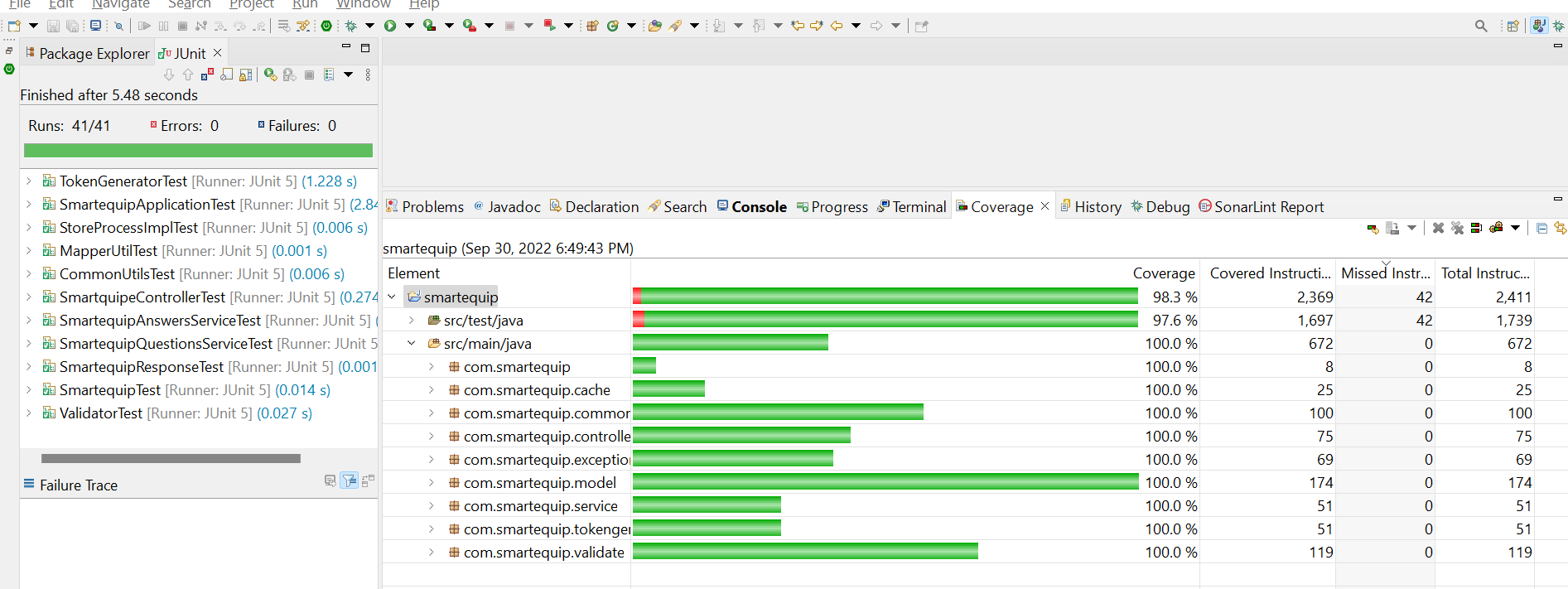
I have tried to understand the requirement and converted to coding language.

Below is the complete flow, code structure, test case after understanding SmartEquip docs.

## Code: [Shraban-oup/smartequip (github.com)](https://github.com/Shraban-oup/smartequip)

## Technology: Java 8, Spring boot annotation based, Spring REST, Junit and Mockito.

## Test Coverage:



## Application port change:

* Application port has been moved to application. Properties.

If port need to change then simply 9090 to any port (ex. 8080)



## Executable jar file run:

Run below command:

java -jar smartequip.jar

If port need to change then run below command with port 8080 or any new port no.

java -Dserver.port=8080 -jar smartequip.jar

## Workflow:

As per requirement :-

1. There must be one API end point “/”. And body of request for create record for validate answer. That’s the reason for choosing POST method for Rest API.
2. There must be two server one will deal with client request(question) and one will deal with client final request(answer)- so created SmartequipAnswersService and SmartequipQuestionsService.

Application Flow:-

1. Client needs to initiate below request:

Method: POST

Body: Hey Service, can you provide me a question with numbers to add?

URL: http://localhost:9090/

1. Once server receive request, below steps perform for response.
2. Validate the sentence that asked question is proper or not.
3. If validation failed, then server will send below response

{

    "statusCode": 400,

    "status": "BAD\_REQUEST",

    "timeStamp": "30-09-2022 18:43:20",

    "message": "Invalid syntax. Expected syntax is 'Hey Service, can you provide me a question with numbers to add ?'"

}

1. If validation pass , then server will generate bearer token and will send with question.

And also store token, question and answer in cache for subsequent request validation.

{

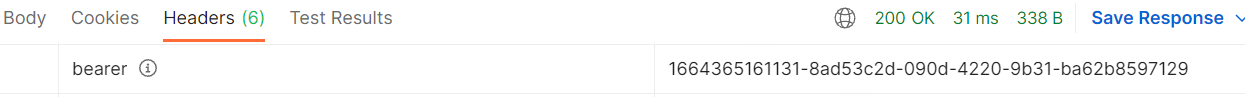
    "message": "Here you go, solve the question: Please sum the numbers 3,43,1.",

    "status": "Success",

    "status\_code": 200

}

Header:-



1. Once client receive question from server, client need to send request with answer .

Method: POST

Body: Great. The original question was “Please sum the numbers 9,5,3” and the answer is 15.

Header: bearer : 1664348154593-403d9e8d-27f6-48f8-9378-0f8299c0c730

URL: http://localhost:9090/

1. Once server receive request it will do following validation check. Each validation pass will continue with next validation. If anyone failed then below response.
2. Token validation and invalid numbers in sentence

{

    "statusCode": 400,

    "status": "BAD\_REQUEST",

    "timeStamp": "30-09-2022 18:44:19",

    "message": "Please request with correct numbers and valid token "

}

1. Answer format validation

{

    "statusCode": 400,

    "status": "BAD\_REQUEST",

    "timeStamp": "30-09-2022 18:45:49",

    "message": "Syntax is wrong. Example: Your answer should end with  following syntax: 'Please sum the numbers 9,5,3' and the answer is 17."

}

1. Given answer value check

{

    "statusCode": 400,

    "status": "BAD\_REQUEST",

    "timeStamp": "30-09-2022 18:46:28",

    "message": "That's wrong. Please try again."}

1. Once all validation pass Server sent below response and delete the token details from cache.

{

    "message": "That's great",

    "status": "Success",

    "status\_code": 200

}

Thanks.