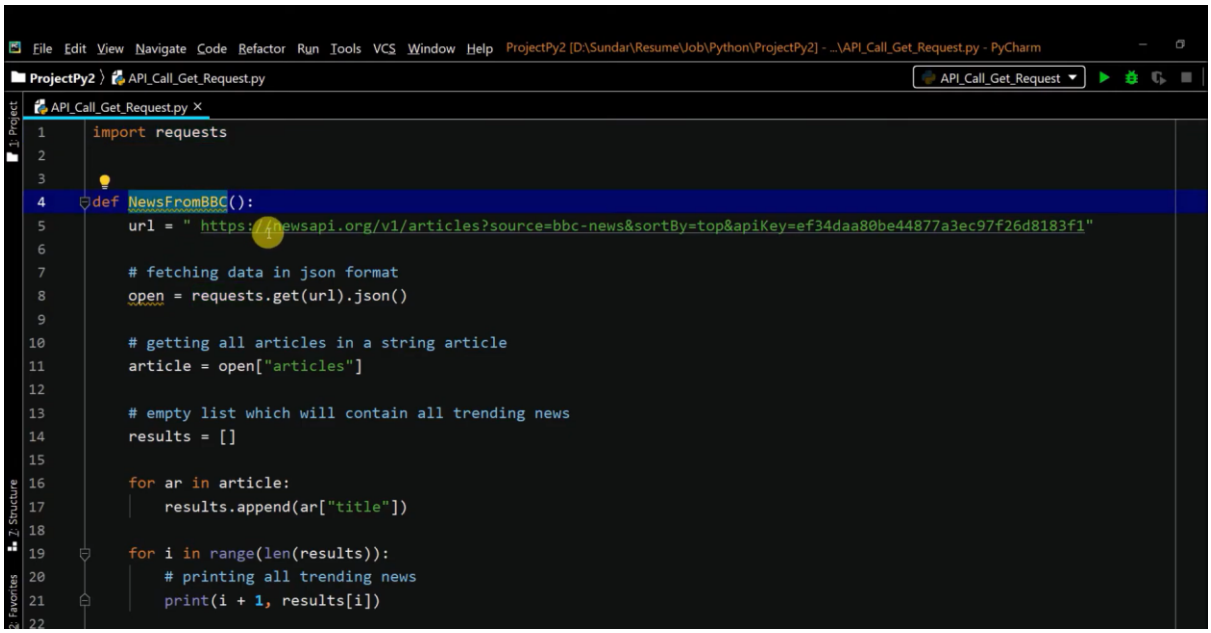
- Get
- Post
- 401 Unauthorized
- PUT
- Delete Users Class

1) **Create an API that lists the title, description based on the category passed as an input parameter.**

Program:

```
Import Requests
Def NewFormBBC():
url=https://nesaip.org
open = requests.get(url).json()
articale = open[“articals”]
results []
for ar in article:
result.append(ar[“Title”])
for I in range(len(results));
print(i + 1,results[i])
if_name_’_mail_’;
NewsFromBBC()
```

Ending With OutPut Screen Short



2) **Create an API that would save a new entry with all the relevant properties which retrieves values from the endpoint GET /entries.**

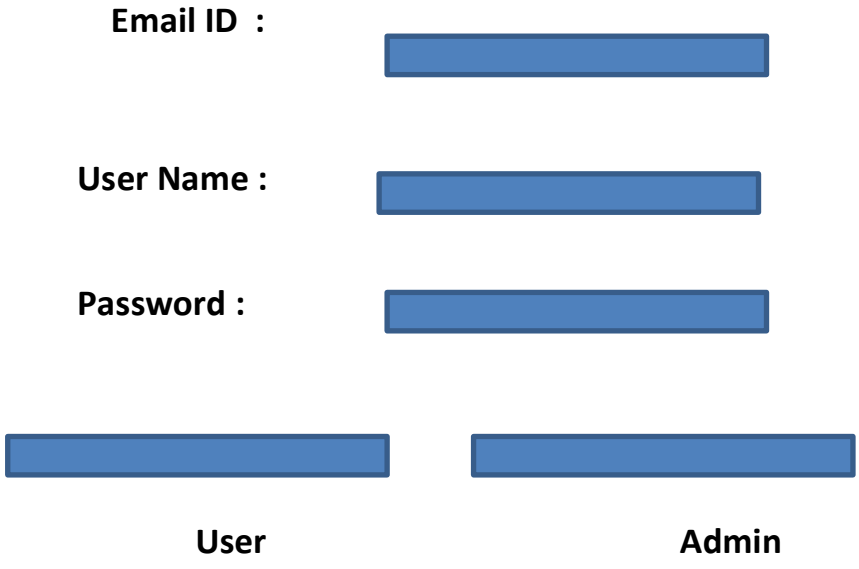
Answer

Create a registration Form Which help to save the new entry. And we can Save the entry also

```
exports.isPasswordAndUserMatch = (req, res, next) =>
{  \\ Attributes
UserModel.findByEmail(req.body.email)  \\ Email
Request
.then( (user)=> {
if (!user[ 0 ]){
res.status( 404 ).send({});\\ Error Display
} else {
let passwordFields = user[ 0 ].password.split( '$' );\\
Password Encription
let salt = passwordFields[ 0 ];
let hash = crypto.createHmac( 'sha512' , salt)
.update(req.body.password).digest( "base64" )
if (hash === passwordFields[ 1 ]) {
req.body = {
userId : user[ 0 ]._id, \\ User id
email : user[ 0 ].email, \\Email
permissionLevel : user[ 0 ].permissionLevel,\\
Permission
provider : 'email' , name : user[ 0 ].firstName + '
' user[ 0 ].lastName,
};
return next();
} else {
```

```
return res.status(400).send({errors: ['Invalid email or password']});
}
}
});
```

Output For The Program



3. **Question: what are the key things you would consider when creating/consuming an API to ensure that it is secure and reliable?**

Answer:

- **Use tokens**.
- **Use encryption and signatures**.
- **Identify vulnerabilities**
- **Use an API gateway**.

Detail Explation

Use Tokens : Token are use to identify the Identities.

Use encryption and signatures : Use to encrypt the password give by the user.

Identify vulnerabilities : No empty Values are allowed.

Use API gateway: API gate way are used to apply which format the use can impressesd.

Suppose you have a CSV file with the data below.

A1: 5, A2: 7, A3: 9, B1: 3, B2: 8, B3: =4+5, C1: =5+A1, C2: =A2+B2, C3: =C2+B3

This can be represented in an excel sheet below:

	A	B	C
1	5	3	=5+A1
2	7	8	=A2+B2
3	9	=4+5	=C2+B3

I want a program that will take the CSV input above and produce CSV output with the results. If it is a value, then return a value. If it is a formula then calculate the formula and return the value of that formula.

1. How will you tackle the challenge above?
2. What type of errors you would you check for?
3. How might a user break your code?

Program.

```
import csv
 fields = ['A', 'B', 'C']
 rows = [‘A’,’B’’C’],
        [‘1’,’A’,’B’,’C’],
        [‘2’,’A’,’B’,’C’],
        [‘3’,’A’,’B’,’C’];


name of csv file
filename = "Dayananda university.csv"
with open(filename, 'w') as csvfile:
    csvwriter = csv.writer(csvfile)
    csvwriter.writerow(fields)
```

```
    csvwriter.writerows(rows)
int A1 = 5;
int A2 = 7;
int A3 = 9;
int B1 = 3;
int B2 = 8;

def ref (A,B,C);
if {
C1 = (5 + A1)
Return
Print("[C1]": Answer)
 Else if{
C2 = (A2 + B2)
Print("[c2]" : Answer)
Else if {
C3 = (C2 + B3)
Print("[c3] : Answer)
}
}
]
Return 0;
```

Thanking You

The End