

Homework 1 – Advanced Software Engineering (2019/20)

Millionaire

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Repository: <https://github.com/simo-r/ASE/tree/master/Homework1>

1. Description

The development of the homework started by taking a tour of the provided skeleton. The tour aimed to discover and understand the class `quiz.py` and the methods already provided in the `quizzes.py` to exploit them in the development phase.

The implementation followed the specification provided inside the `quizzes.py` and in the PDF but at a certain point, I had to take a look at the `test_quiz.py` to understand the syntax and the values expected and returned by each endpoint.

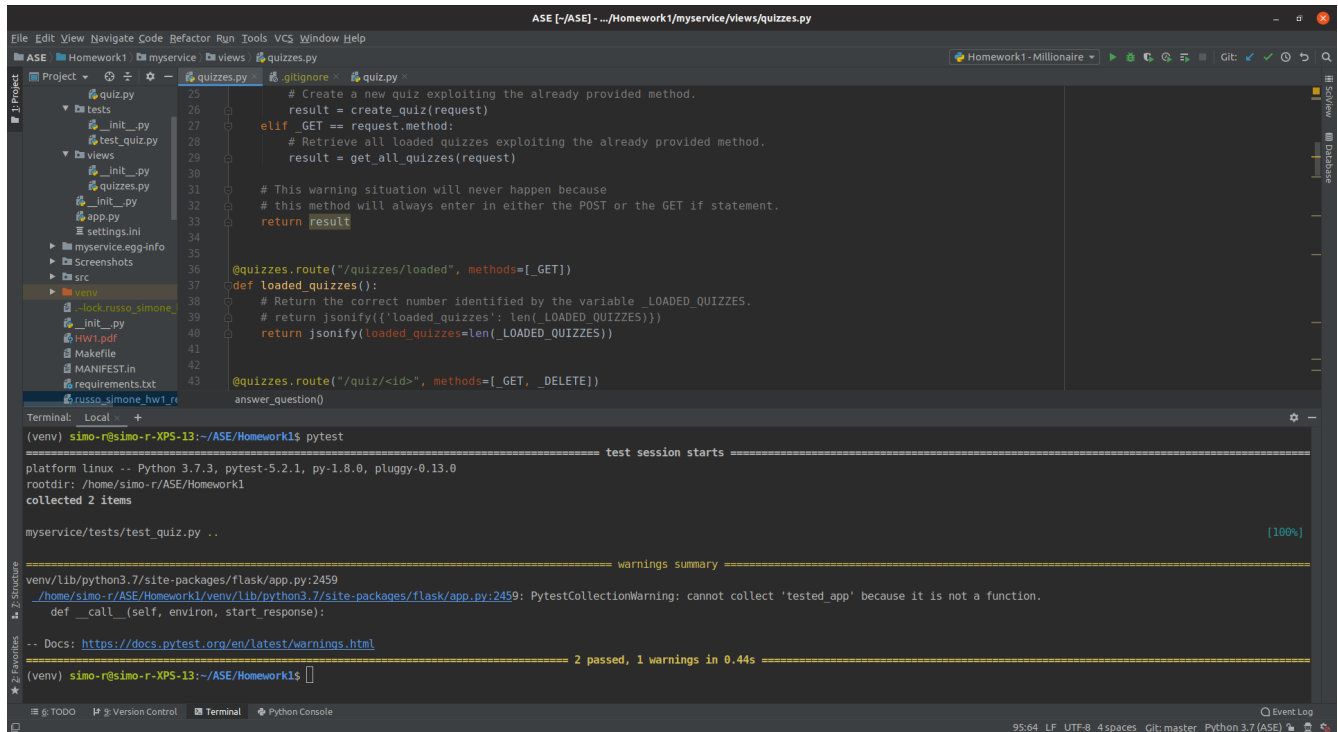
I also added the keyword *methods* to the Flask *route* annotation restricting the usage of such methods to the only HTTP methods supported by them, so now Flask manages unsupported HTTP method on each route.

Note that, in the method `all_quizzes()` inside the `quizzes.py` the variable *result* gives a warning because “*Local variable result might be referenced before assignment*” but that will never happen because the execution of the method will either enter in PUT or the GET case thanks to the Flask route annotation.

The screenshot of the successfully passed tests below shows a warning due to the alias *tested_app* in the import “*from myservice.app import app as tested_app*” because Pytest scans every python file trying to execute as a function “everything” that starts with the *test* keyword.

2. Screenshots

2.1 PyTest



The screenshot shows an IDE window titled "ASE [-/ASE] - .../Homework1/myservice/views/quizzes.py". The editor displays the contents of `quizzes.py`, which includes a `create_quiz` function, a `loaded_quizzes` function, and two route decorators. The left sidebar shows a project tree with folders like `tests`, `views`, and `src`. The bottom panel contains a terminal window showing the output of a `pytest` command. The output indicates that the tests passed successfully, with 2 items collected and 2 passed, along with a warning summary.

```
ASE [-/ASE] - .../Homework1/myservice/views/quizzes.py
File Edit View Navigate Code Refactor Run Tools VCS Window Help
ASE Homework1 myservice views quizzes.py Homework1-Millionaire Git: ✓

Project
  Project
    quizzes.py
    tests
      __init__.py
      test_quiz.py
    views
      __init__.py
      quizzes.py
      __init__.py
      app.py
      settings.ini
      myservice.egg-info
      Screenshots
      src
      venv
        lock_russo_simone
        __init__.py
        HW1.pdf
        Makefile
        MANIFEST.in
        requirements.txt
        russo_simone_hw1_r

quizzes.py
25 # Create a new quiz exploiting the already provided method.
26 result = create_quiz(request)
27 elif _GET == request.method:
28 # Retrieve all loaded quizzes exploiting the already provided method.
29 result = get_all_quizzes(request)
30
31 # This warning situation will never happen because
32 # this method will always enter in either the POST or the GET if statement.
33 return result
34
35 @quizzes.route("/quizzes/loaded", methods=[_GET])
36 def loaded_quizzes():
37 # Return the correct number identified by the variable LOADED_QUIZZES.
38 # return jsonify({'loaded_quizzes': len(LOADED_QUIZZES)})
39 return jsonify(loaded_quizzes=len(LOADED_QUIZZES))
40
41 @quizzes.route("/quiz/<id>", methods=[_GET, _DELETE])
42 answer_question()

Terminal: Local
+
(venv) simo-r@simo-r-XPS-13:~/ASE/Homework1$ pytest

===== test session starts =====
platform linux -- Python 3.7.3, pytest-5.2.1, py-1.8.0, pluggy-0.13.0
rootdir: /home/simo-r/ASE/Homework1
collected 2 items

myservice/tests/test_quiz.py .. [100%]

===== warnings summary =====
venv/lib/python3.7/site-packages/flask/app.py:2459
/home/simo-r/ASE/Homework1/venv/lib/python3.7/site-packages/flask/app.py:2459: PytestCollectionWarning: cannot collect 'tested_app' because it is not a function.
  def __call__(self, environ, start_response):
-- Docs: https://docs.pytest.org/en/latest/warnings.html
===== 2 passed, 1 warnings in 0.44s =====
(venv) simo-r@simo-r-XPS-13:~/ASE/Homework1$
```

Figure 1: test_quiz.py passed

2.2 Postman – All polls

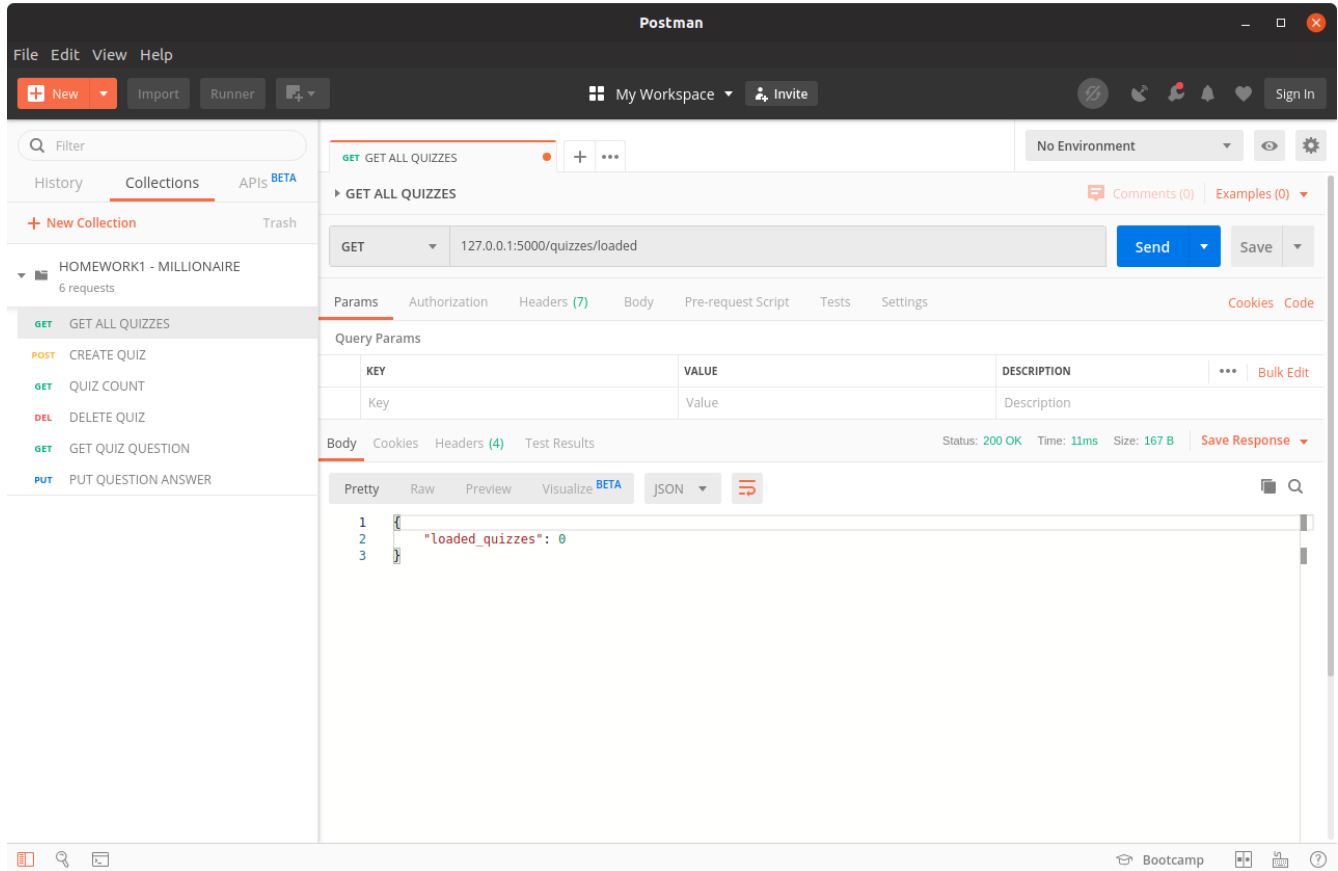


Figure 2: Test1 - No loaded quiz

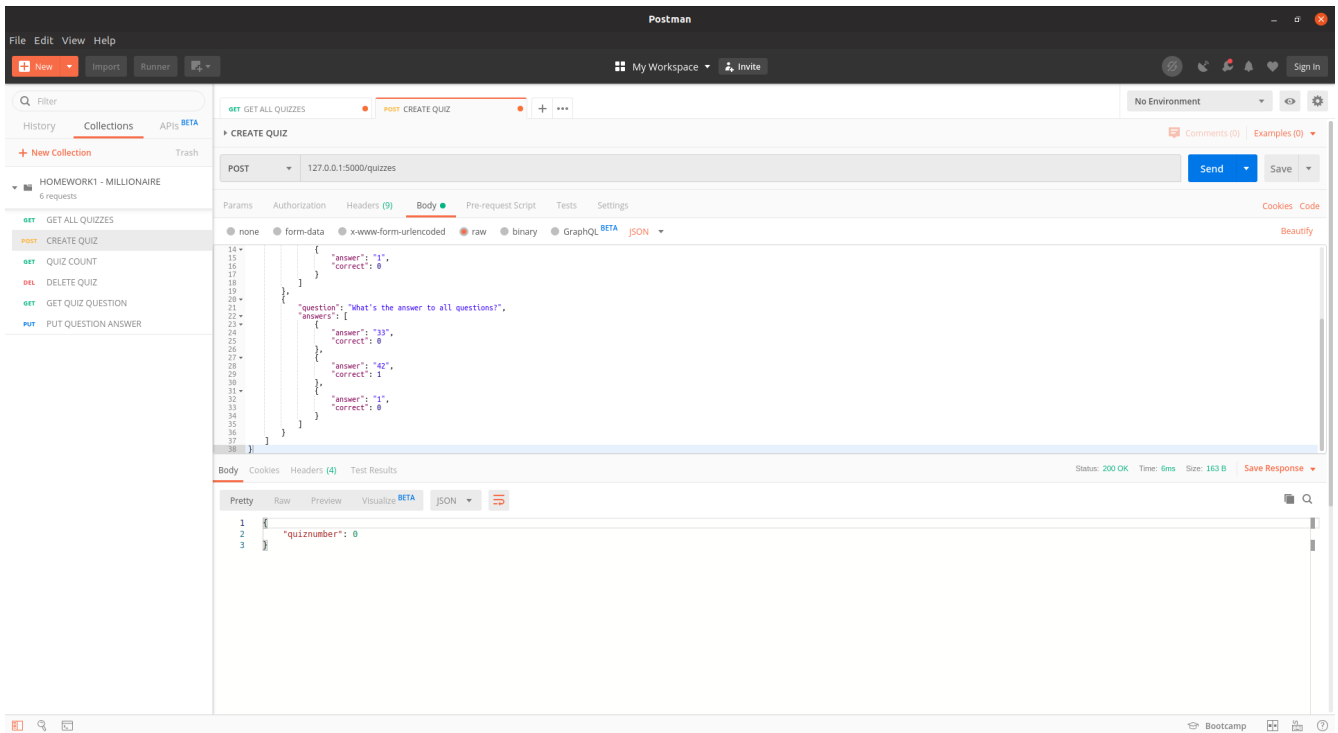


Figure 3: Test2 - Create 1st quiz with 2 questions

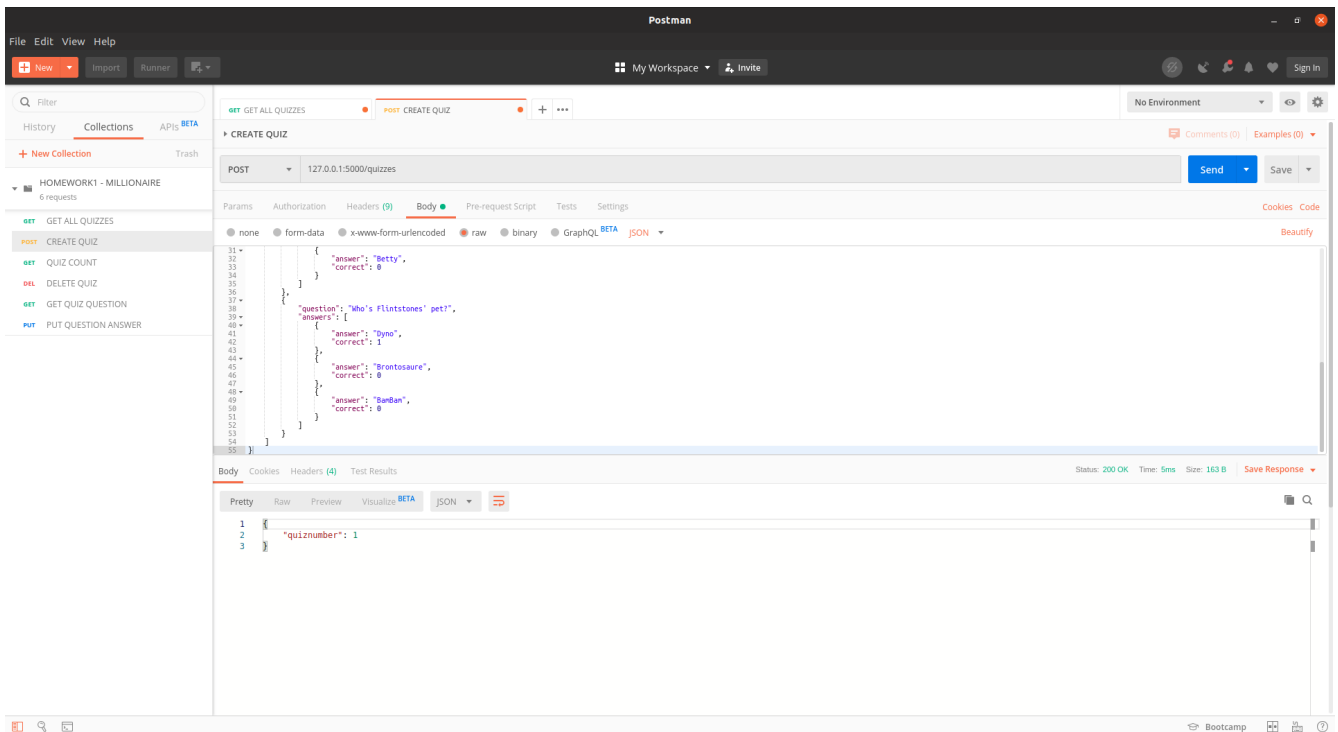


Figure 4: Test3 - Create 2nd quiz with 3 questions

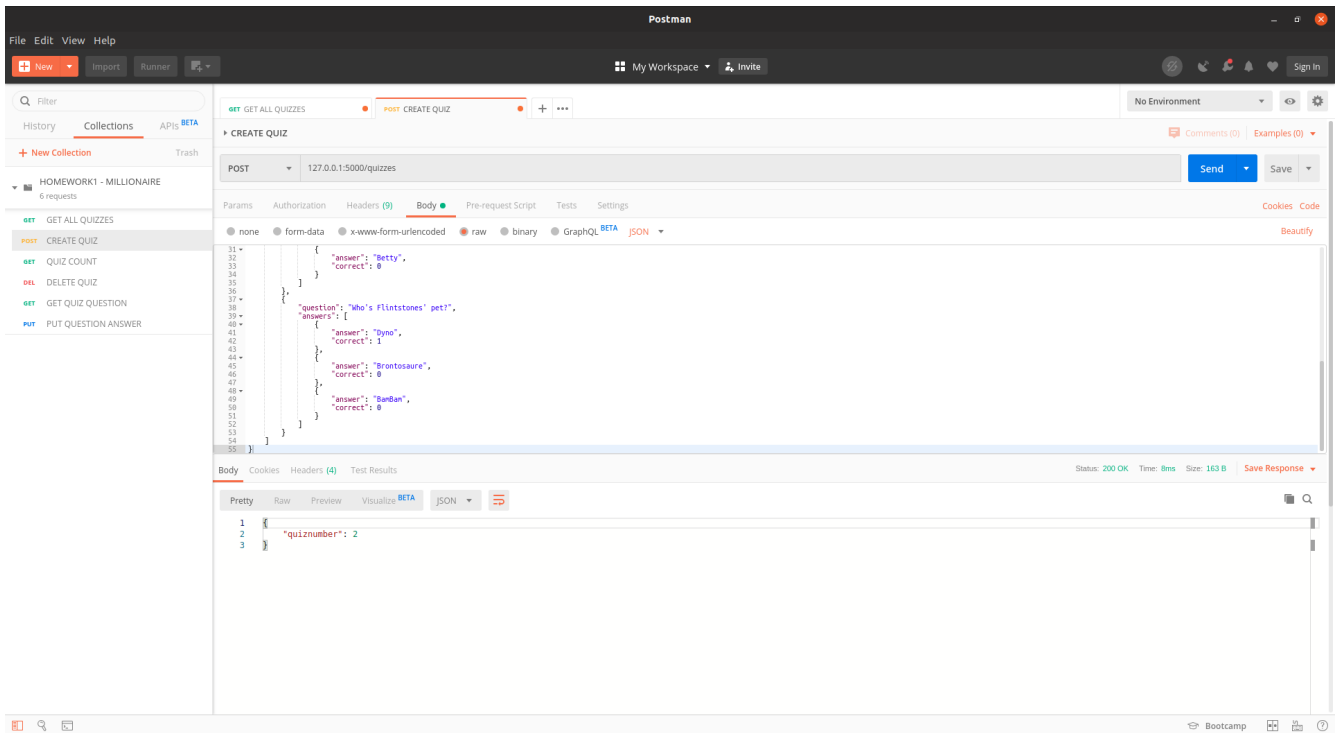


Figure 5: Test4 - Create 3rd quiz with 3 questions

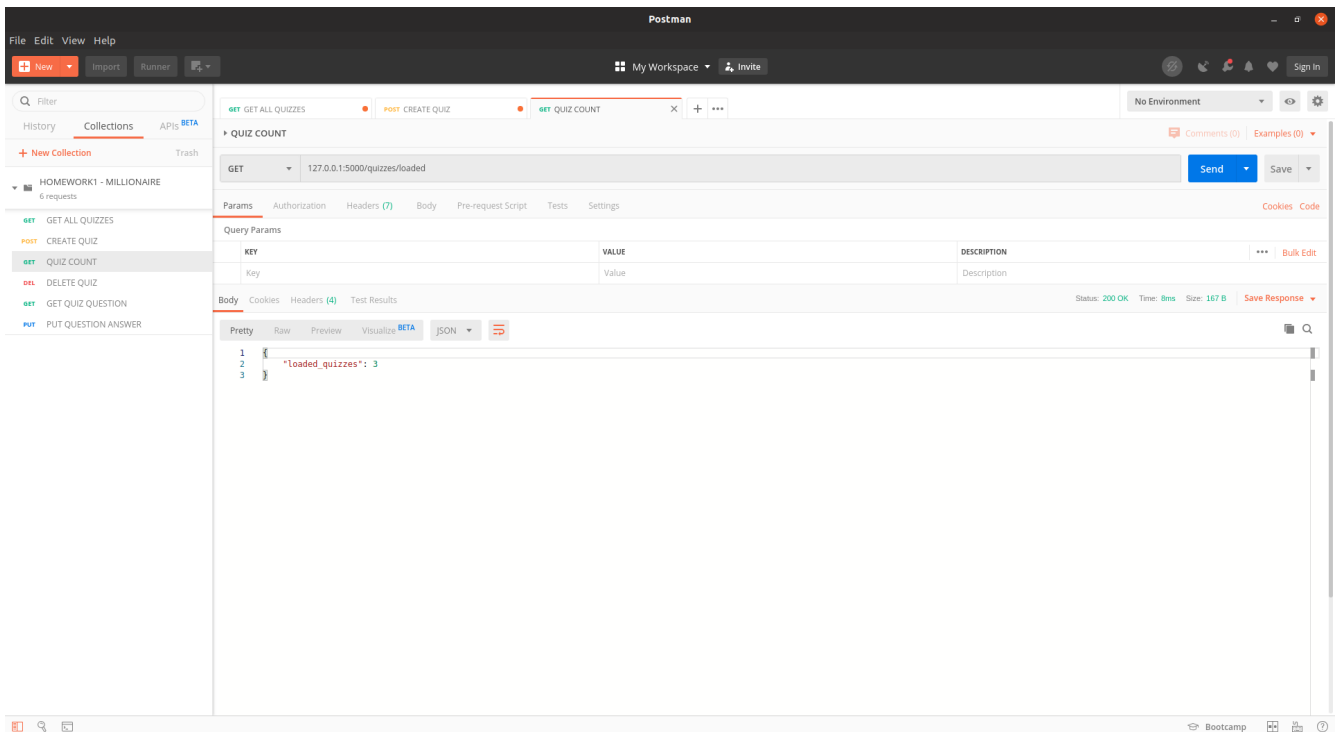


Figure 6: Test5 - Get the number of loaded quizzes

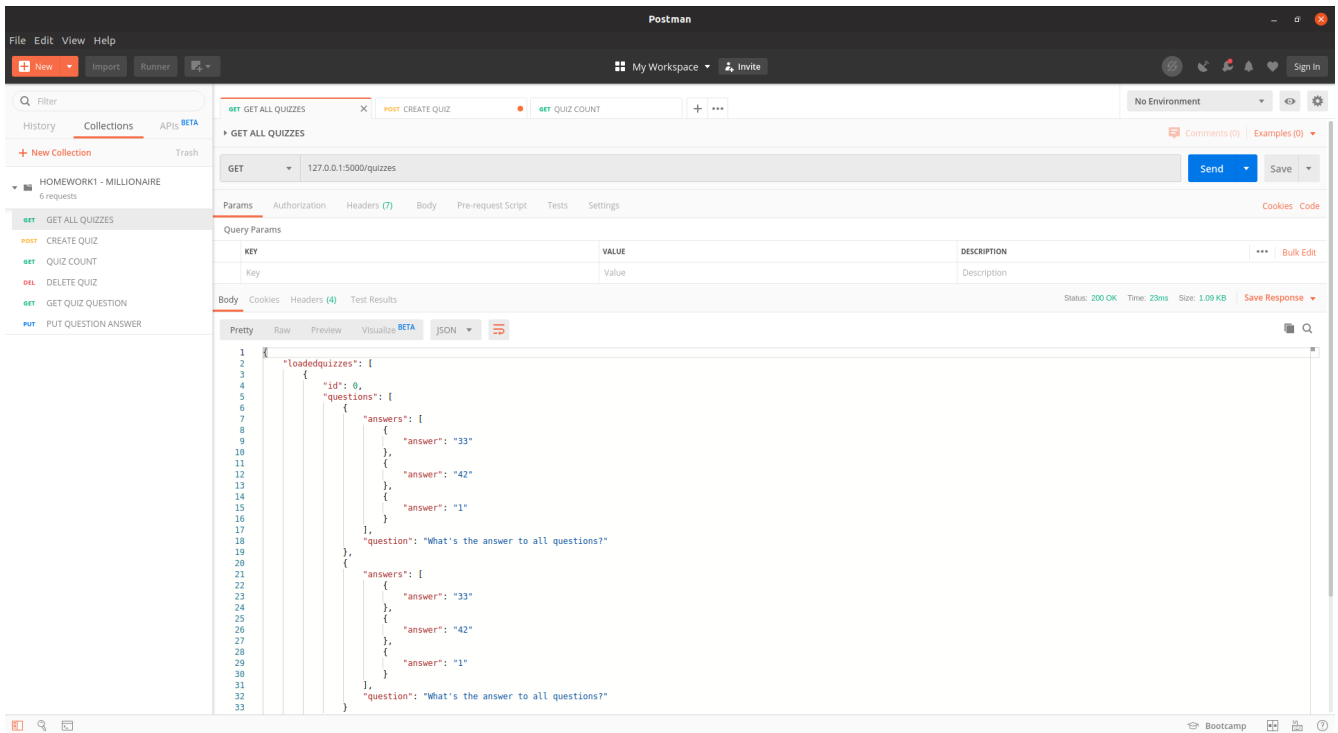


Figure 7: Test6 - Get all loaded quizzes

2.3 Postman - /quiz

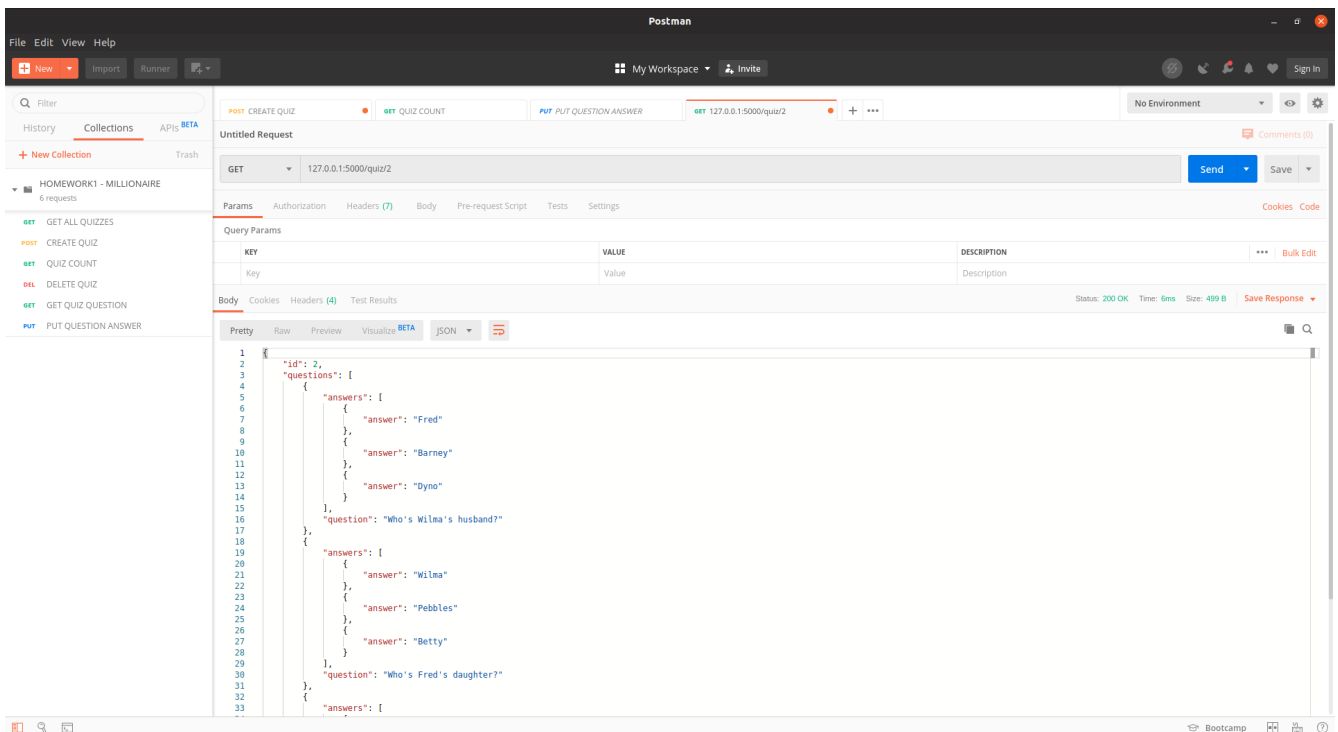


Figure 8: Test7 - Retrieve the 2nd quiz

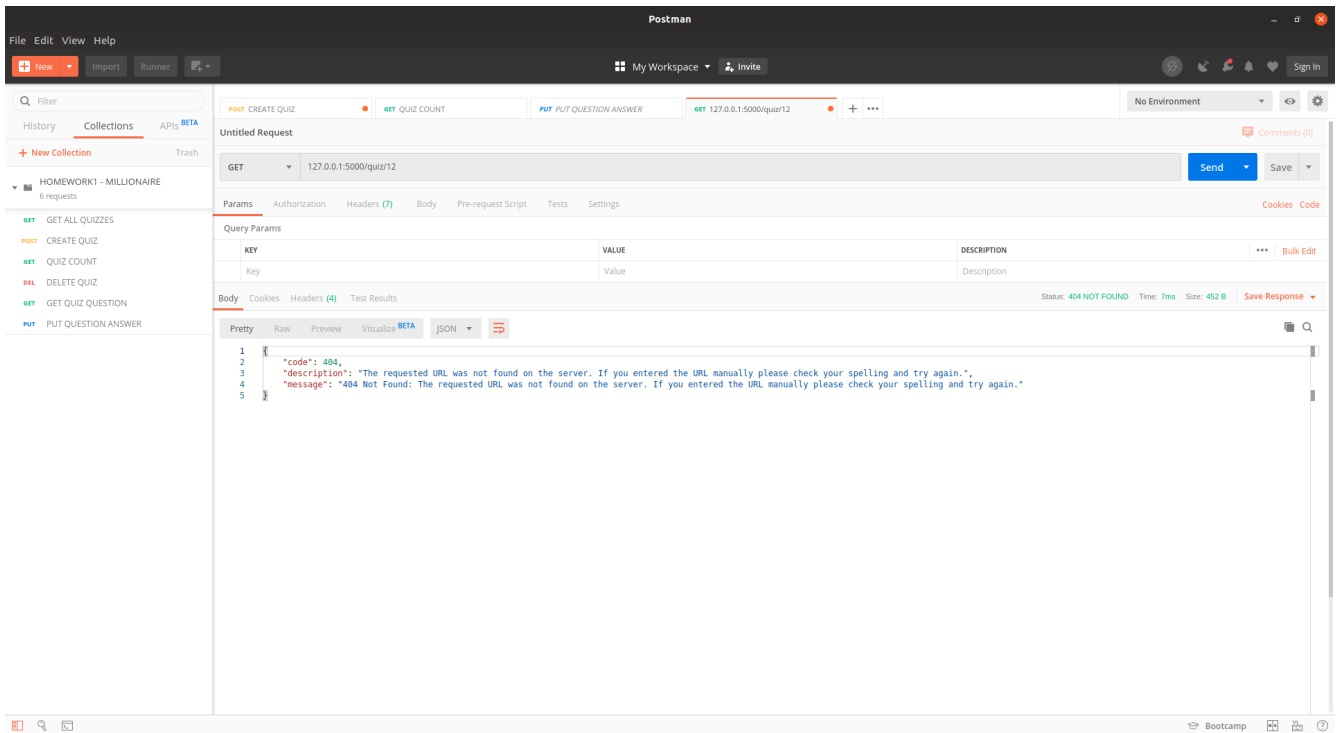


Figure 9: Test8 - Retrieve non-existing quiz

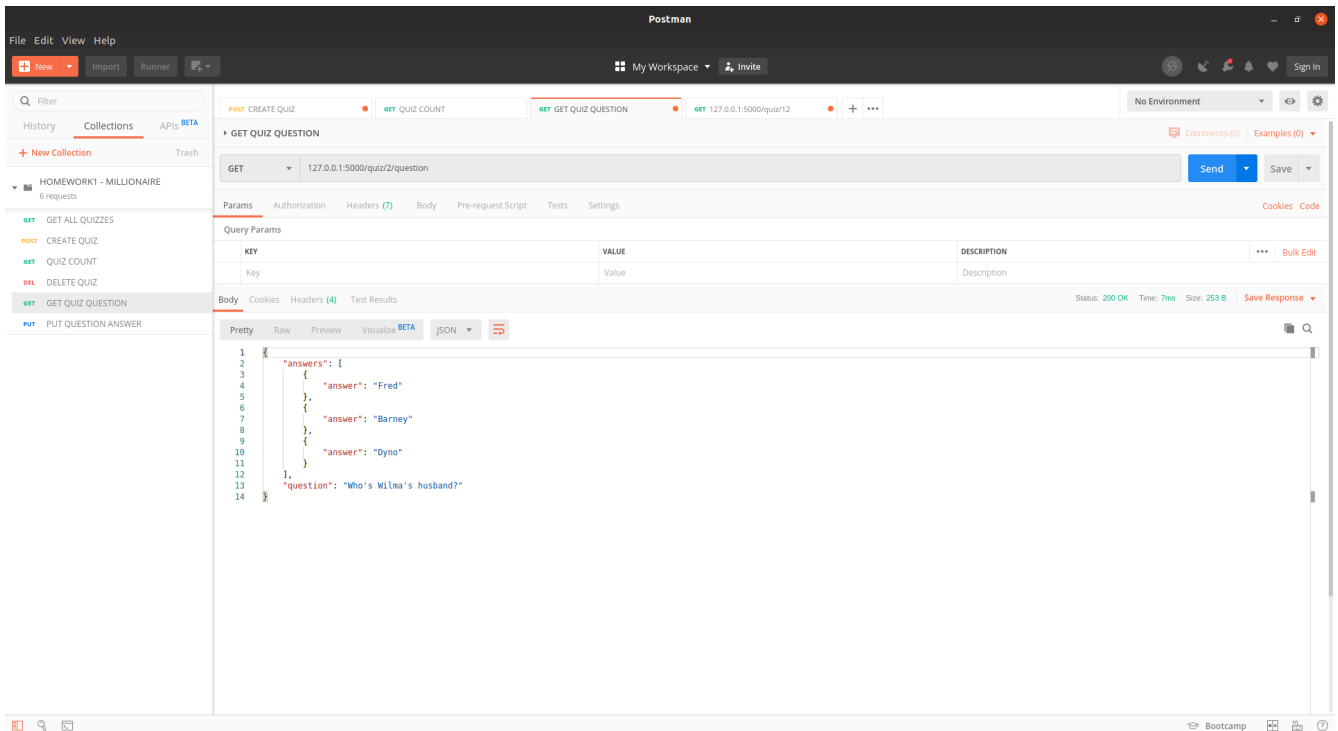


Figure 10: Test9 - Get questions of the 2nd quiz

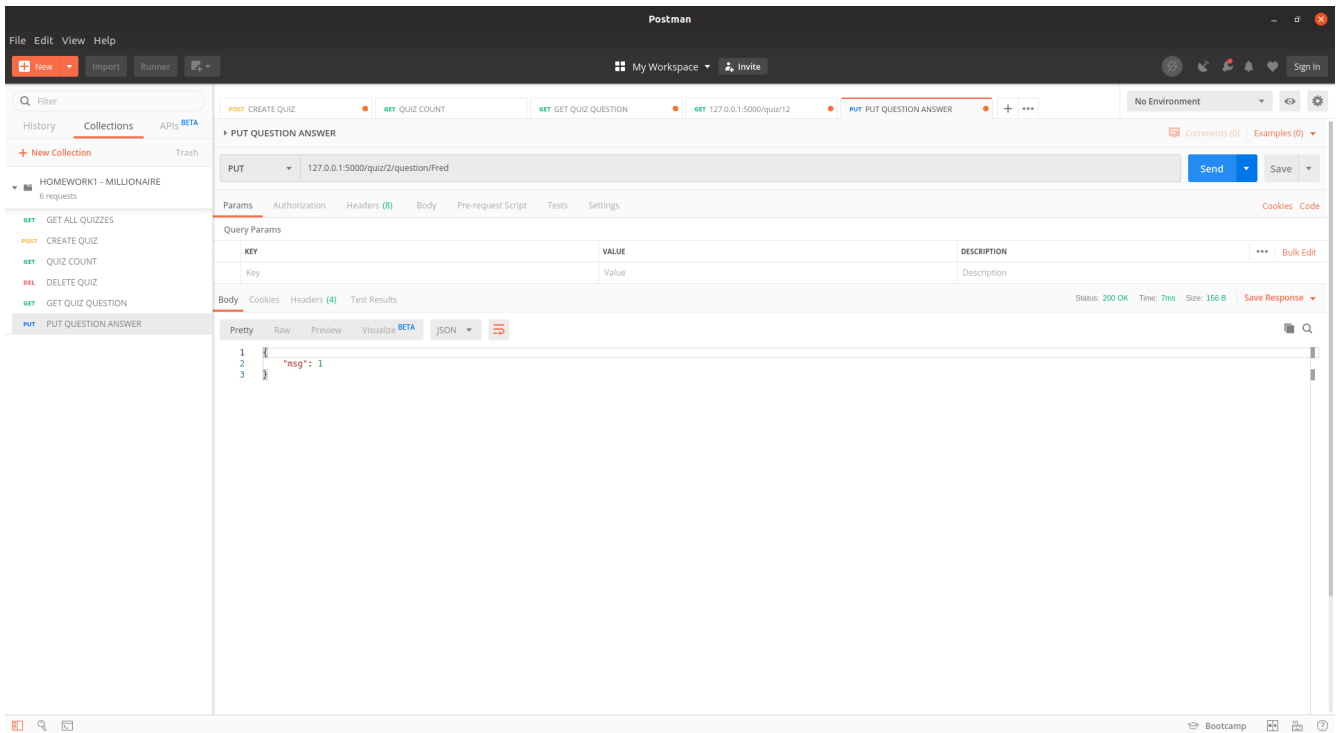


Figure 11: Test10 - Answer first question of the 2nd quiz

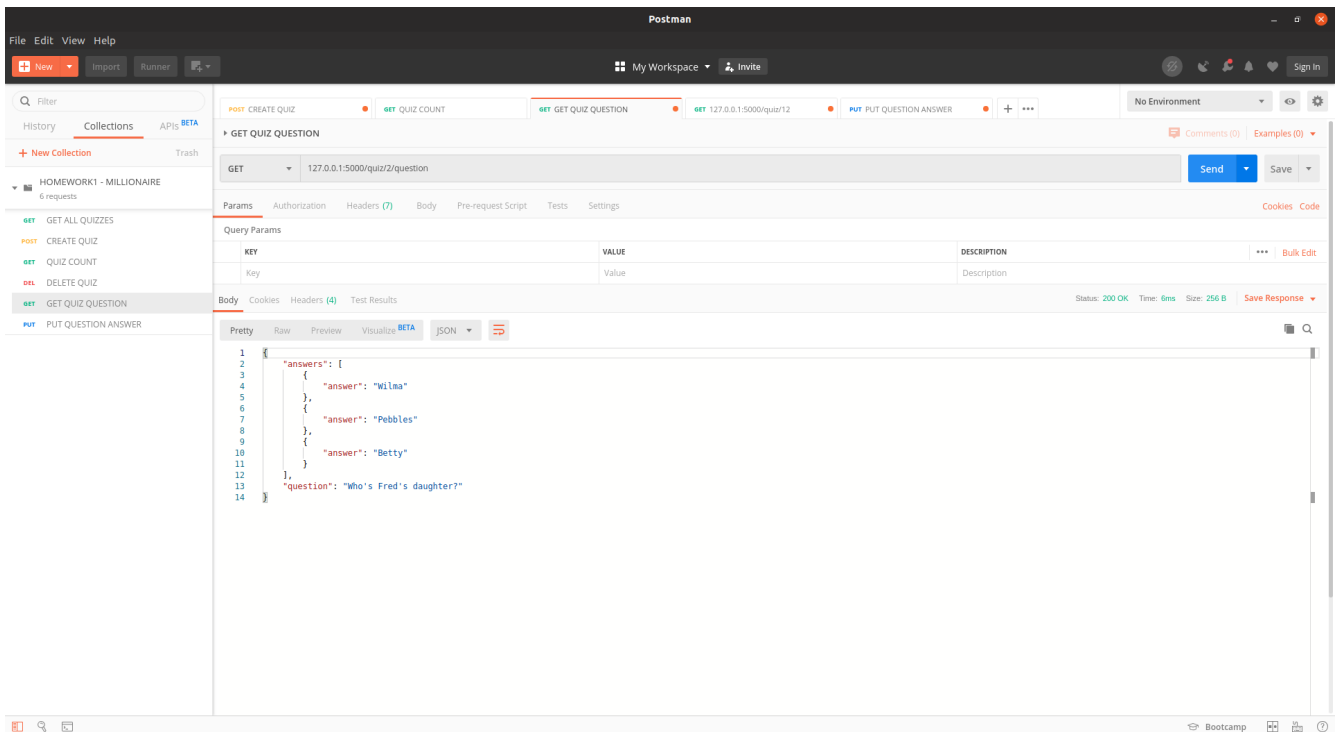


Figure 12: Test11 - Get the next question of the 2nd quiz

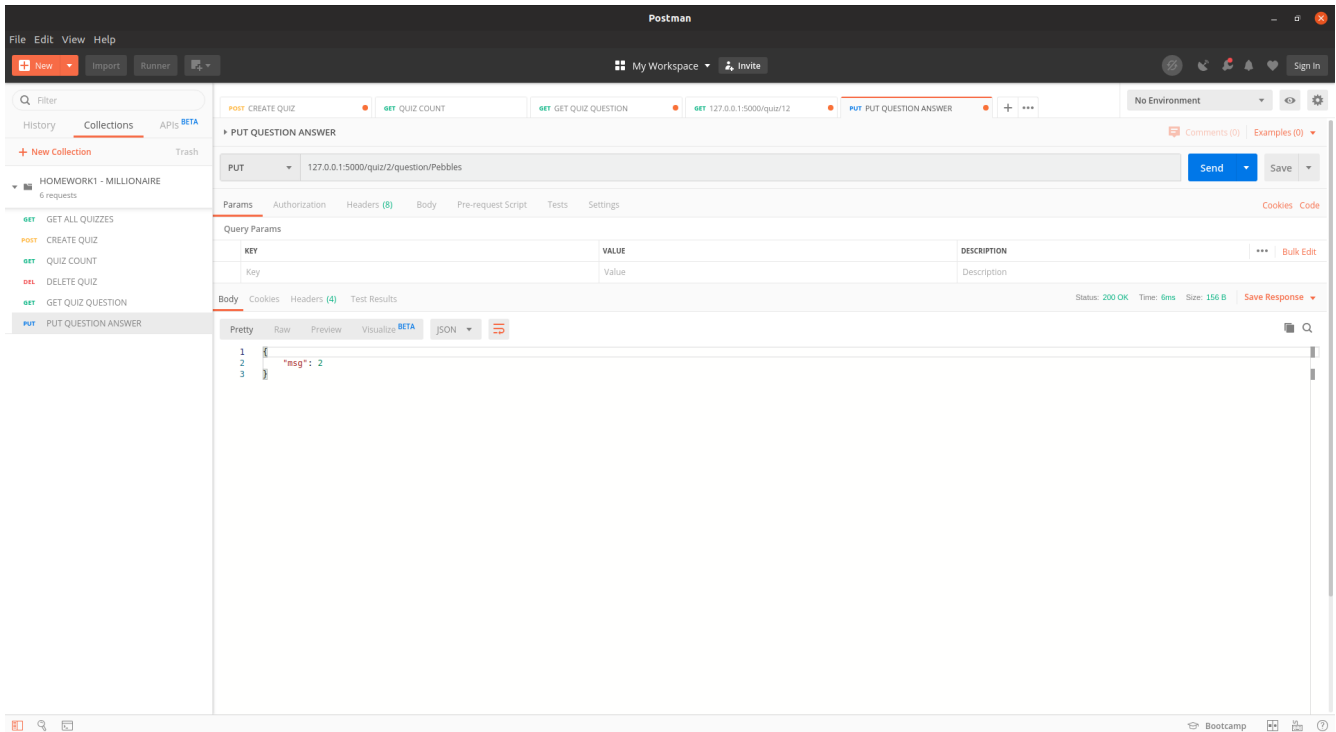


Figure 13: Test12 - Answer 2nd question of the 2nd quiz

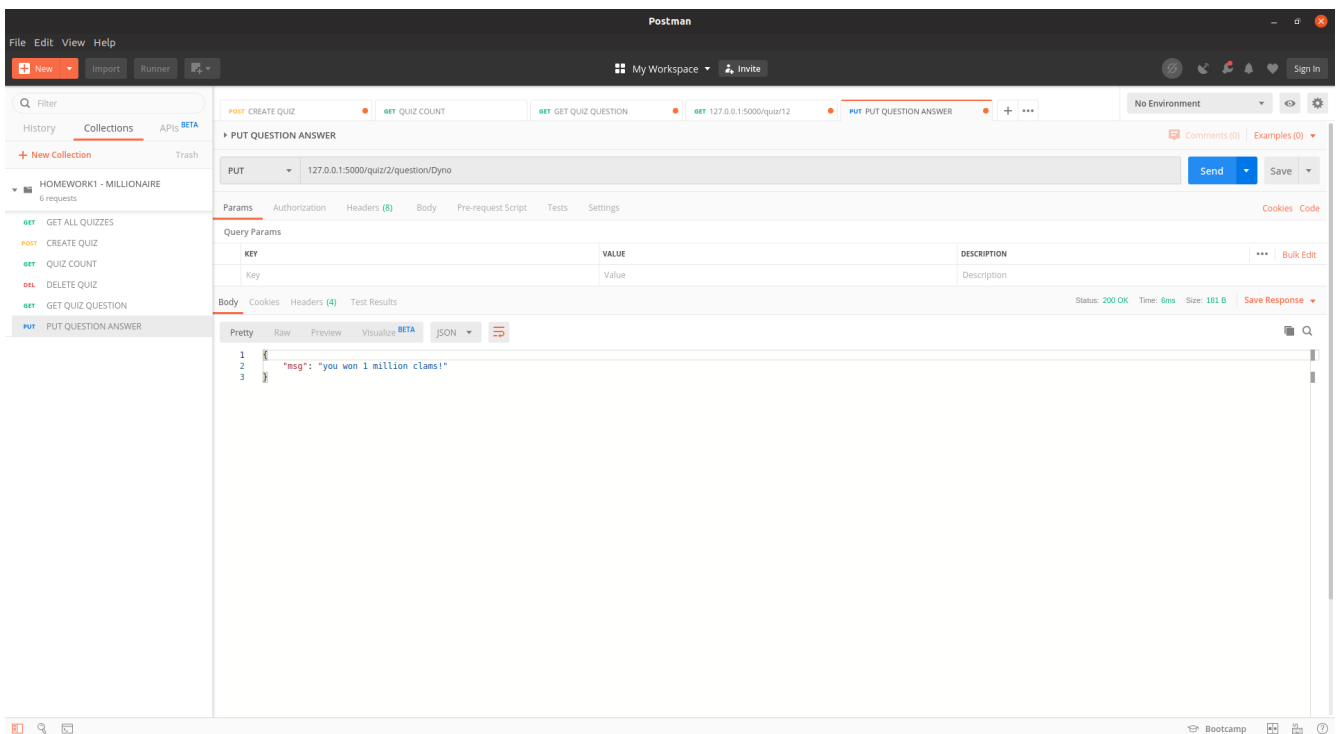


Figure 14: Test13 - Answer 3rd question of the 2nd quiz and win!

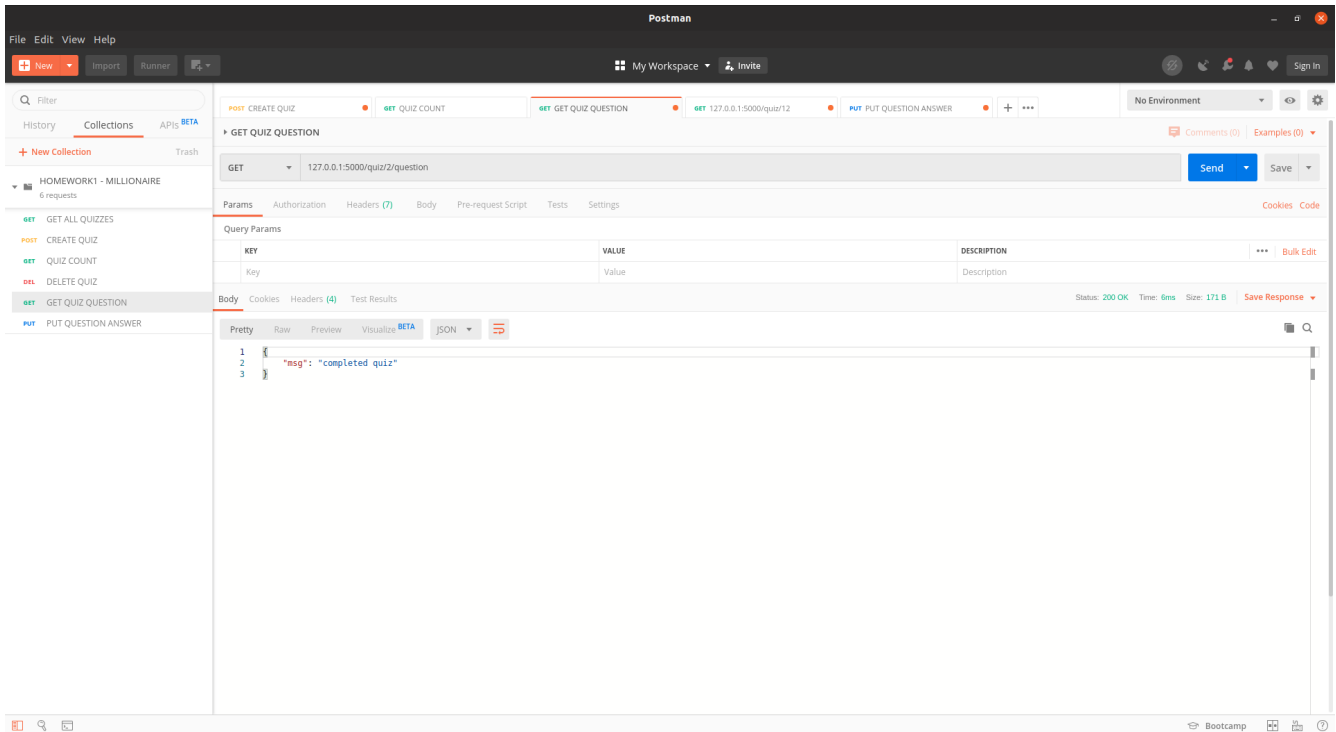


Figure 15: Test14 - Get questions of the already won quiz

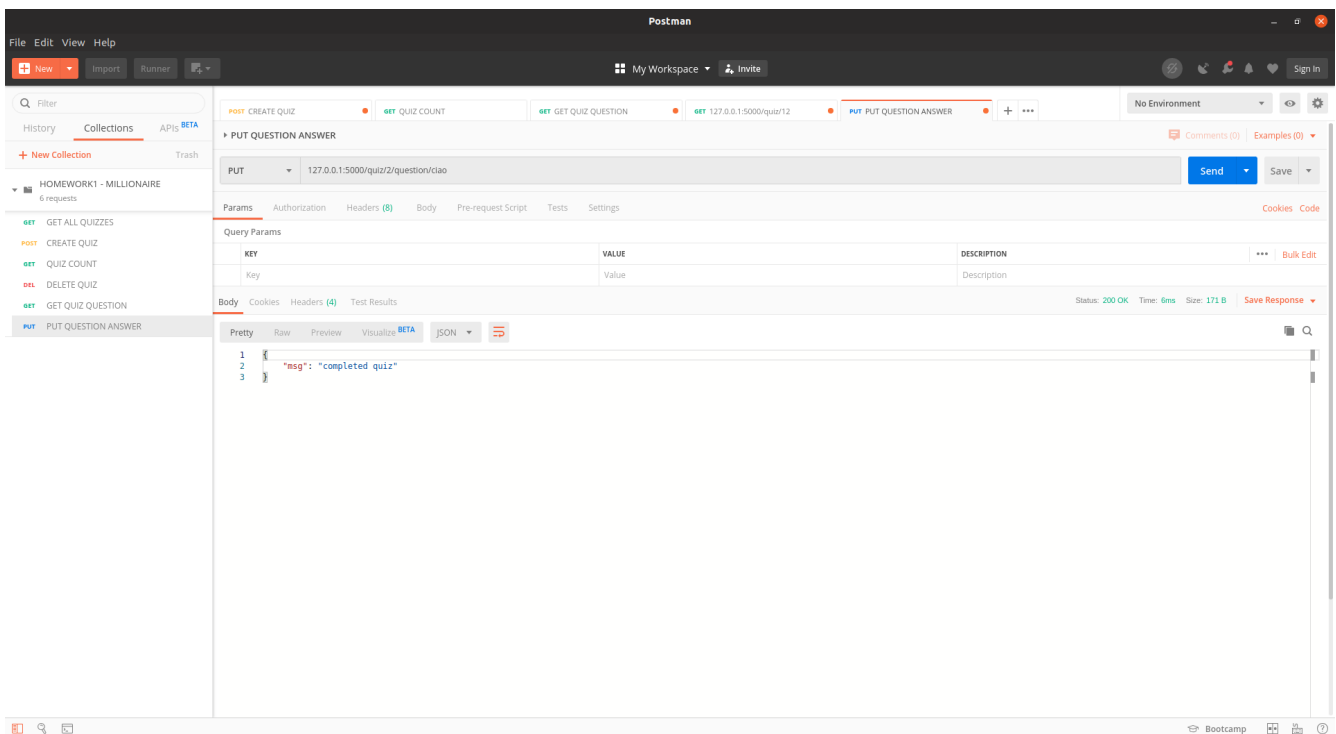


Figure 16: Test15 - Answer an already answered question of the 2nd quiz

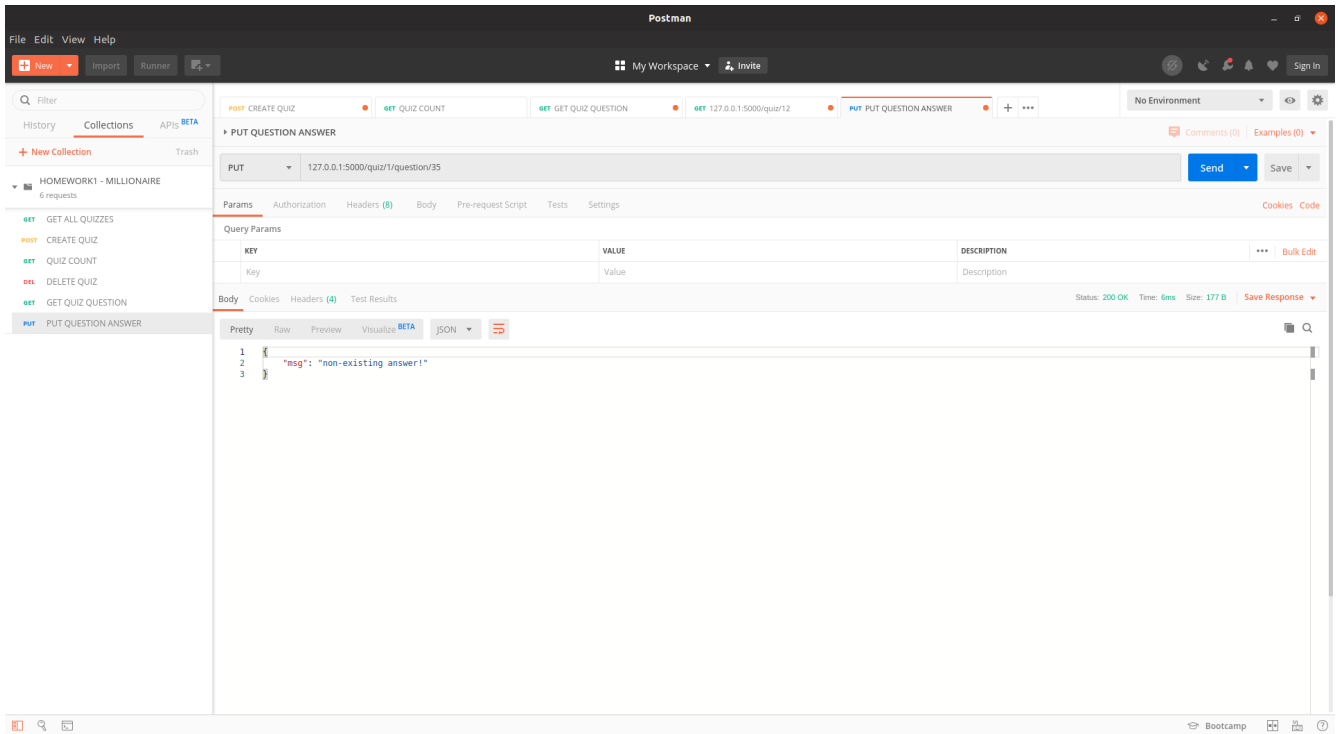


Figure 17: Test16 - Answer with non-existing answer

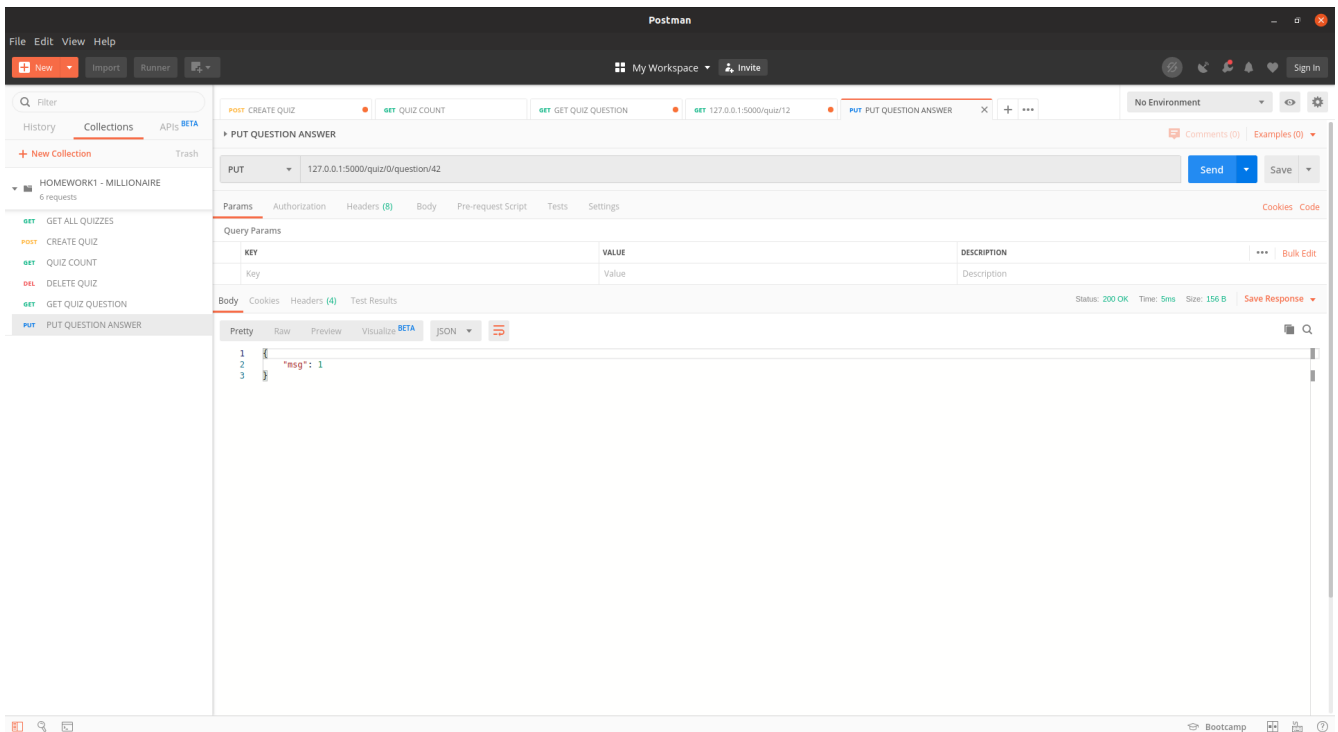


Figure 18: Test17 - Correct answer of a question

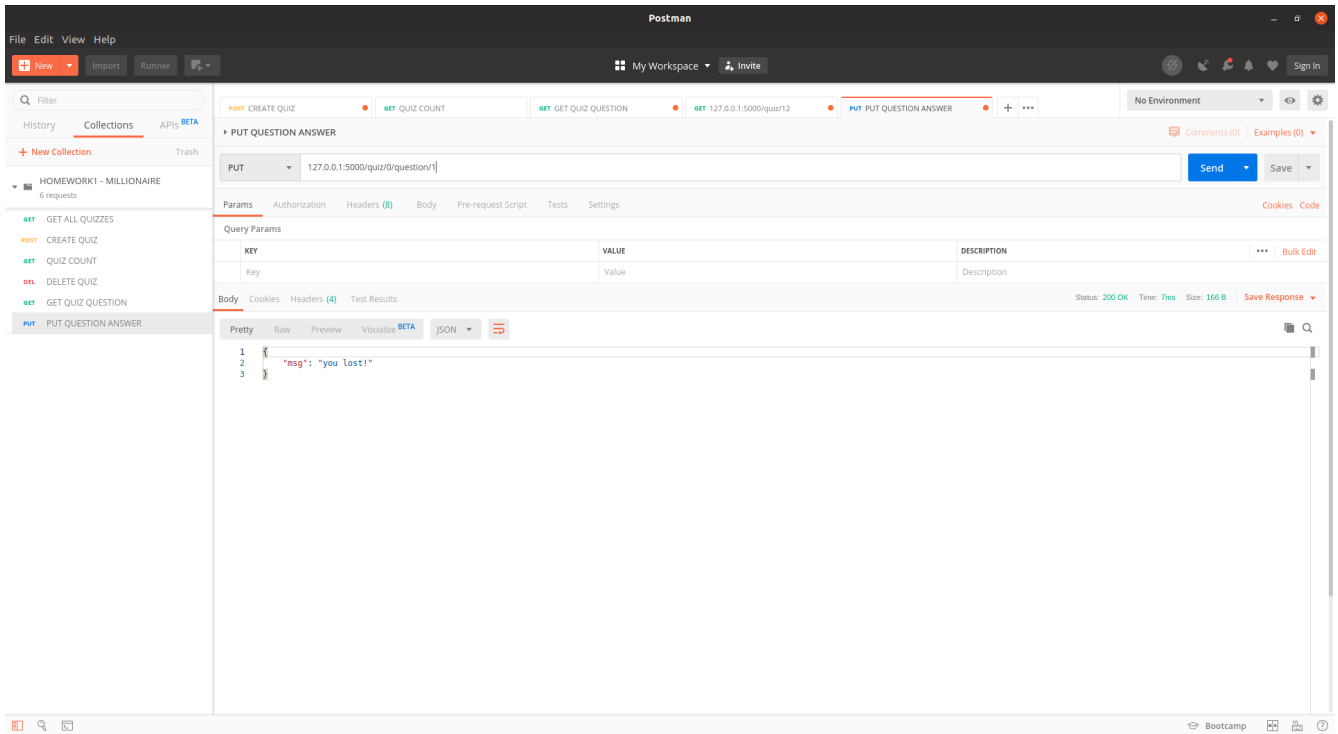


Figure 19: Test18 - Wrong answer

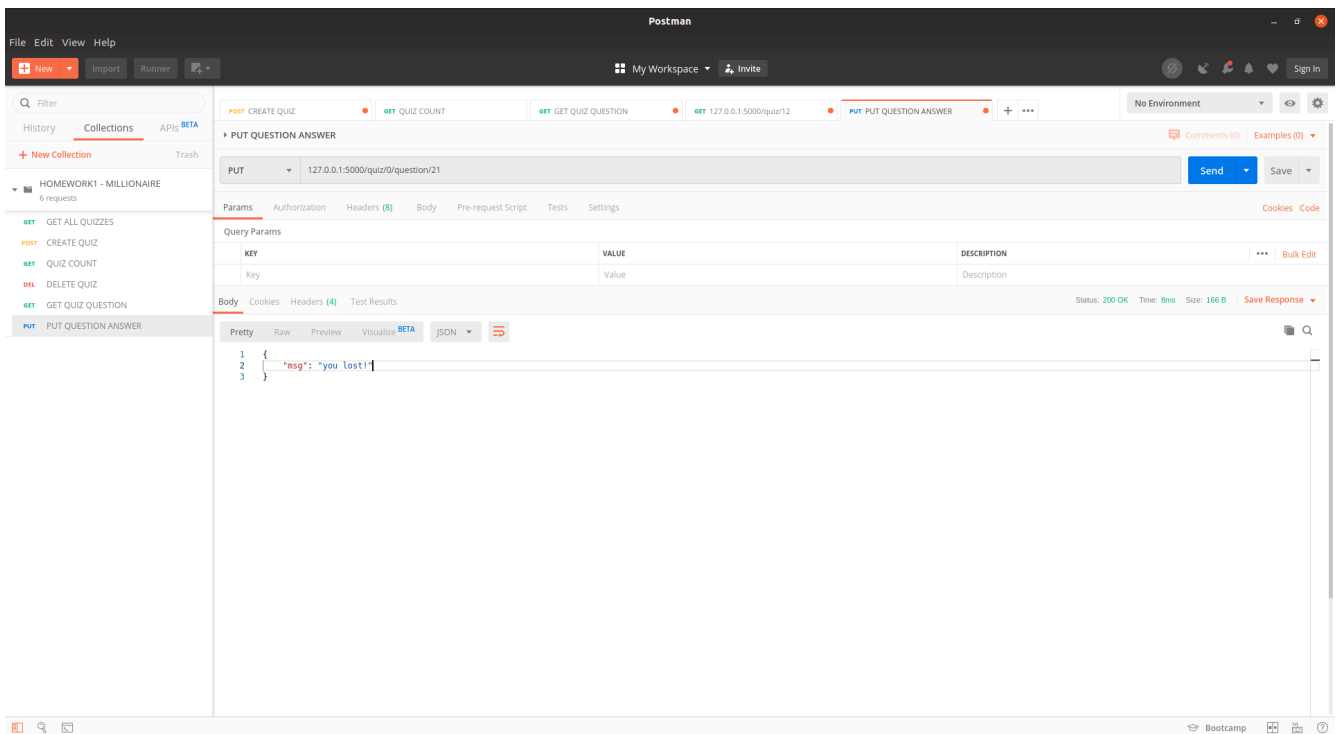


Figure 20: Test19 - Double call to lost quiz

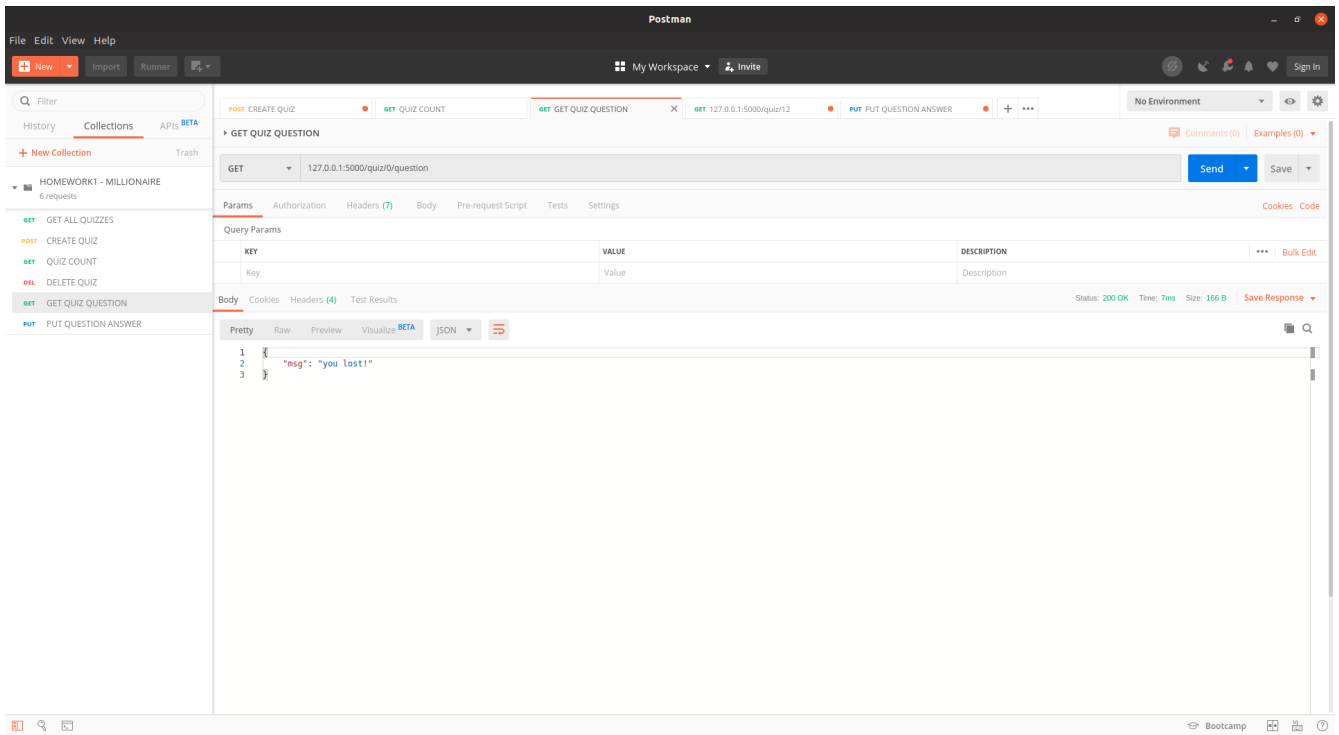


Figure 21: Test20 - Triple call to lost quiz

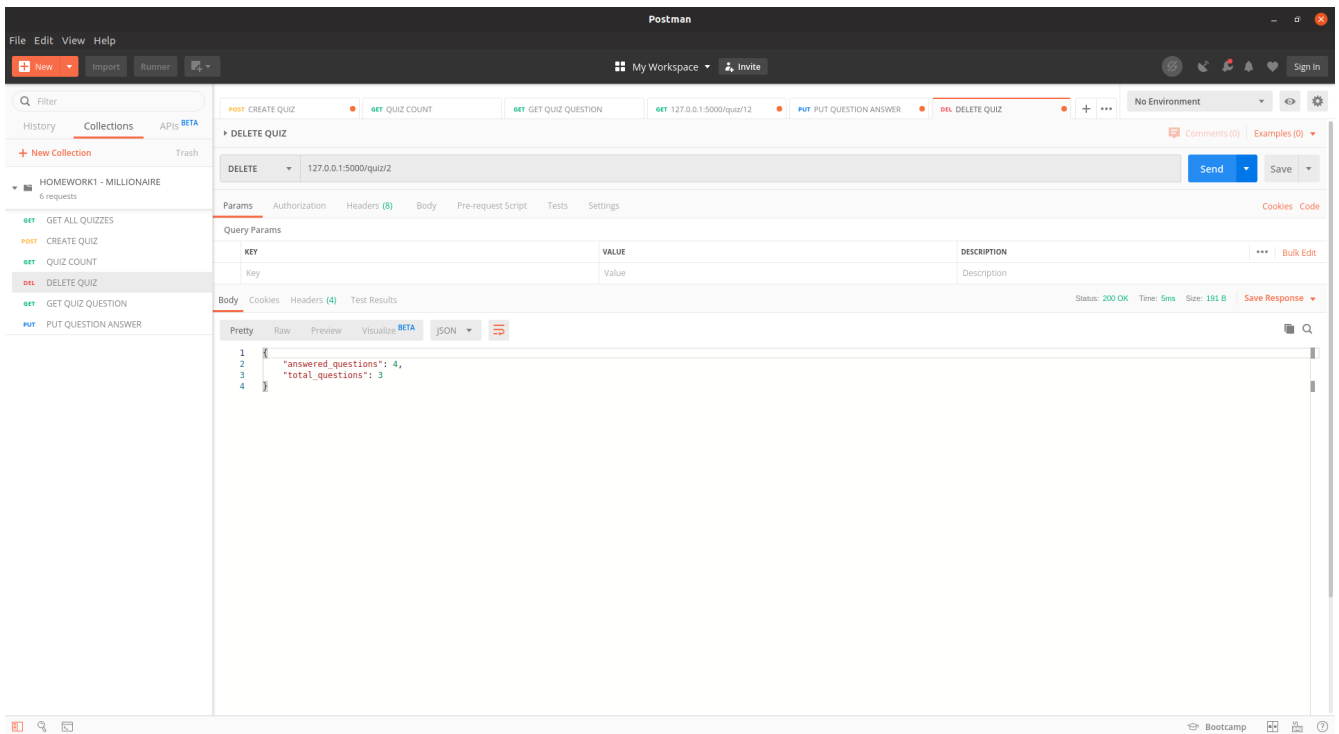


Figure 22: Test21 - Delete quiz

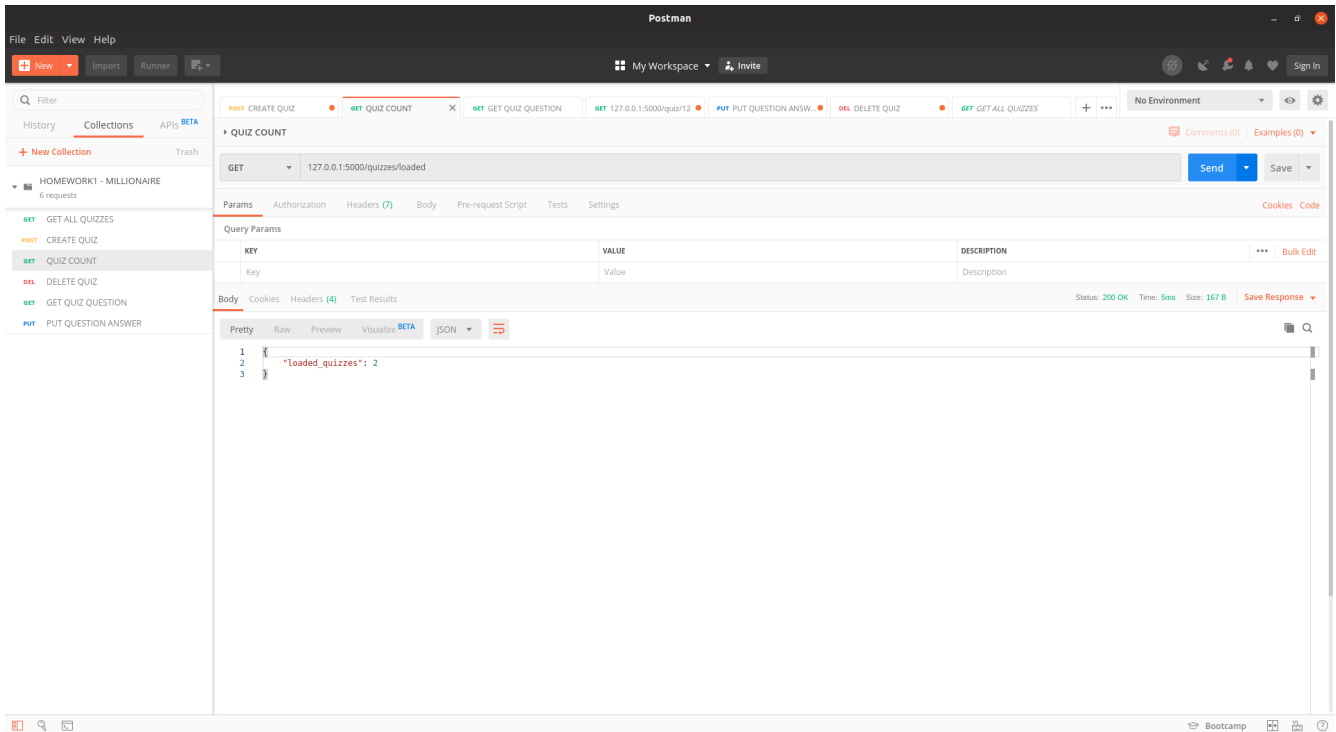


Figure 23: Test22 - Two loaded quizzes

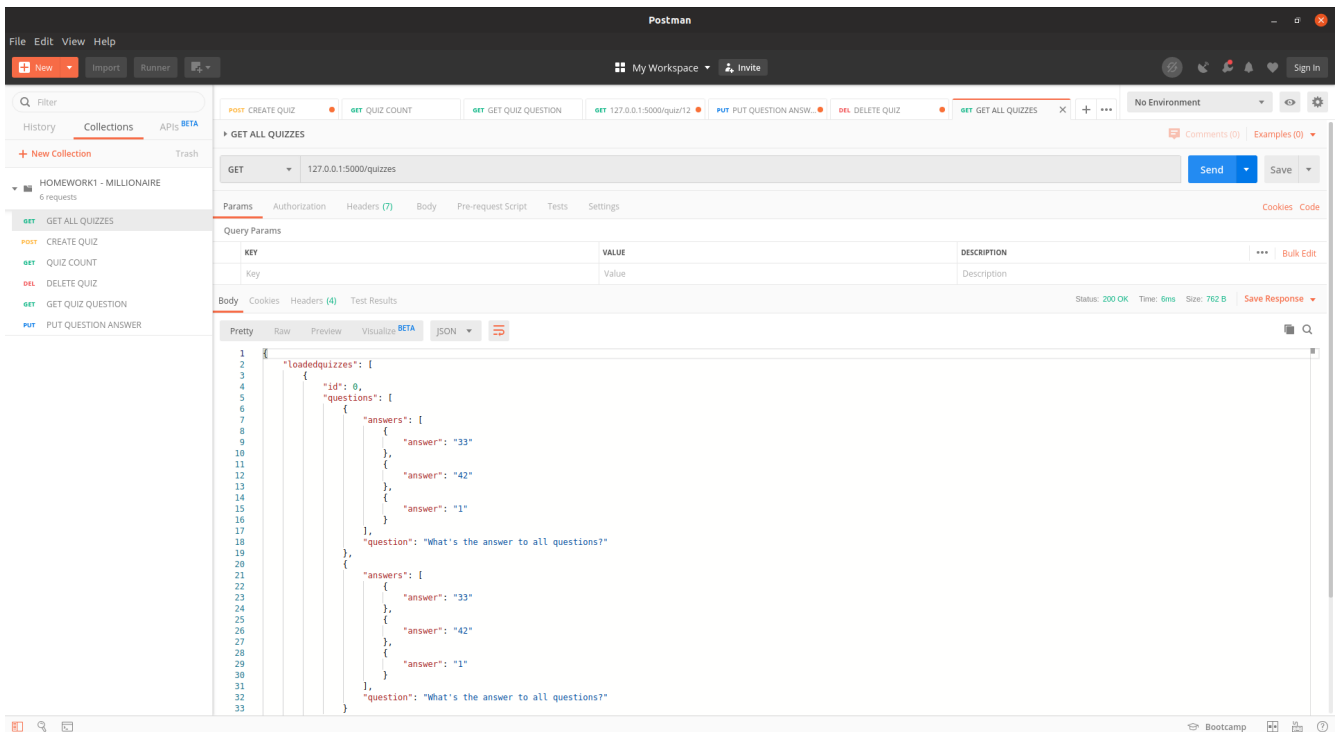


Figure 24: Test23 - Get all loaded quizzes

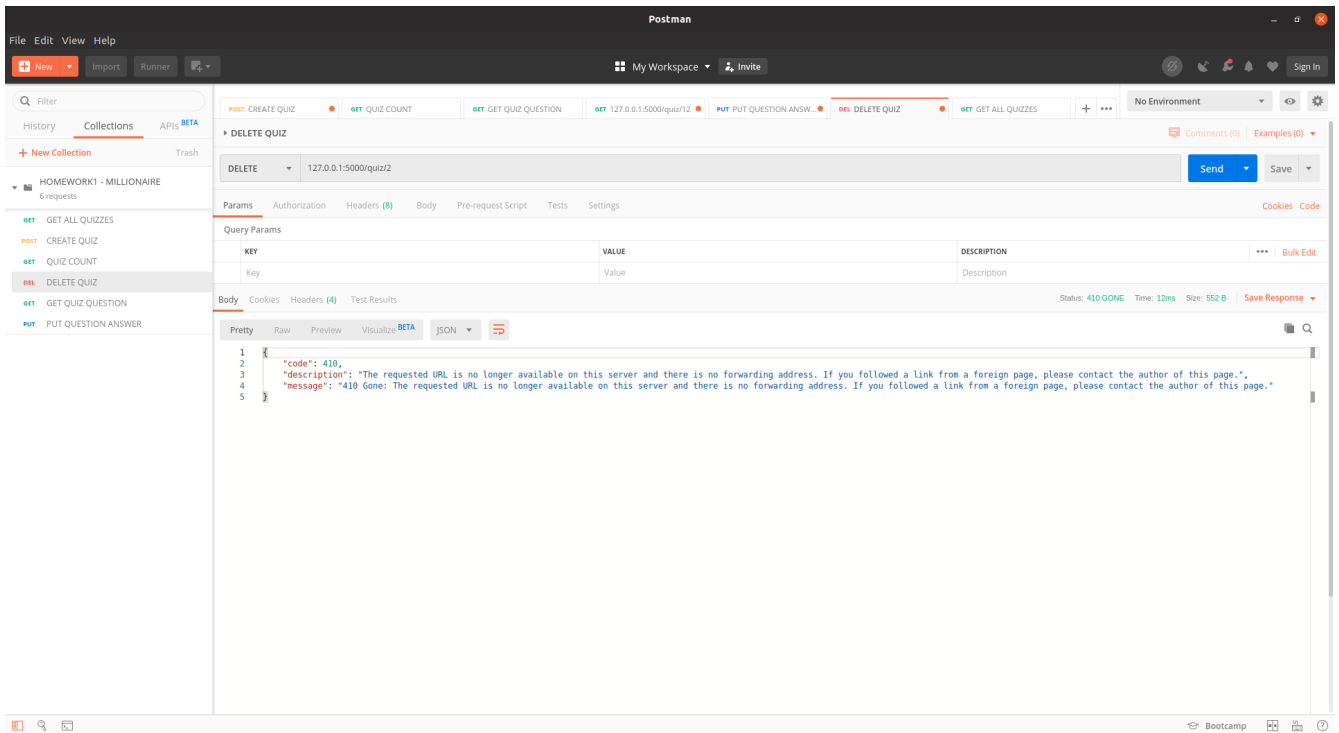


Figure 25: Test24 - Delete previously deleted quiz

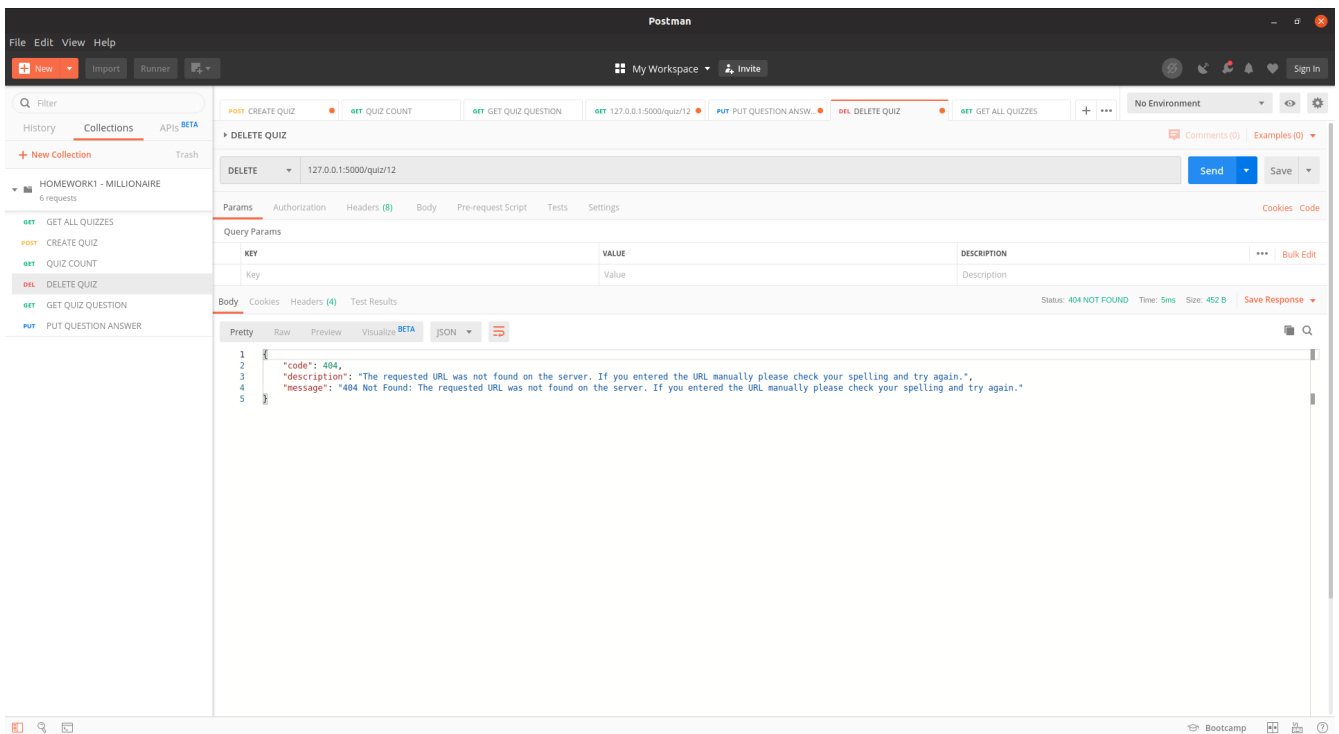


Figure 26: Test25 - Delete non-existing quiz

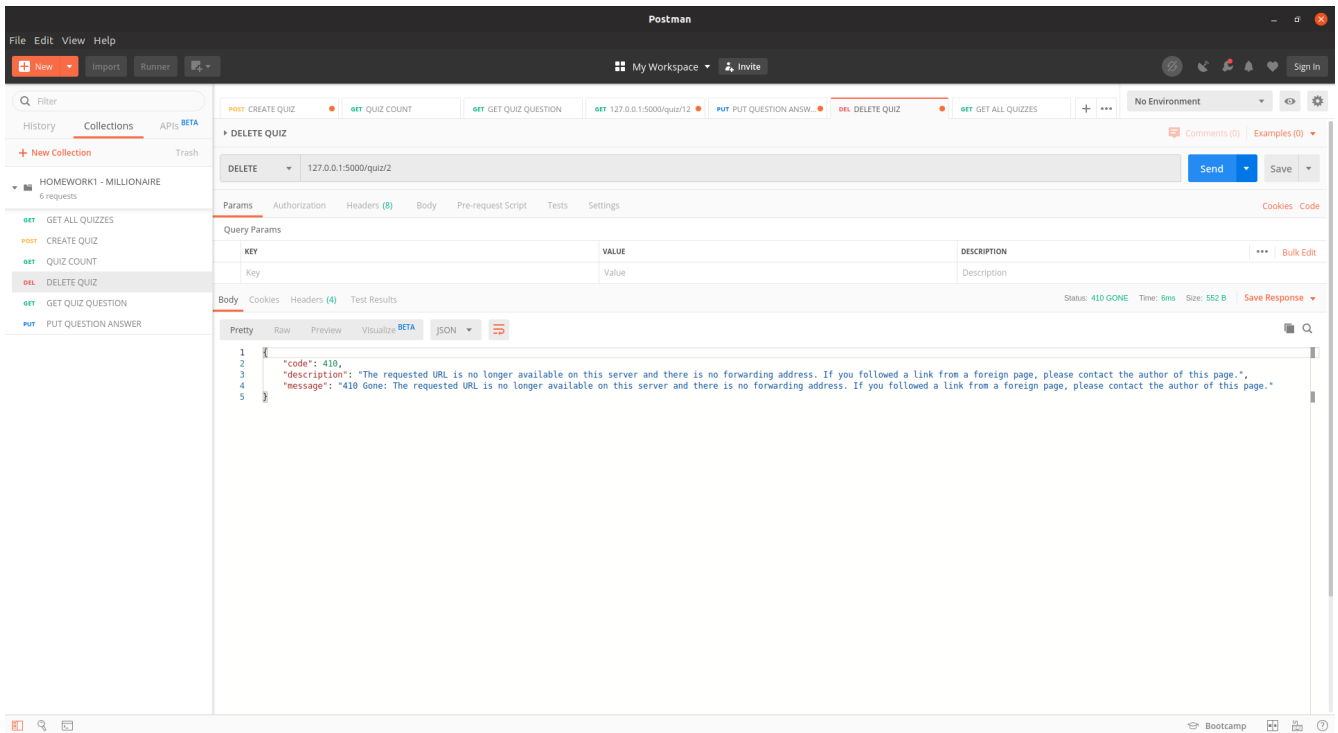


Figure 27: Test26 - Get previously existing quiz

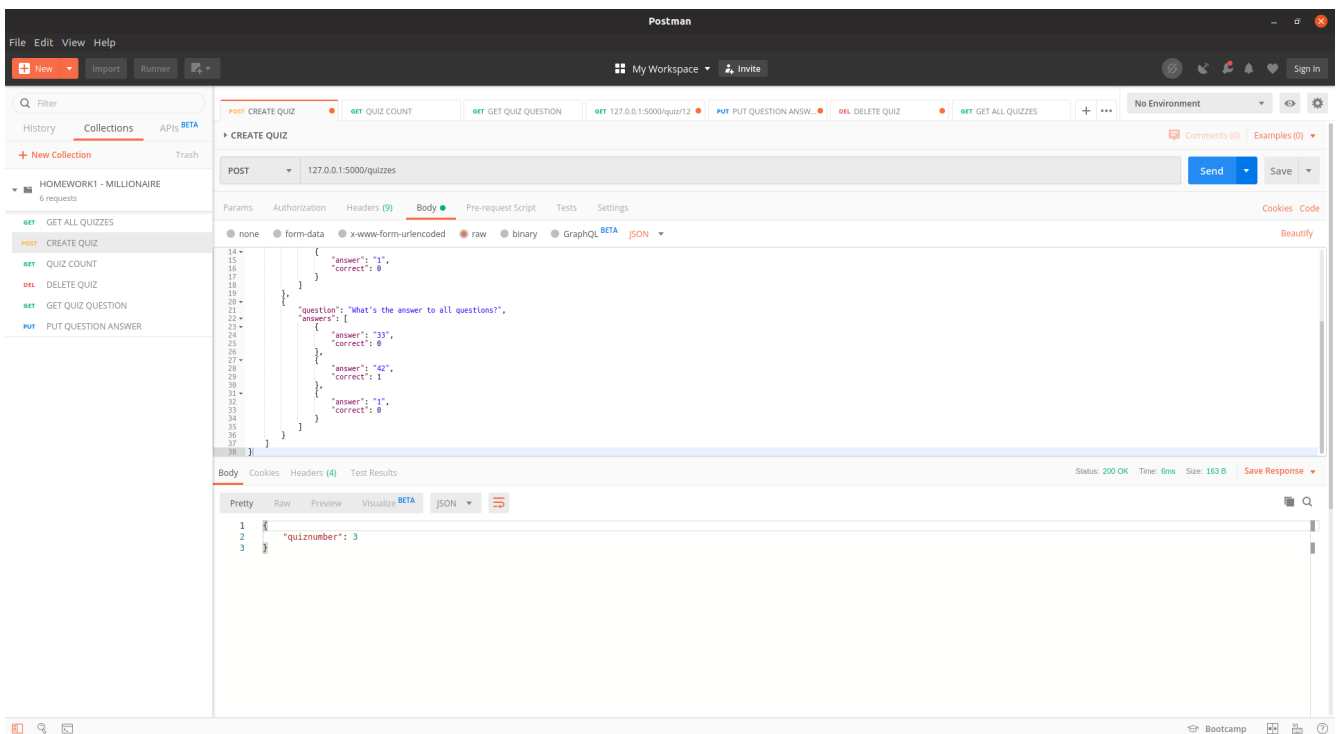


Figure 28: Test27 - Create new quiz after deletion

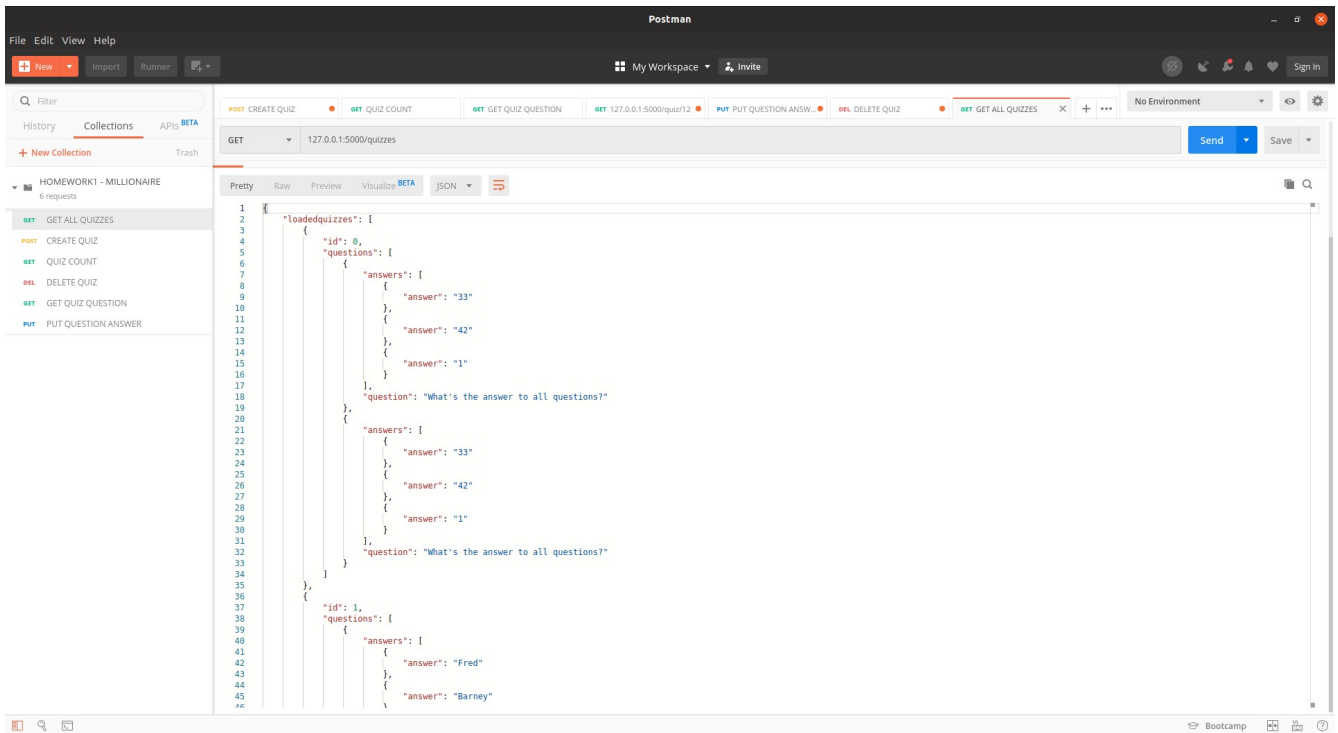


Figure 29: Test28 - Get all loaded quizzes

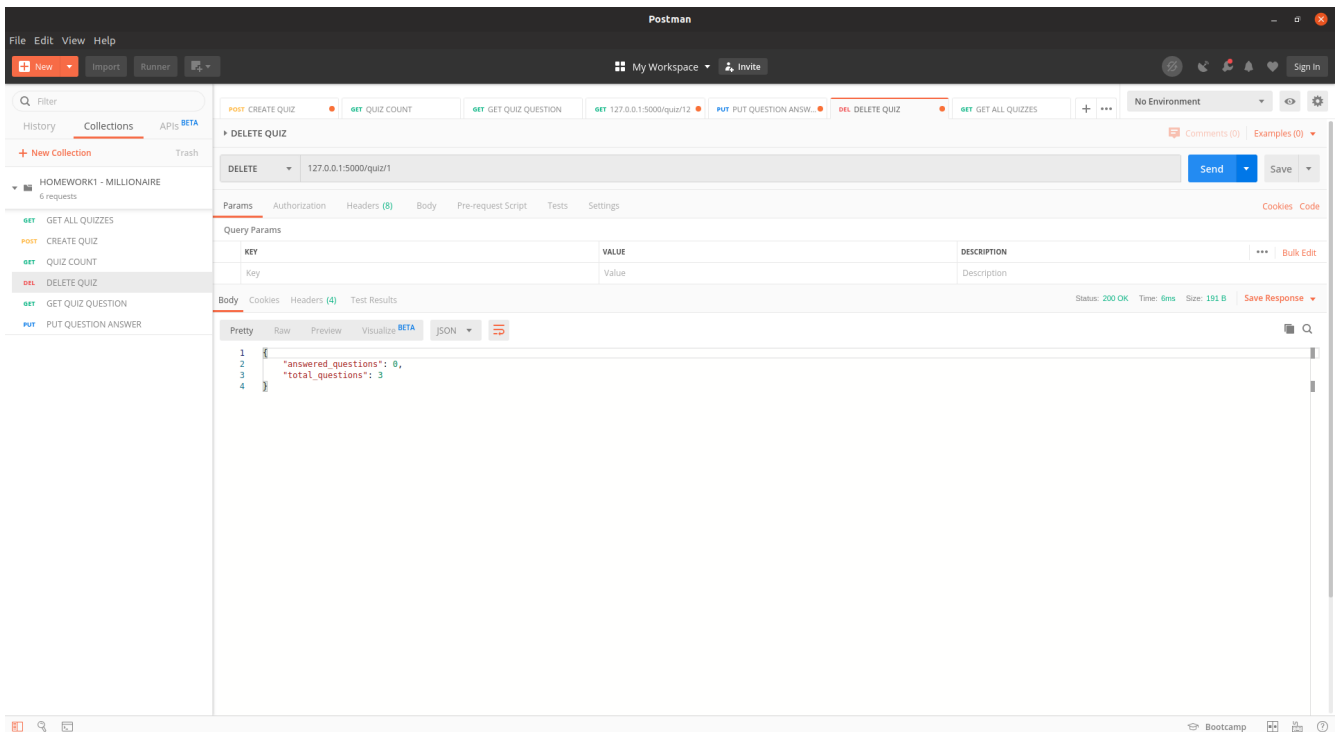


Figure 30: Test29 - Delete quiz