BP

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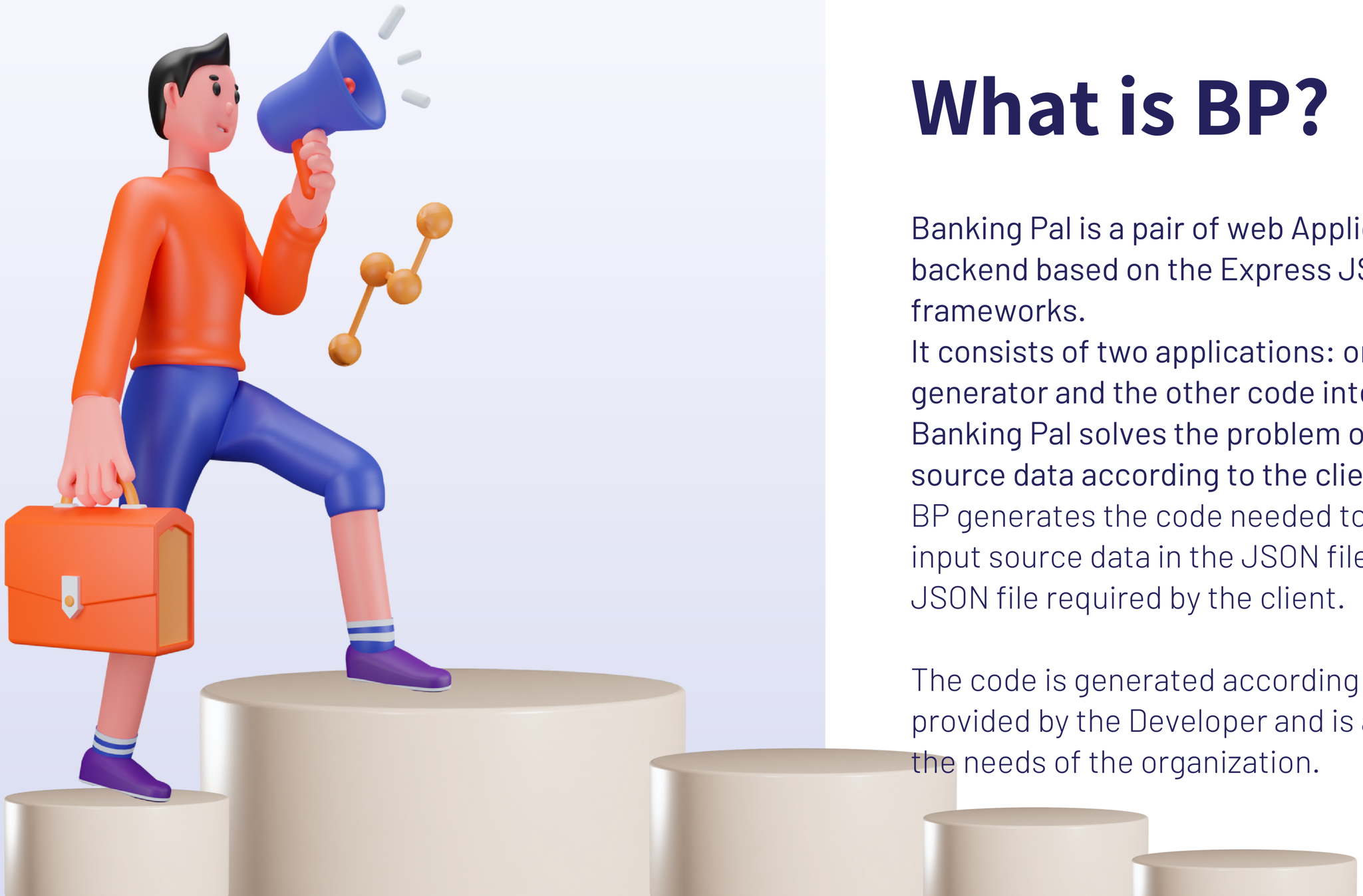

What is BP?

Banking Pal is a pair of web Applications with a backend based on the Express JS and Node JS frameworks.
It consists of two applications: one code generator and the other code interpreter app.
Banking Pal solves the problem of providing the source data according to the client's needs.
BP generates the code needed to convert the input source data in the JSON file into the target JSON file required by the client.

The code is generated according to the mapping provided by the Developer and is according to the needs of the organization.

Our Philosophy

We aim to provide a solution that can reduce the workload and the time required by the Developer to convert a given data to a specific form as needed by the client.

The time saved through this application would be highly beneficial for the companies to be used somewhere else.

FILE CONVERSION FROM CSV TO J-SON FORMAT

The Code interpreter takes the input of mapping in a CSV file and converts it to JSON file format using the in-built module CSV-parser of JavaScript.

The Code interpreter app sends the made JSON file to the Code Generator application.

Code Generator receives the J-SON

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When the code generator receives the JSON, it reads the file and a, for each loop, iterates through each line of the JSON file. Each iteration produces the code needed to convert that particular line of the source JSON file to the target JSON according to the CSV mapping given as input to the code interpreter app. Each generated code line is pulled into the list in the form of a string. The generated code is in JavaScript.

THE GENERATED CODE TAKES CARE OF ALL THE SPECIAL CONDITIONS THAT IS THE CONCATENATION OF THE STRING VALUES, ENUM MAPPING FOR VARIABLE INPUT,IF-THEN-ELSE CASES ETC.

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List Containing Code is sent to the Code Interpreter

forEach loop is run on the list containing code lines to extract the code line by line.

The extracted line of code from the list is evaluated using the in-built JavaScript function that is eval().

After all the iterations we have generated the target file in the JSON format according to the needs of the client given in the CSV mapping.

The generated code was in Node.Js.

OUTPUT

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Our Backend of the application is working correctly and can generate the code for all three given sample sources in the backend.
The generated code can also give the output of the correct target JSON file along with all the changes.

Here is the code generated for all three given source files and the file generated for all three generated codes.

FUTURE SCOPE

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IMPROVING THE FRONTEND OF THE INTERPRETER APPLICATION

TAKING IN CONSIDERATIONS OF ALL THE DIFFERENT TYPES OF PROBLEMS AND CASES THAT CAN BE GIVEN IN CSV MAPPING

CREATING THE DATABASE TO MAINTAIN THE RECORD OF WHO USED HOW MUCH DATA AND WHICH DATA WAS USED TO PERSONALIZE THE USER EXPERIENCE.

IMPROVING THE USER EXPERIENCE

CODE GENERATED FOR MAPPING -1

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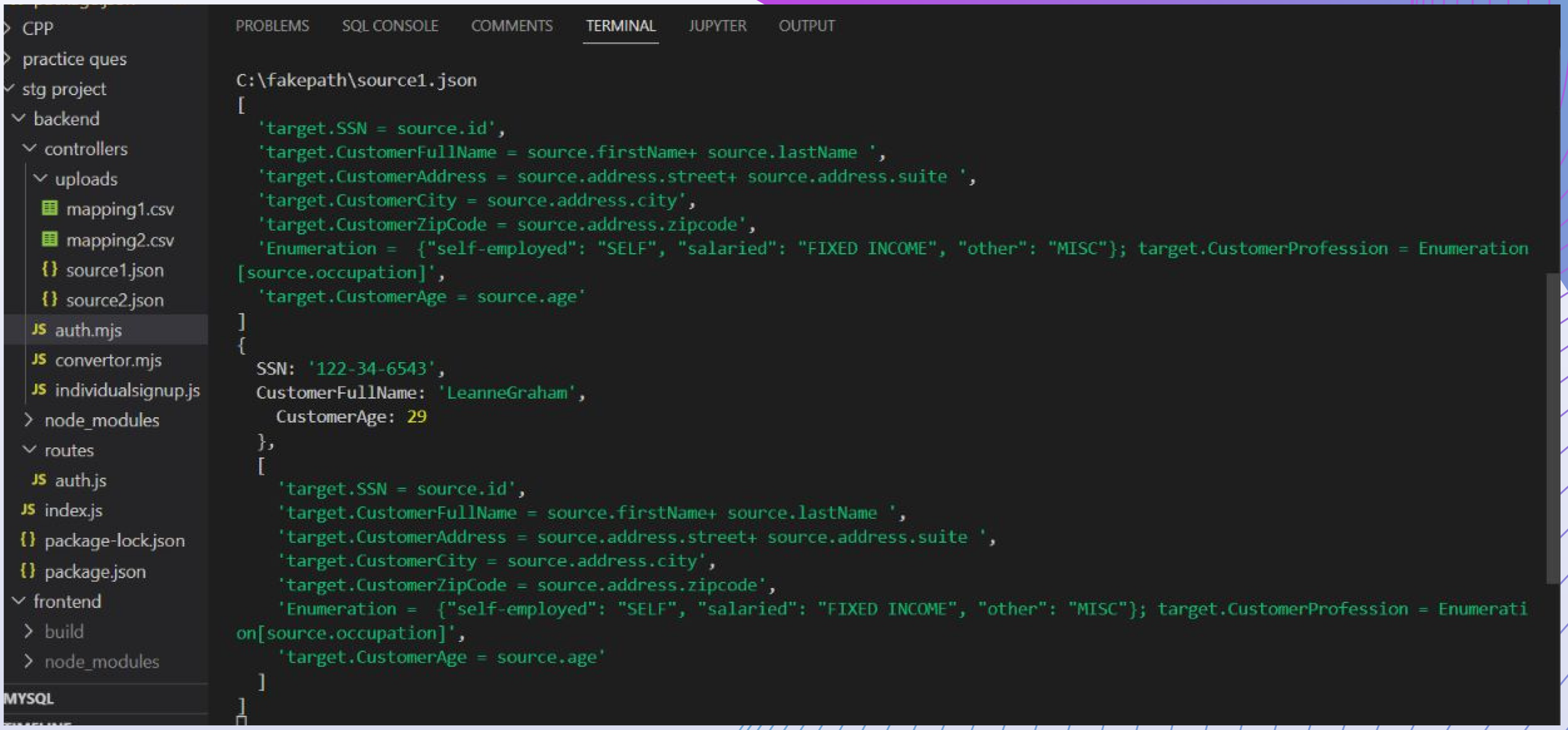

CODE GENERATED FOR MAPPING-2

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```
42  var source_name = req.body.source.split("\\")[2];
```

PROBLEMS SQL CONSOLE COMMENTS TERMINAL JUPYTER OUTPUT

```
Connected!
C:\fakepath\source2.json
[
  `Enumeration =  {"NA": "1", "EU" : 2, "AS": 3, "AF": 4}; target.SSN = Enumeration[source ] + '-' + source.id `,
  'target.CustomerFullName = source.firstName+ source.lastName ',
  'target.CustomerAddress = source.address.street+ source.address.suite ',
  'target.CustomerCity = source.address.city',
  'target.CustomerZipCode = source.address.zipcode',
  'Enumeration =  {"self-employed": "SELF", "salaried": "FIXED INCOME", "other": "MISC"}; target.CustomerProfession = Enumeration
[source.occupation]',
  'target.CustomerAge = source.age',
  'eval(target.CommercialLoans = [];); target.CommercialLoans = source.loanHistory.forEach((item) => { if (item.isCommercial == t
rue){ CommercialLoans.push(item)}})'
]
```

CODE GENERATED FOR MAPPING-3

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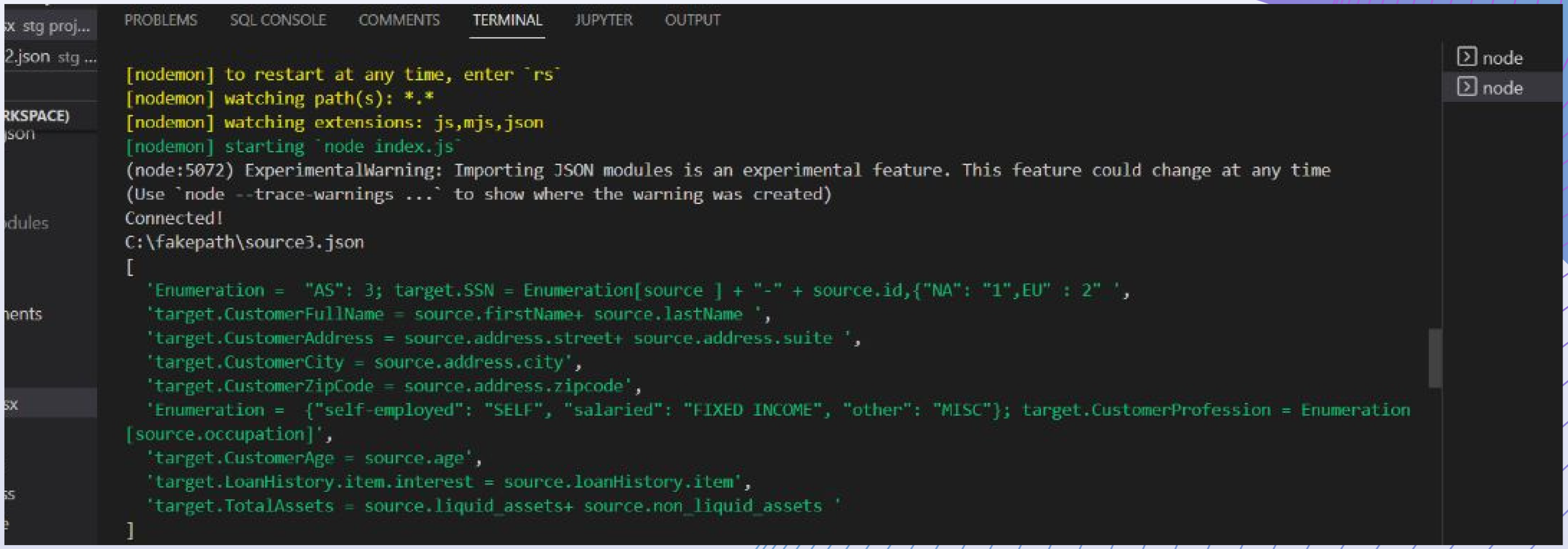

HOW IS THE RESULT DISPLAYED IN FRONTEND

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DEVELOPERS .

SUBMIT

TARGET


```
{"SSN":"122-34-6543","CustomerFullName":"LeanneGraham","CustomerAddress":"Kulas LightApt.
556","CustomerCity":"Gwenborough","CustomerZipCode":"92998-3874","CustomerProfession":"SELF","CustomerAge":29}
```


GENERATED CODE

```
target.SSN = source.id,target.CustomerFullName = source.firstName+ source.lastName ,target.CustomerAddress =
source.address.street+ source.address.suite ,target.CustomerCity = source.address.city,target.CustomerZipCode =
source.address.zipcode,Enumeration = {"self-employed": "SELF", "salaried": "FIXED INCOME", "other": "MISC"};
target.CustomerProfession = Enumeration[source.occupation],target.CustomerAge = source.age
```

Meet Our Team

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