

Id	Description	Category	0 points	1 point	2 points	3 points	4 points	5 points	Possible grades	Grade	Notes
0	How environment supports testing?	Functional completeness (Functional suitability)	No support	Comes with a testing functionality/framework, but it has shortcomings (e.g., performance is remarkably slow, documentation limited, etc.), and it can't be changed to alternative solution	Provides documentation how external testing frameworks can be integrated into the environment	Comes with a testing functionality/framework, but it has shortcomings (e.g., performance is remarkably slow, documentation limited, etc.), but it can be changed to alternative solution		Comes with a testing functionality/framework, which performs as expected and has documentation	0 - 3, 5		
1	Environment supports mainnet forking for testing?	Functional completeness (Functional suitability)	No					Yes	0, 5		
2	Environment automatically compiles the code when running tests (if there are any changes)?	Functional completeness, Usability (Functional suitability)	No	Yes					0, 1		
3	How environment supports debugging?	Functional completeness (Functional suitability)	No support	Provides documentation how an external debugger/ debugging tools can be integrated into the environment			Comes with debugging tool(s) and a documentation		0, 1, 4		
4	How environment supports compiling?	Functional completeness (Functional suitability)	No support	Provides documentation how a compiler can be integrated into the environment or how the source code can be compiled	Comes with a compiler which can't be configured, or the configuration isn't explained in the documentation			Comes with a compiler and a documentation how it can be configured	0, 1, 2, 5		
5	How environment supports deploying?	Functional completeness (Functional suitability)	No support	Provides documentation how deploying can be done				Comes with a tool or a functionality to deploy smart contracts	0, 1, 5		

6	How environment supports gas optimization?	Functional completeness (Functional suitability)	No support		Provides documentation how an external tool or plugin can be integrated into the environment	Comes with a tool or a functionality to evaluate gas usage		Comes with a tool or a functionality to optimize gas usage	0, 2, 3, 5		
7	How environment supports ensuring the security of the smart contracts?	Functional completeness (Functional suitability)	No support			Provides documentation how an external tool or plugin can be integrated into the environment		Comes with a tool or a functionality to improve the security	0, 3, 5		
8	Does the development environment enable parallel frontend development (e. g., exposes interface for the frontend to connect)?	Functional completeness (Functional suitability)	No					Yes	0, 5		
9	Development environment worked as intended during the evaluation?	Functional correctness (Functional suitability)	No, either constantly minor troubles or some functionality simply doesn't work	A few minor problems may occur (e.g., an unexpected need for configuration), but the provided functionalities still operates as expected		Yes, no problem occurs during the evaluation			0, 1, 3		
10	How much the environment supports and overall eases the development process?	Functional appropriateness (Functional suitability)	Not at all	Just a bit, lacking support at least in one functionality		Environment provides a decent support and benefits gained from using it are unquestioned, but some functionalities could be either improved or the environment is lacking some essential functionalities		Environment provides full support for developers in identified functionalities (score from feature ids 0-9 = 43)	0, 1, 3, 5		

11	Development environment supports Solidity and Vyper?	Functional completeness (Functional suitability)	No			Yes, only another		Yes, both	0, 3, 5		
12	Development environment provide an extension for VS Code?	Functional completeness (Functional suitability)	No			Yes			0, 3		
13	Does the development environment operate as fast as expected?	Time behaviour (Performance efficiency)	No, user constantly (either on multiple functionalities or on an hourly basis) thinks how slow it is	No, and sometimes (either on a some functionality or on a daily basis) the user thinks that it is slower than expected	Yes, user doesn't pay any attention to the matter	Yes, and sometimes (either on a some functionality or on a daily basis) the user notices that it is even faster than expected	Yes, user constantly (either on multiple functionalities or on an hourly basis) thinks that it is faster than expected		0 - 4		
14	Does the development environment require so much resources that it negatively affects using the PC?	Resource utilization (Performance efficiency)	Yes, and it can be noticed constantly (on an hourly basis)	Yes, and it can be noticed sometimes (on a daily basis)		No, using the development environment doesn't negatively affect using the PC			0, 1, 3		
15	Development environment has restrictions regarding the size of the project?	Capacity (Performance efficiency)	Yes					No	0, 5		
16	Can Open Zeppelin be imported (or is it by default) within the development environment?	Co-existence, Interoperability (Compatibility)	No			Yes			0, 3		
17	Can Ganache be imported (or is it by default) within the development environment?	Co-existence, Interoperability (Compatibility)	No			Yes			0, 3		
18	Can Waffle be imported (or is it by default) within the development environment?	Co-existence, Interoperability (Compatibility)	No			Yes			0, 3		

19	Environment allows importing plugins/ external tools within the environment?	Co-existence, Interoperability (Compatibility)	No					Yes	0, 5		
20	Where the suitability and the main features of the environment can be determined?	Appropriateness recognizability (Usability)	Unable to determine from the internet	From the internet	Official documentation	Either on the homepage or on the GitHub repository README	Both on the homepage and on the GitHub repository README		0 - 4		
21	Development environment documentation have a search function?	Learnability (Usability)	No	Yes					0, 1		
22	Environment documentation provides up-to-date information/instructions for installing the dependencies?	Learnability (Usability)	No				Yes		0, 4		
23	Development environment have smart contract and dApp project tutorials/examples ?	Learnability (Usability)	No project tutorials/ examples	Yes, but the example(s) has a lot of problems (docs outdated, confusing, etc.) and following it is highly challenging	Yes, but the example(s) has some problems (docs outdated, confusing, etc.), but tutorial is still fairly easily followable		Just one of the tutorials exists, and it is accurate, up-to-date, and easily followable	Yes, both tutorials exists, and they are accurate, up-to-date, and easily followable	0 - 2, 4, 5		
24	Generally (as there is always some outdated information), does the documentation appears to be up-to-date?	Learnability (Usability)	No		Mostly (certain section is not up-to-date)			Yes	0, 2, 5		

25	Documentation explains how plugins, external tools, or alternative functionalities can be imported to the environment?	Learnability (Usability)	Doesn't support importing any of these, or documentation doesn't explain how it can be done	Documentation is confusing and hard to follow	Documentation contains all the relevant information, but it has some shortcoming (e.g., confusing layout, missing commands etc.)	Documentation contains all the relevant information, and it provides examples of terminal commands and/or code examples			0 - 3		
26	How much the documentation could be improved?	Learnability (Usability)	Pretty much any change would be an improvement	A lot, there is major problems with structure, presentation, language etc.	Some, there is problems with structure, presentation, language etc.	A bit, the standard level, provides all the basic information in a decent format, but doesn't stand out in any way	Not by much, few minor changes and improvements to structure, presentation, language etc.	Documentation is nearly perfect, comes to personal preference whether any change would improve the documentation	0 - 5		
27	Development environment have its own forum, in which developers can ask help from other developers?	Learnability (Usability)	No	Yes, but it isn't active (there are clearly more suitable platforms for discussion, such as StackOverflow)	Yes, and it is active (has at least 1000 members or most of the questions are being answered within two days)				0 - 2		
28	Are the default commands to execute functionalities/ operate environment long and difficult? (e. g., majority of them contain more than 20 characters, at first it is beneficial to save them in a text file?)	Operability (Usability)	Yes	Some, but not all	No				0 - 2		
29	Are you able to start a new project under 10 minutes with the environment (including the installation and possible configuration)?	Operability (Usability)	No		Yes				0, 2		

30	How many open issues the GitHub repository has from the past 30 days?	Maturity (Reliability)	Over 40 open issues	40<issues<=30	30<issues<=20	20<issues<=10	10<issues<=5	Less than 5 open issues	0 - 5		
31	Under normal circumstances, development environment can be used any given time (e.g., not down every night at the same time)?	Availability (Reliability)	No					Yes	0, 5		
32	Can security flaws be detected, or is there any reason to questionable the security (including template projects)?	Confidentiality, Integrity (Security)	Security flaws can be detected during the evaluation	There is valid reasons to question the security of the development environment (e.g., critical vulnerabilities on dependencies)	The security of the development environment doesn't spark trust towards it, but no valid reasons to question it (e.g., vulnerabilities on dependencies)			No reason to question the security of the development environment	0, 1, 2, 5		
33	What is the package's health score on Snyk (https://snyk.io/advisor/)?	Confidentiality (Security)	Score <= 75	75< score <=80	80< score <=85	85< score <=90	90< score <=95	Score > 95	0 - 5		
34	User can change some of the functionalities to alternative solutions (e.g., testing framework, development node)?	Modularity (Maintainability)	Unable					Yes	0, 5		
35	How much effort it takes to update the development environment?	(Maintainability)	Requires a lot of work and searching for information (>10 min)	Requires few Google searches or reviewing documentation (<10 min)	Effortless, can be done from terminal under 3 minutes				0 - 3		

36	What is the philosophy of the development environment about balancing new technologies/functionalities and stability?	(Maintainability)	An extreme, uses either outdated technologies or constantly introduces breaking changes with new technologies		A somewhat balanced, uses relatively new technologies and doesn't often introduce breaking changes			A perfect blend, uses the newest technologies, but doesn't still introduce breaking changes on releases	0, 2, 5		
37	Development environment can be used on Linux, macOS, and on Windows 10?	Adaptability (Portability)	No					Yes	0, 5		
38	Does the development environment have pre-requirements for installation, and how much effort installing those requires?	Installability (Portability)	Pre-requirements require a lot of effort (e.g., process is difficult and confusing, >15 min)		Pre- requirements require some effort (e.g., documentation about the process could be clearer, <15 min)			No pre-requirements, or can be done from terminal under 3 minutes with the instructions on documentation	0, 2, 5		
39	How much effort does the development environment installing process require?	Installability (Portability)	Installation process is difficult and it requires a lot of work (>10 min)		Requires few Google searches or some reading of the documentation (<10 min)			Can be installed from terminal under 2 minutes with the instructions on documentation	0, 2, 5		