API Understandability and Readability Survey

Welcome to our survey on API design understandability! Your participation will help us understand how different API design practices affect the understandability and readability of APIs. Please review each API snippet and answer the related questions. The survey will take approximately 30-35 minutes.

You will be presented with 28 comprehension questions in a multiple-choice format. Each question includes an API snippet (endpoint, parameter) and four options to choose from (e.g., what the endpoint returns or its purpose). Your goal is to select the correct answer. While the time taken to answer each question will be recorded, accuracy is more important than speed.

After each comprehension question, you will answer two rating questions: the first asks how difficult the API snippet was to understand, and the second asks how difficult it was to read the endpoint.

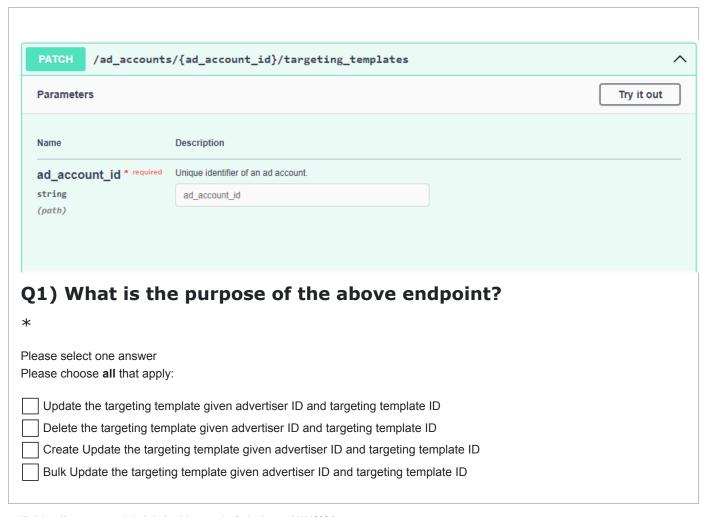
Finally, you will be asked demographic questions, such as your country of origin, current role, technical API perspective (e.g., API user/client developer, API developer/designer, or both), years of professional experience with APIs, and knowledge of the Richardson maturity model.

Your responses will remain anonymous and will be used solely for research purposes. Participation is completely voluntary, and you are free to abandon the survey at any point.

Thank you for contributing!

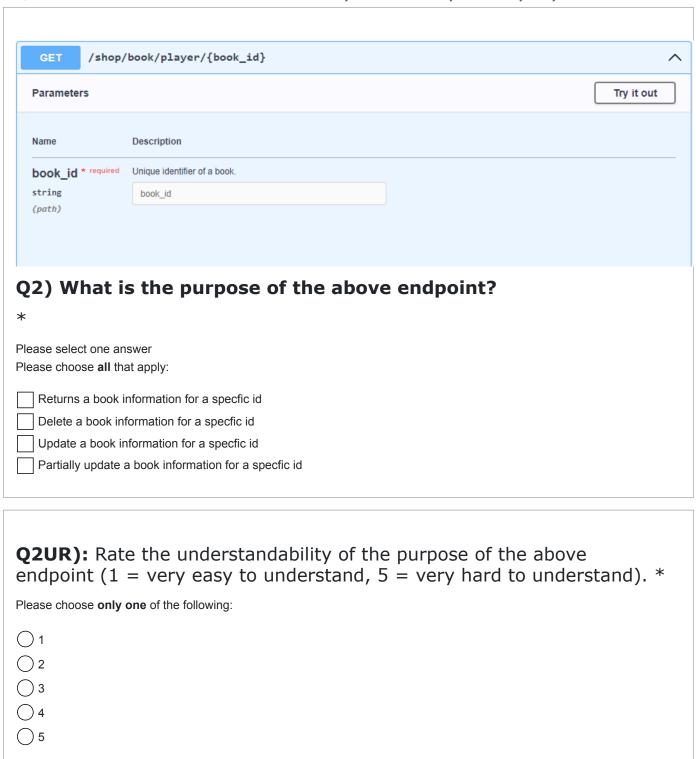
There are 95 questions in this survey.

Q1 Amorphous



Q1UR): Rate the understandability of the purpose of the above endpoint (1 = very easy to understand, 5 = very hard to understand). * Please choose only one of the following:
○ 1○ 2○ 3○ 4○ 5
Q1RR) Rate the readability of the above endpoint $(1 = \text{very easy to understand}, 5 = \text{very hard to understand}). *$

Q2 Contextless

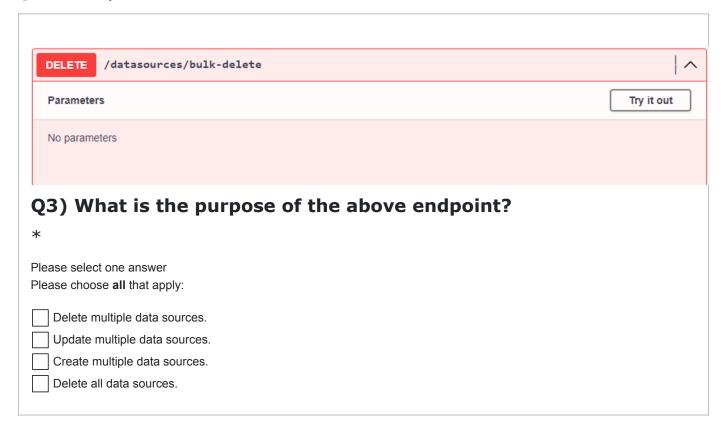


Q2RR) Rate the readability of the above endpoint (1 = very easy to understand, 5 = very hard to understand). *

Please choose only one of the following:

1
2
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Q3 CRUDy

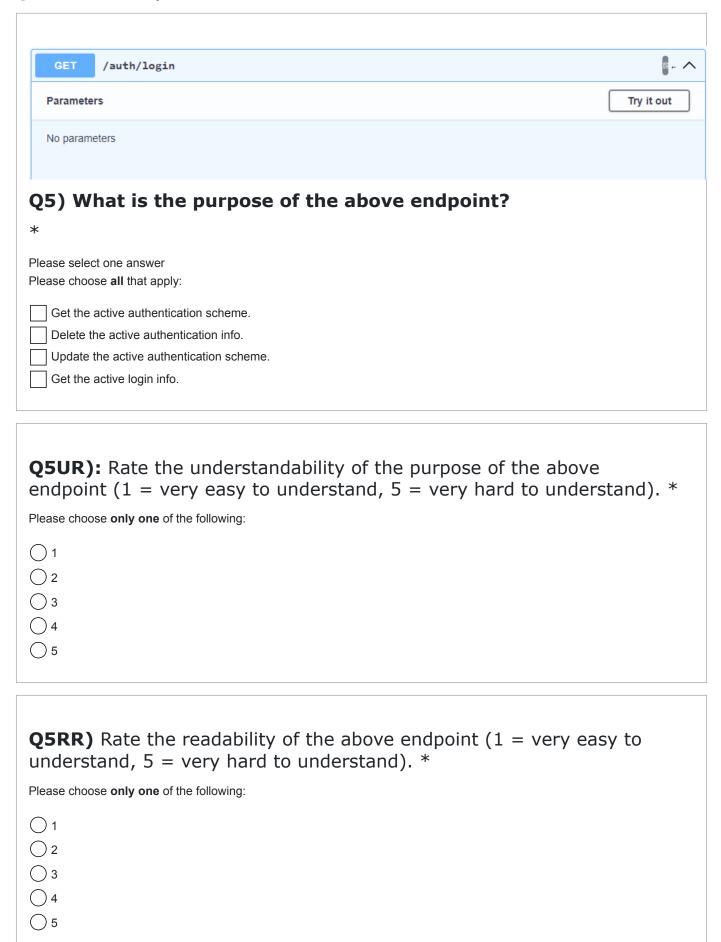


Q3UR): Rate the understandability of the purpose of the above endpoint (1 = very easy to understand, 5 = very hard to understand). * Please choose only one of the following:
○ 1○ 2○ 3○ 4○ 5
Q3RR) Rate the readability of the above endpoint $(1 = \text{very easy to understand}, 5 = \text{very hard to understand}). *$
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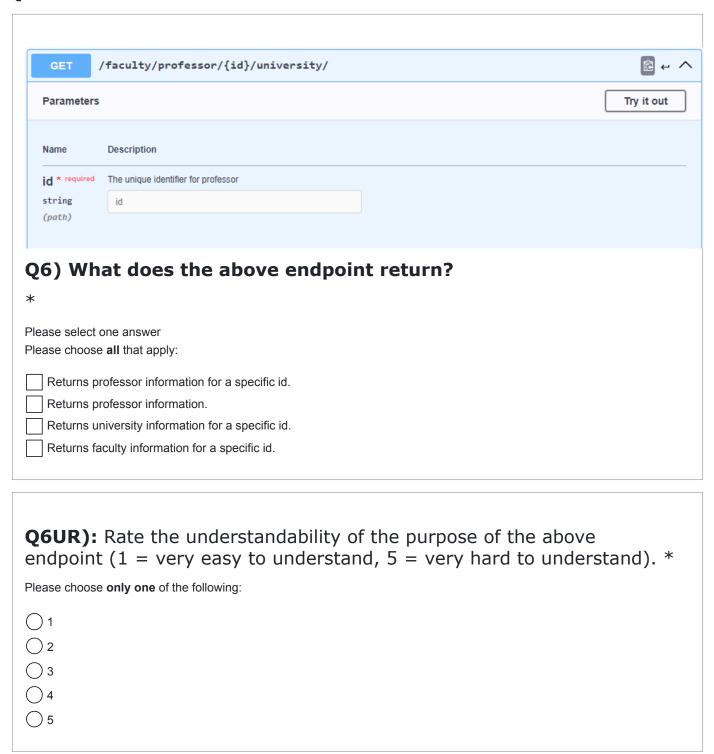
Q4 Inconsistent

GET /createVenmoPaymentContext	^
Parameters	Try it out
No parameters	
Q4) What is the purpose of *	the above endpoint?
Please select one answer Please choose all that apply:	
Create a Venmo payment context.	
Delete a Venmo payment context. Update a Venmo payment context.	
Return a Venmo payment context.	
-	bility of the purpose of the above derstand, 5 = very hard to understand). *
Q4RR) Rate the readability of understand, 5 = very hard to understand, 5 =	the above endpoint (1 = very easy to understand). *

Q5 Non-descriptive



Q6 Non-hierarchical

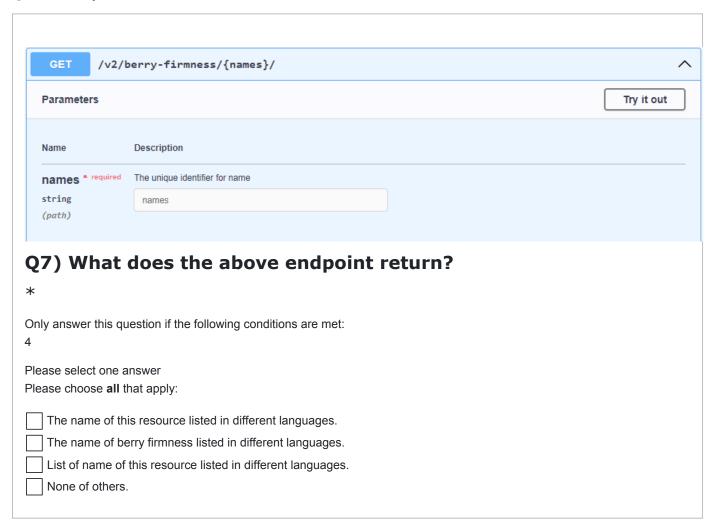


Q6RR) Rate the readability of the above endpoint (1 = very easy to understand, 5 = very hard to understand). *

Please choose only one of the following:

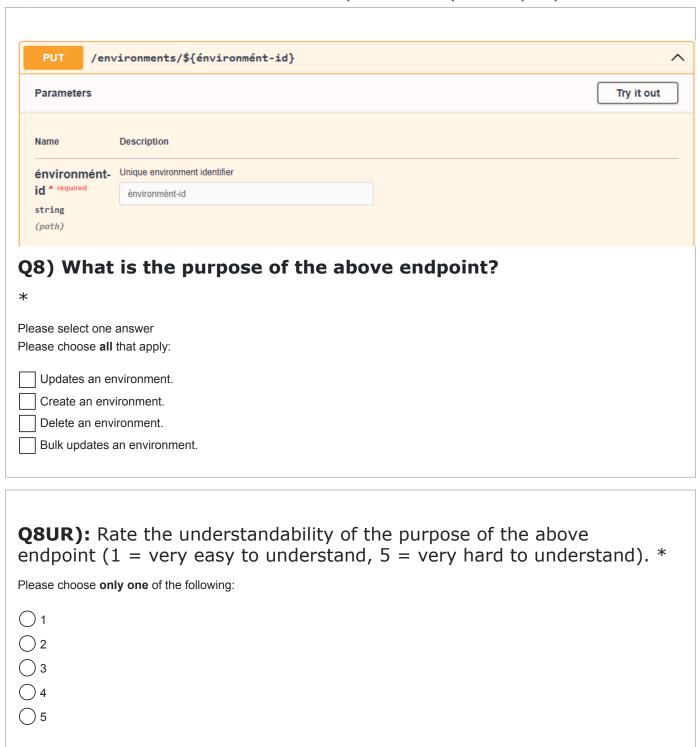
1
2
3
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5

Q7 Non-pertinent



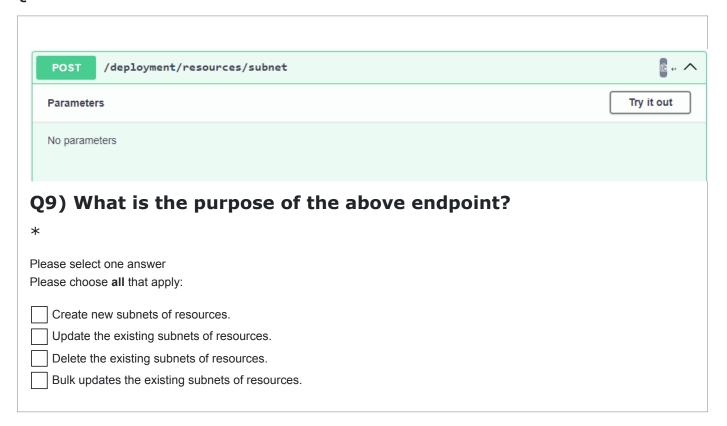
Q7UR): Rate the understandability of the purpose of the above endpoint (1 = very easy to understand, 5 = very hard to understand). * Please choose only one of the following:
○ 1○ 2○ 3○ 4○ 5
Q7RR) Rate the readability of the above endpoint $(1 = \text{very easy to understand}, 5 = \text{very hard to understand}). *$
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Q8 Non-standard



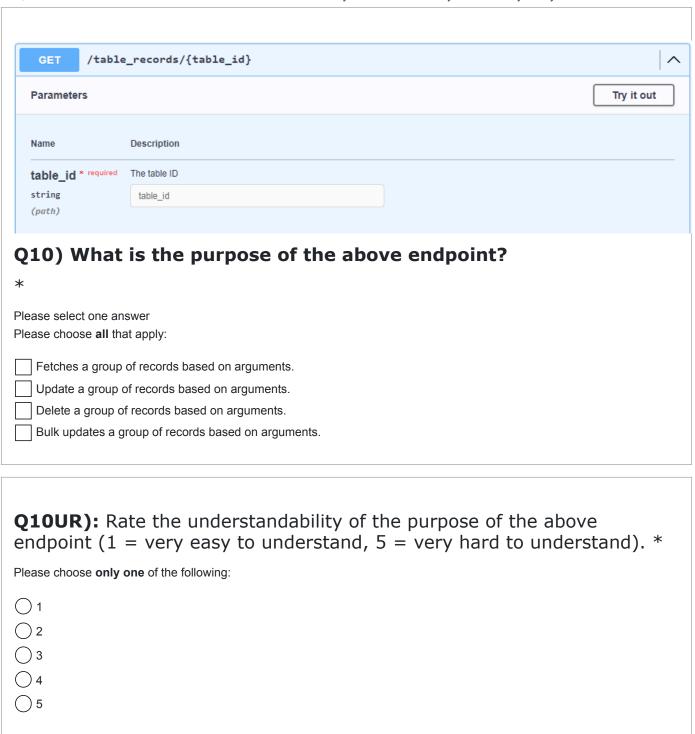
Q8RR) Rate the readability of the above endpoint $(1 = \text{very easy to understand}, 5 = \text{very hard to understand}). *$	
Please choose only one of the following:	
○ 1○ 2○ 3○ 4○ 5	

Q9 Pluralized



Q9UR): Rate the understandability of the purpose of the above endpoint (1 = very easy to understand, 5 = very hard to understand). * Please choose only one of the following:
○ 1○ 2○ 3○ 4○ 5
Q9RR) Rate the readability of the above endpoint $(1 = \text{very easy to understand}, 5 = \text{very hard to understand}). *$

Q10 Unversioned

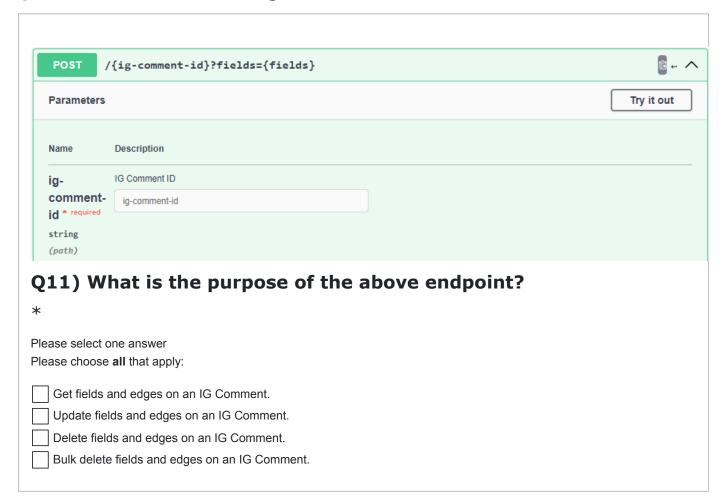


Q10RR) Rate the readability of the above endpoint (1 = very easy to understand, 5 = very hard to understand). *

Please choose only one of the following:

1
2
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5

Q11 Parameters Tunneling

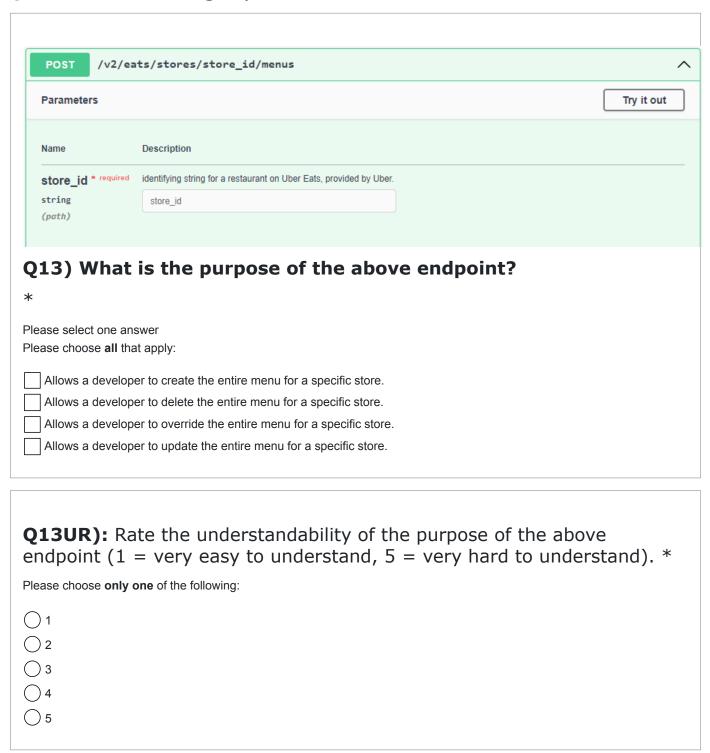


Q11UR): Rate the understandability of the purpose of the above endpoint (1 = very easy to understand, 5 = very hard to understand). * Please choose only one of the following:
○ 1○ 2○ 3○ 4○ 5
Q11RR) Rate the readability of the above endpoint $(1 = \text{very easy to understand}, 5 = \text{very hard to understand}). *$

12 Inconsistent Archetype

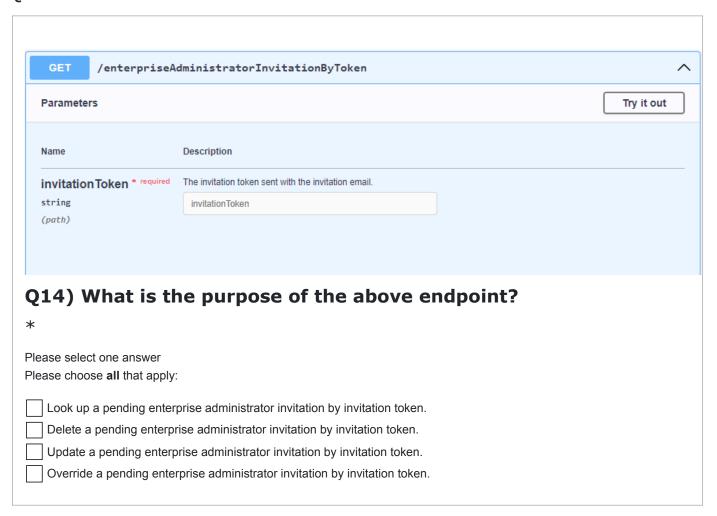
GET /policies/policy/version	€ 4 ^
Parameters	Try it out
No parameters	
Q12) What will the above endpoint return?	
*	
Please select one answer Please choose all that apply:	
Lists the versions of the specified policy and identifies the default version.	
A version of the specified policy and identifies the default version. Lists the versions of the specified policy.	
Lists identified the default version.	
Q12UR): Rate the understandability of the purpose of the above endpoint (1 = very easy to understand, 5 = very hard to understand).	
Please choose only one of the following:	rstand). *
	rstand). *
	rstana). *
	rstana). *
Please choose only one of the following: 1 2	rstana). *
Please choose only one of the following: 1 2	rstand). *
Please choose only one of the following: 1 2 3 4	rstand). *
Please choose only one of the following: 1 2 3 4	
Please choose only one of the following: 1 2 3 4 5 Q12RR) Rate the readability of the above endpoint (1 = very expression).	
Please choose only one of the following: 1 2 3 4 5 Q12RR) Rate the readability of the above endpoint (1 = very end understand, 5 = very hard to understand). *	
Please choose only one of the following: 1 2 3 4 5 Q12RR) Rate the readability of the above endpoint (1 = very endpoint (1 = very endpoint)). Please choose only one of the following: 1 2	
Please choose only one of the following: 1 2 3 4 5 Q12RR) Rate the readability of the above endpoint (1 = very endpoint (1 = very endpoint). * Please choose only one of the following: 1 2 3	
Please choose only one of the following: 1 2 3 4 5 Q12RR) Rate the readability of the above endpoint (1 = very endpoint (1 = very endpoint)). Please choose only one of the following: 1 2	

Q13 Identifier Ambiguity



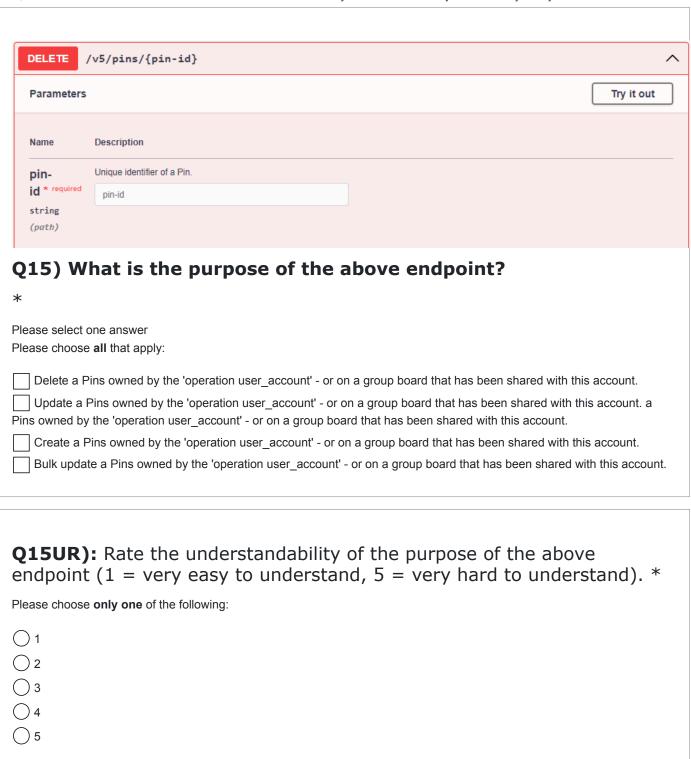
Q13RR) Rate the readability of the above endpoint $(1 = \text{very easy to understand}, 5 = \text{very hard to understand}). *$
Please choose only one of the following:
<u></u>
<u></u> 3
○ 4

Q14 Flat



Q14UR): Rate the understandability of the purpose of the above endpoint (1 = very easy to understand, 5 = very hard to understand). * Please choose only one of the following:
○ 1○ 2○ 3○ 4○ 5
Q14RR) Rate the readability of the above endpoint $(1 = \text{very easy to understand}, 5 = \text{very hard to understand}). *$

Q15 Tidy

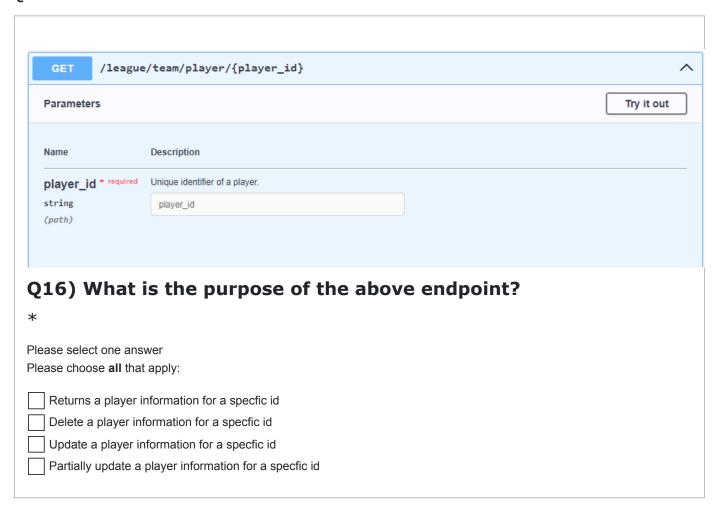


Q15RR) Rate the readability of the above endpoint (1 = very easy to understand, 5 = very hard to understand). *

Please choose only one of the following:

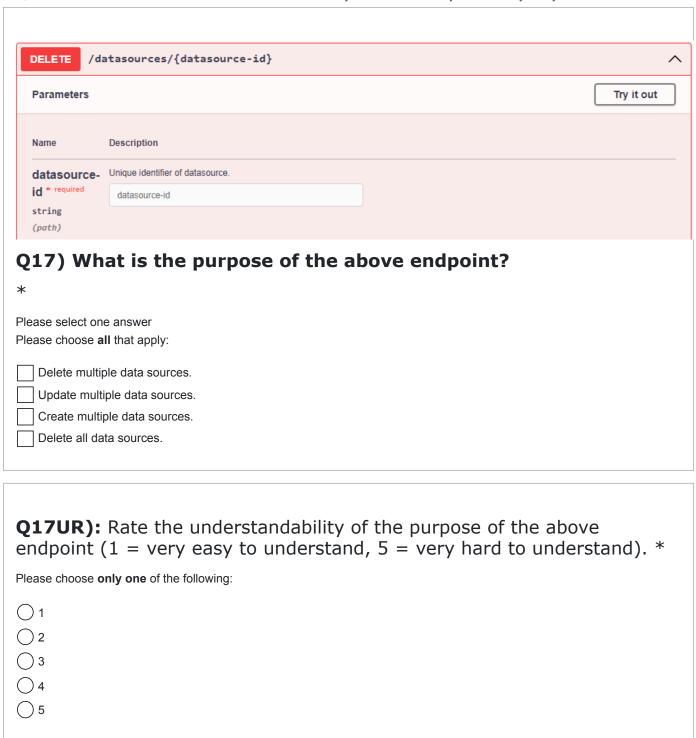
1
2
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4
5

Q16 Contextualized



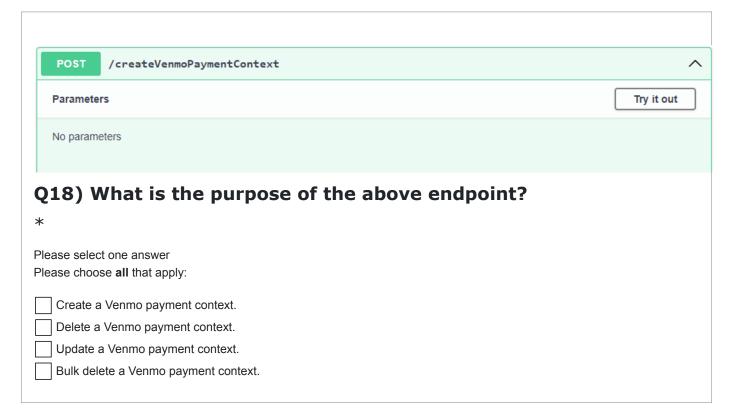
Q16UR): Rate the understandability of the purpose of the above endpoint (1 = very easy to understand, 5 = very hard to understand). * Please choose only one of the following:
○ 1○ 2○ 3○ 4○ 5
Q16RR) Rate the readability of the above endpoint $(1 = \text{very easy to understand}, 5 = \text{very hard to understand}). *$

Q17 Verbless



Q17RR) Rate the readability of the above endpoint $(1 = \text{very easy to understand}, 5 = \text{very hard to understand}). *$	
Please choose only one of the following:	
○ 1○ 2○ 3○ 4○ 5	

Q18 Consistent

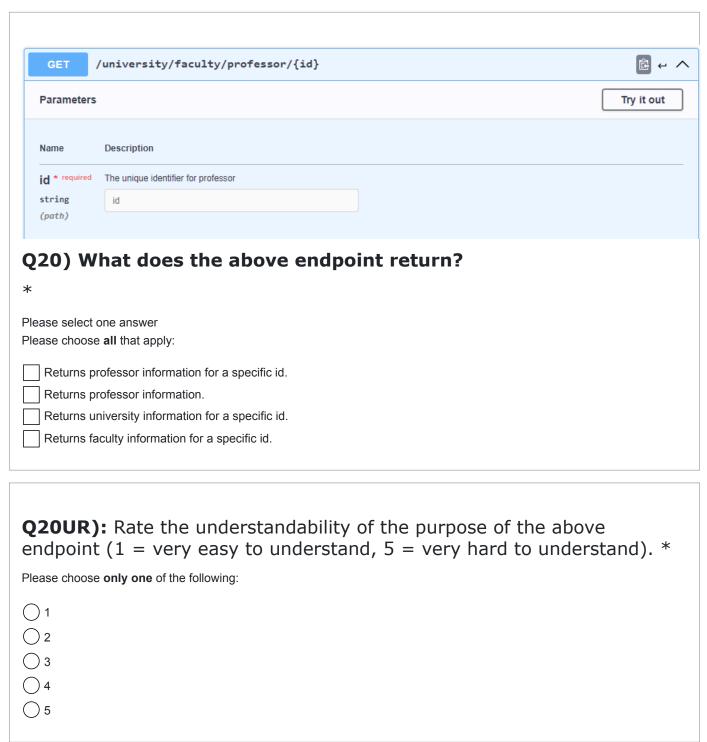


Q18UR): Rate the understandability of the purpose of the above endpoint (1 = very easy to understand, 5 = very hard to understand). * Please choose only one of the following:
○ 1○ 2○ 3○ 4○ 5
Q18RR) Rate the readability of the above endpoint (1 = very easy to understand, 5 = very hard to understand). $*$

Q19 Descriptive

GET /authentication/login
Parameters Try it out
No parameters
Q19) What is the purpose of the above endpoint? *
Please select one answer Please choose all that apply:
Get the active authentication scheme. Delete the active authentication info. Update the active authentication scheme. Get the active login info.
Q19UR): Rate the understandability of the purpose of the above endpoint (1 = very easy to understand, 5 = very hard to understand). * Please choose only one of the following: 1 2 3 4 5
Q19RR) Rate the readability of the above endpoint (1 = very easy to understand, 5 = very hard to understand). * Please choose only one of the following: 1 2 3 4 5

Q20 Hierarchical

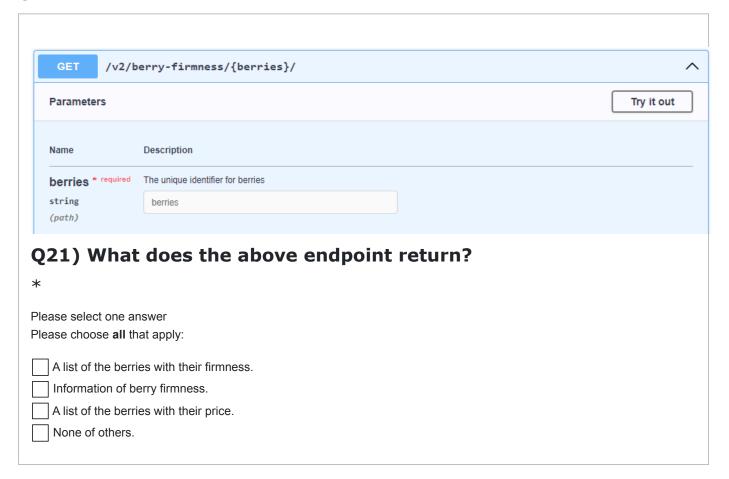


Q20RR) Rate the readability of the above endpoint (1 = very easy to understand, 5 = very hard to understand). *

Please choose only one of the following:

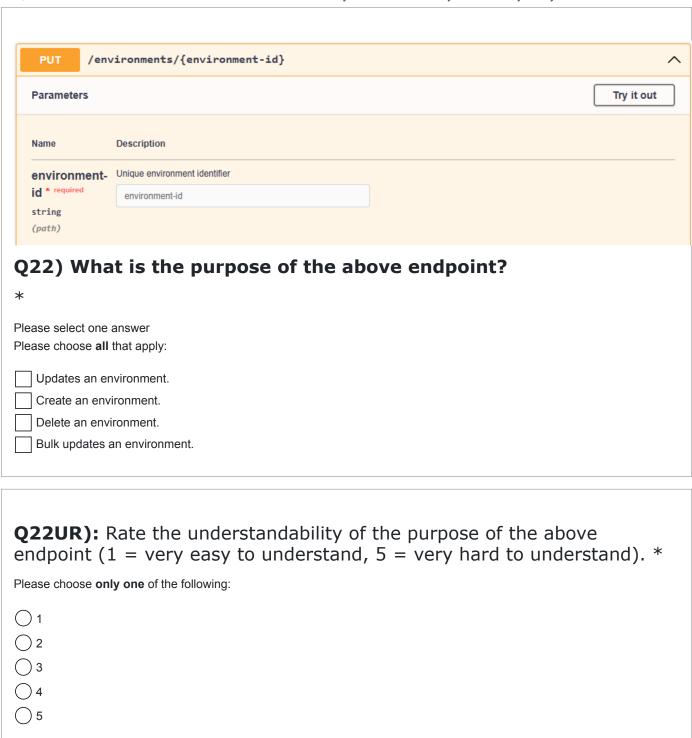
1
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Q21 Pertinent



Q21UR): Rate the understandability of the purpose of the above endpoint (1 = very easy to understand, 5 = very hard to understand). * Please choose only one of the following:
○ 1○ 2○ 3○ 4○ 5
Q21RR) Rate the readability of the above endpoint (1 = very easy to
Q21RR) Rate the readability of the above endpoint (1 = very easy to understand, 5 = very hard to understand). *
understand, 5 = very hard to understand). * Please choose only one of the following:
understand, 5 = very hard to understand). * Please choose only one of the following: 1 2
understand, 5 = very hard to understand). * Please choose only one of the following:

Q22 Standard

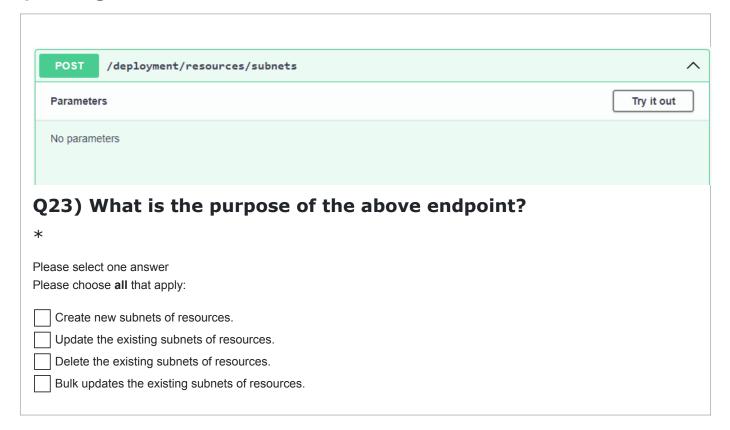


Q22RR) Rate the readability of the above endpoint (1 = very easy to understand, 5 = very hard to understand). *

Please choose only one of the following:

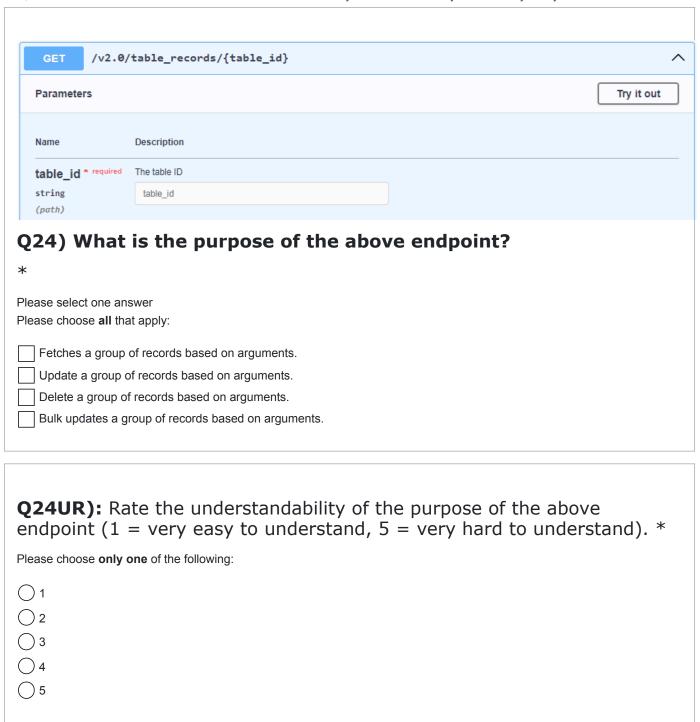
1
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Q23 Singularized



Q23UR): Rate the understandability of the purpose of the above endpoint (1 = very easy to understand, 5 = very hard to understand). * Please choose only one of the following:
○ 1○ 2○ 3○ 4○ 5
Q23RR) Rate the readability of the above endpoint (1 = very easy to understand, 5 = very hard to understand). * Please choose only one of the following:
○ 1○ 2○ 3○ 4○ 5

Q24 Versioned

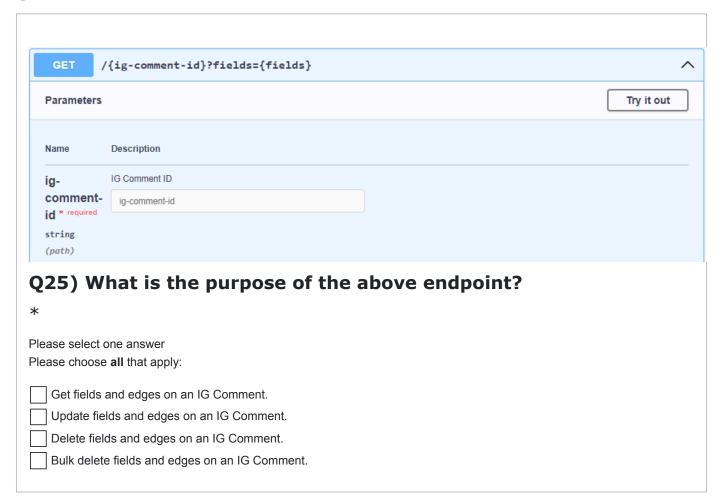


Q24RR) Rate the readability of the above endpoint (1 = very easy to understand, 5 = very hard to understand). *

Please choose only one of the following:

1
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4
5

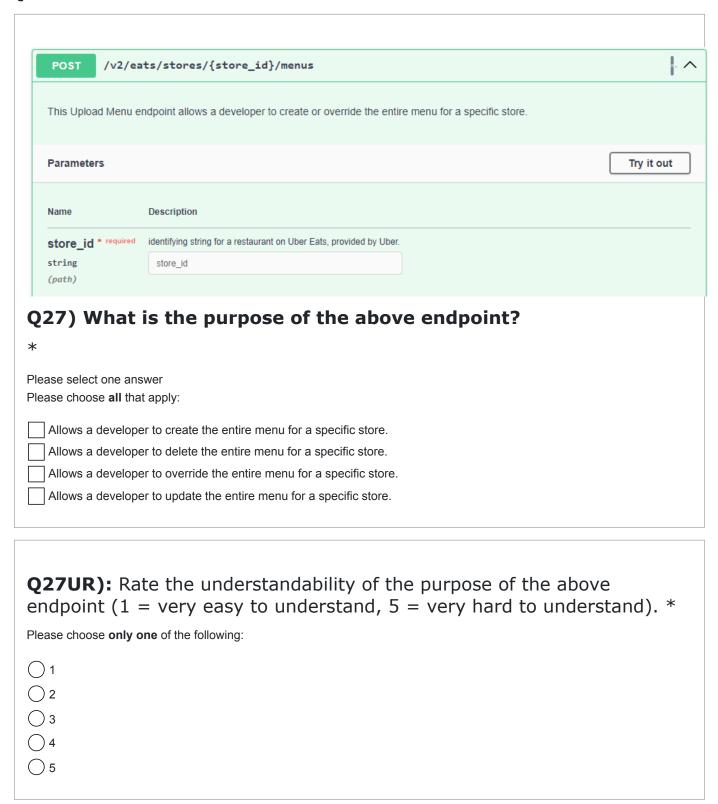
Q25 Parameters Adherence



Q26 Consistent Resource

GET /policies/policy/versions	^
Parameters	Try it out
No parameters	
26) What will the above endpoint return?	
*	
Please select one answer Please choose all that apply:	
Lists the versions of the specified policy and identifies the default version.	
A version of the specified policy and identifies the default version. Lists the versions of the specified policy.	
Lists identified the default version.	
Q26UR): Rate the understandability of the purpose of the about endpoint (1 = very easy to understand, 5 = very hard to under Please choose only one of the following: 1 2 3 4 5	
Q26RR) Rate the readability of the above endpoint (1 = very understand, 5 = very hard to understand). * Please choose only one of the following:	easy to
<u>1</u>	
○ 2 ○ 2	
○ 3○ 4	
<u>5</u>	

Q27 Identifier Annotation

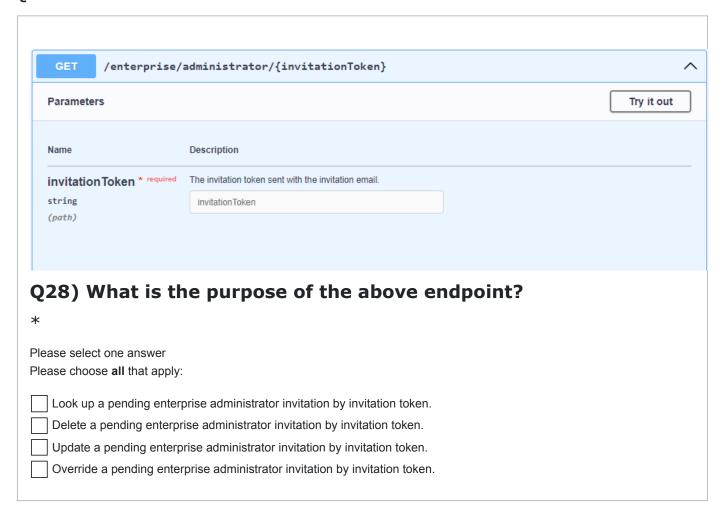


Q27RR) Rate the readability of the above endpoint (1 = very easy to understand, 5 = very hard to understand). *

Please choose only one of the following:

1
2
3
4
5

Q28 Structured



Q28UR): Rate the understandability of the purpose of the above endpoint (1 = very easy to understand, 5 = very hard to understand). * Please choose only one of the following: 1 2 3 4 5
Q28RR) Rate the readability of the above endpoint $(1 = \text{very easy to understand}, 5 = \text{very hard to understand}). *$
Please choose only one of the following:
<u>0</u> 1
<u></u>
<u></u>
5
General Information
Location (Country) *
Please write your answer here:

Profession *
Please select one answer
Please choose all that apply:
Consultant
Software Engineer / Developer
Researcher Software Architect
Student
Teaching (Professor)
Other:
Developer Perspective (Select any of the following) *
Please select one answer
Please choose all that apply:
Both API user and developer
API developer / designer
API user / client developer
Other
Other:
Variable for the ADI development and the A
Years of experience in API development and use. *
Only numbers may be entered in this field. Please write your answer here:
Tiedde witte your driswer here.
Are you familiar with Richardson maturity model? *
Select all that apply Please choose all that apply:
YesNo

What's the minimum maturity level a Web API needs to be considered RESTful? Select all that apply Please choose all that apply: 1 2 3
Closing Section
Your perspective on current API design guidelines and practices. Please write your answer here:
Do poor linguistic design practices impact the understandability and readability of APIs? Please write your answer here:

•	answer here:
•	ppy with the survey design? *
Please choose on	ly one of the following:
Yes	
○ No	
How can w	e improve our survey design?
Please write your a	answer here:
	ting our survey! Your responses are valuable in helping us study the understandability and readability of API
sign practices. We a	ting our survey! Your responses are valuable in helping us study the understandability and readability of API appreciate your time and effort in participating. If you have any further feedback or questions, feel free to rea survey with your colleagues.
sign practices. We a	appreciate your time and effort in participating. If you have any further feedback or questions, feel free to rea