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【ask】

First, let’s briefly talk about your professional background and some development experience you have done . How long is it?

【answer】

My undergraduate major is XX engineering, and then it happens that the XX engineering in our school is also a very practical engineering , which is the kind of project that is done as soon as I enter the school , so we may be able to trace it back if we count my first project. In December of the freshman year , it was a python competition with a team. Python is the kind of writing a project in one or two days. That competition should be my first project in a strict sense, and then that project Basically I wrote it by myself, because other students in the group may not be very good at writing programs at that time, I wrote it basically, and then that game is strictly a personal project, and then the team project is in the second semester , In the second semester of college, there was a small game competition. That is the 4 of us together, it should be the 4 of us who wrote a game together, that can be regarded as a team project of mine. Then, in the second year of the sophomore year, there are more projects to do. There will be a fairly large-scale one in our course, a professional course in our second year, and its big homework is a project, and then that project The scale is still relatively large, that is, we are also finished by 4 people, the entire project code may have 40,000 lines of code , and the document may have 100,000 words, such a scale . Then I also participated in some team competitions that year. Well, those projects may also be around ten or twenty thousand lines of code . After that, I have been working on projects , because our major is a major in doing projects , and then it was the summer vacation of the junior year. At that time, I went to Microsoft Suzhou for an internship, and then I practiced there for three months, and was also responsible for the development of an internal monitoring system . During my postgraduate period, my laboratory is also a very engineering laboratory, so I am basically working on projects, but these projects during my postgraduate period are basically my personal projects , because I can't find my classmates , and my classmates also do engineering. , roughly like this.

【ask】

In this way, your development experience is actually four or five years from the freshman year . That is more experienced . Then I want to ask you, you can give some more specific examples, you can recall a new tool, or new software or new technology you have learned recently or before , and then briefly talk about what you learned about this The whole process of software is that you start from hearing about this tool or this framework, then learn it, and then use it to do some development work, or complete the project, how do you do the whole process.

【answer】

Okay, I actually feel that the general developer's learning path is to learn a new framework , so to speak, the process of learning a new framework is basically fixed, that is, to propose this framework, and then go to its official website or GitHub , GitHub will share its documents on it, and then the document will generally be, usually a getting first The started part, that part is for developers who have never used this thing to learn, and then generally talking about getting The started part is to be able to simply understand what the framework does, and then see the getting When you start, you should be able to start writing something. In the process of writing this thing , I may also look at some more detailed , some more detailed parts, that is, its documentation will also include some in addition to getting started, the other part of the document of a specific piece , is when getting When starting is not enough, I will look at the more in-depth parts, mainly to look at getting first. started, and then read the other parts as you write .

【ask】

It is equivalent to learning while using it, which is equivalent to seeing this getting This overview of started , and then understand the general functions, practices, etc., and then start using it, and then encounter problems in the process of using it, and then go to the in-depth and detailed part of the document, right?

【answer】

's right, and then if the documentation is not enough, go to the Internet and search for some issues or stacks. Some Q&As on overflow.

【ask】

Then you encounter problems in the process of doing it, that is, what you said just now is that you will go back to the document to look at it again when you encounter problems. Is there any other solution ?

【answer】

When I encounter a problem, I usually look at the documentation or search for the problem on the Internet. Well, if I can't solve it , I sometimes look at the source code, but generally I don't. Because the source code , Because the style of code written by everyone is actually different, you generally can't understand the source code , and sometimes some things are very complicated, and you can't read the source code .

【ask】

That is to give priority to solving it yourself, instead of asking other people to ask teachers and classmates as soon as you come up, give priority to solving it yourself .

【answer】

right.

【ask】

You also talked about your development experience just now, and as a programmer , you are considered a programmer . What do you think are the characteristics of programmers in China compared with people in other professions and other professions?

【answer】

What are the characteristics, specifically?

【ask】

Very general, for example, what are your typical personalities, occupations , work habits, living habits , or study habits ?

【answer】

I think a major feature is that you should rely on yourself first when you encounter problems, that is , the problems you encounter in the computer world are generally your own problems, not other people's problems, so when you encounter problems, you will first see if you are wrong , and then if you find that you can't solve it, you can go to see it yourself. If it really doesn't work, then go to some Q&A websites to ask, and maybe other occupations that deal with people more may not be able to solve many things alone. , so those occupations may be the first reaction to encountering problems may be to pull people and pull a group to chat about something .

【ask】

What about study habits ?

【answer】

In terms of learning habits , I think that although I may know that I have been learning this concept, I may emphasize this concept , that is, I know that I don’t understand anything, I know that I should keep chasing, and keep watching the development of the entire industry. Keep looking at something that is new, and then try to use it .

【ask】

That is to say, this profession requires continuous learning, because new things come out very quickly, and you have to keep learning to keep up . In addition, you may be inclined to self-study , right?

【answer】

Yes, I prefer self-study. Because there are generally not many resources for new things to allow you to learn very simply, you may need to nibble on some uncompleted materials that have just come out .

【ask】

Oh, then I want to ask you, what position do you think technical documentation occupies in your development work ? How important is it ?

【answer】

From several perspectives, first of all, if you are learning something, the technical documentation is definitely the most important, because even if it is an open source project, no one will look at the code, even if the project is open source , everyone is in When using this thing , you will not look at its code.

【ask】

Is it because the code is hard to read ?

【answer】

Well, yes , and the efficiency of starting to look at the code is generally relatively low. Generally, you must basically read the documentation during the learning process . Then, if it is about cooperation, it is a project you wrote yourself, and then you want to push this project out for other people to use, the documentation is also a more important thing, because you are writing more documents than you say. A thinking process, you may say that it is stuck as it is now, but when you write a document, you will have to think about each plan, that is, how to describe this thing concisely and clearly . Mainly in these two aspects , the work of programmers is either to use other people's work, or to write their own .

【ask】

One is that for self-learning, reading documents is a more efficient way, and then for internal team communication, documents can enhance the efficiency of your communication .

【answer】

Yep.

【ask】

Well, ok, oh, then what types of documents do you usually use? You can just think about what kind of materials you can ask for help in your usual study and work process ? These can be counted as documents .

【answer】

In fact, you can actually read the documents you mentioned just now. For example , they are the ones written by themselves, the documents of the framework used to get started. Those are the ones that need to be read. Sometimes, um, because You are using a framework. This framework may provide many APIs. What does each API do? Generally, there will be a special API reference. That piece is generally not seen at the beginning, but sometimes encountered Will take a look from time to time .

【ask】

Use means you want to see specific parameters or a function?

【answer】

Yes, or to see what functions this package provides , I will look there. Then the user documentation is for end users, which is actually seen during the development process. For example, if you have a bunch of development tools in the development process , then for these development tools, our developers are its users, so just look at this User documentation, and the forums mentioned earlier , in fact, when you search for some questions, you will enter these forums, because these forums , because they are also a specific problem, there may be some specific problems I encountered . The problem is relatively similar , so when solving this kind of problem, it is more efficient to look at the forum than to look at the document , because the document is only what the developer thinks you will encounter , not the user. What is the problem, but the problems of the forum are all the problems encountered by users, which are likely to be similar to the problems you encountered , so the forum is a better one, mainly these .

【ask】

Is the forum like a blog park in China ?

【answer】

Blog garden , yes , there are some frameworks in the blog garden that are generally used . Although they are rarely seen, they are really useful. Then , I usually read English materials, because I feel that the quality of Chinese materials is really not good. .

【ask】

Which forum is that in English ?

【answer】

Mainly stack overflow , some GitHub issues will also have some problems below. Other redis will also have some problems.

【ask】

Then you usually find these materials mainly through search engines ?

【answer】

Yes, it is the search engine.

【ask】

there any other way besides this ?

【answer】

Personally , because the projects I have done recently are generally personal projects, so I usually rely on search engines to search, but before, for example, if I cooperated with other people , if I encounter some modules that other people are responsible for, you can also ask. others. Then I used to like to add some technical discussion QQ groups , but now I don't like to add it. Sometimes I like to ask some questions there.

【ask】

Who maintains this QQ group ?   
【answer】

Also some technicians . Some projects, especially domestic projects, will post a QR code of a Dingding group QQ group in there. If you scan it, everyone in this group is discussing the project. Sometimes there are The question is answered here , and there seems to be such a group abroad . I forgot what that platform was called . There are also such groups maintained by developers abroad , and then there is a discussion group about this group. There will be quite a few discussion groups in this group.

【ask】

So this kind of developer group is not an official place, right?

【answer】

If it is from the official document, if it is from the document, it is generally official . Generally, there will be some developers of the library themselves answering questions in it . For example, the v2ex is called this name. In a domestic forum, in that forum , it is a discussion community of the developer himself . Sometimes there will be some discussion areas , this kind of group is the developer's own group, that is, a group that fans join .

【ask】

Then after you find these documents, after you find these materials, how can you quickly find and locate the information you need, because the documents may be relatively long .

【answer】

Generally, the location information is also searched by search engines , because this kind of document can generally be retrieved by search engines, so I encountered a problem that I searched directly in the search engine , and the search engine could bring me in . Then it really doesn't work, it may be the document . Now it is usually a framed document, there are some document frameworks, and then it is deployed as a static web page, and then this kind of general provides a search entry, and usually can also be searched in this way sometimes.

【ask】

I mean after opening the page of this document , what is one of your reading habits like? Whether to read from beginning to end or to quickly locate some keywords through some other means .

【answer】

document is not actually used for reading , just follow the process I said before, first look at the getting started, getting The started part must be done step by step, it's all like this, but I won't read the more detailed part. It 's what I use and what I need. I go to the search engine to search first , and it will take me directly. Going to a certain page area of the document , I don't have to read the detailed parts of it , because it's useless, you know?

【ask】

Well, the next question is, you just mentioned that you have read some documents, you mainly read some English documents , then it is equivalent to you have read some foreign documents, and then you should have also read domestic ones, That is, from the experience of the documents you have read, how do you think their quality is, domestic and foreign you can give some examples, good examples, typical examples of well-written documents and writing examples of poor documentation, and then you can tell where they are good and where they are bad .

【answer】

Well, let’s take the foreign ones first. I think the best documents written are the Microsoft series, because Microsoft has an MSDN called docs.microsoft.com . It should be called this. This is a document maintained by Microsoft itself. website, and then there will be documents of all Microsoft products, such as its web framework, the document of that thing is very detailed, it has the kind of get started part, that is, you can section by section , you can start from 0 Begin to learn a framework, it also has a kind of function for slightly more popular users , that is, what function I want specifically, for example, I want to realize the link to the database, then it has a part to teach you how to do this function , that is A very specific function, it has such a piece, which is for the end user, and then it also has that kind of documentation like the API reference. And Microsoft's set of documents, its coverage is very wide, basically you can search for any problems you encounter . Let’s take another example. This example is, for example, Spring , which is an IOC library of Java , and its springboot for web, which is actually a framework with a very wide range of users , but I do n’t think there is much. People read its documentation, because I do , its documentation I think it is a little less practical , I may have read its documentation a few times, but I am not impressed, because of the problems encountered on spring boot , usually you will go to the search engine to search , you will not jump directly to the document, you will jump to some forums or stack overflow, or domestic articles, some Zhihu articles go to it. Because its documentation doesn't cover what the developer wants , that's all, it's not very useful . Then Microsoft's is , it will provide a document like this for you to see what the developer wants , like this . Domestically , because these frameworks are mainly foreign, there are many frameworks written in China, such as XX's opener documentation . I have read a few pages of that. How should I say, XX's developer documentation, I think it is OK , is what I want, and it will still write the functional parts I want to see. Well, I think the opener documentation of XX is still ok . I don't think it's easy to say about other domestic documents, because I really don't use domestic things very much, and then I think it's not good, it 's a thing called swc , and I may be a little bit on the front end of the web . swc is a front-end library written in rust , it can be used to translate js , the documentation of this library is really, even its getting I can't even run the started part, its documentation is too brief , there is nothing.

【ask】

Does it mean it's too brief to run down because it doesn't give an example?

【answer】

It is an example, but there is no advanced part except for a very simple example, that is, I put getting After started running , I want to do some complicated configuration or something, it is not written, so it is like this . Then corresponding to it, there is another one called esbuild , which is similar to it. It can be used to package js translation . It is a foreign framework. The documentation for that thing is very detailed, and it has very detailed getting The started part, and then to each part , for example, I want to add TS support, I want to add react support, this part, how does it support react , how does it support js , it has a detailed document to say . So these two frameworks are actually very similar in their fields, but their documents are one in the sky and one in the ground .

【ask】

Can you briefly summarize these points? The points you just mentioned are actually relatively general. I think they are mainly in the content . Summarize the document, where its content is good and where it is not good . It will be more detailed in the content you mentioned just now, and will provide some examples ?

【answer】

Well, for an example of a certain type of function, let's put it this way , generally speaking, software frameworks will have getting The started part , this part is generally speaking , even if I write the framework myself, I will write this part, but its documentation is good or bad in getting After starting , is there enough documentation for you to understand and use the framework more deeply. Because you use a framework , you can't only use its basic functions, you will have its advanced functions . Such a good document, such as Microsoft's document, will write a document for every function you may use to teach you how to integrate this function into a project . Then the bad documentation may be poor in this part , which is the part where I want to use more advanced functions .

【ask】

Then I would like to ask if there are some problems in the documents you have read, can you find a way to give feedback to the original author of the document ?

【answer】

If this is an open source project, the document of the current open source project is generally a project maintained independently, and then that project will generally become a GitHub independently. repo , if you want to give feedback on this repo , just send an issue to this repo , and I have made some changes myself.

【ask】

In addition to open source projects, is there a way for non-open source projects to provide feedback?

【answer】

I think about this. I might not be able to use this.

【ask】

For example, for some foreign products and frameworks, will there be feedback channels in their official documents ?

【answer】

Yes , generally this kind of document itself is also open source , and it also follows the open source feedback and contribution process, which is to issue an issue on GitHub.

【ask】

that it has problems, or if you have any questions, you will be willing to give some feedback and some comments , right?

【answer】

If I find that I don't understand the document , I first check it first, and then ask other people . Then if there is a problem, send an issue.

【ask】

If so, do you feel that it is not well written or where there is a mistake, will you give it advice ?

【answer】

I don't have this, but sometimes , I still mention it a little, but I don't usually mention it. Those things are things that I think can be changed with a little effort , and I don't think there is much need to spend this time to give opinions. . Because you have to organize your own language to make comments, I am actually quite lazy .

【for】

So do you have that kind of motivation? I just hope that you can make this document better by making comments, and then help other people avoid similar problems you encountered . Do you have this kind of motivation ?

【answer】

This kind of record what problems I encounter, and then I solve them , I will write a blog, I prefer this approach . Because of writing documents, you have to submit your things to other people's projects and other people's warehouses, then you have to ensure that your own things are consistent with those written by others. For example , the language you write at least Looking not so Chinglish . Then, because we have different languages, others may not understand what we write. In fact, many English documents written by Chinese developers on GitHub also have this problem. I myself sometimes, for example, I may read the English materials I wrote one or two years ago, and I may feel that I have written something, so I am not afraid and willing to contribute some documents in English .

【ask】

Then you mentioned the problem of language. You should usually read more documents from abroad. Do you think that language is a problem from the reading point of view? Do you think there is something you don't understand ?

【answer】

the contrary, I think that because everyone is programming in English, reading English documents may be more efficient than reading Chinese documents, because those concepts do not need to be translated again, but the reading speed will be reduced, but I still prefer to go Read documents in English, because they feel more authoritative and reliable .

【ask】

Have you ever written technical documentation yourself?

【answer】

It should have been written .

【ask】

Can you expand on an example of a document you've written? In what project was it written , what kind of document was it, and what was included in it? Who was it for?

【answer】

That's it, when I was a sophomore , we had a team project, didn't that project say there was a 100,000-word document ? Most of these documents are actually for teachers, because some of them were used to communicate with each other at that time. Well, for example, there was a standard waterfall development process in that project, that is , the first requirement document , that is You have to figure out what your project is going to do. I think this is very necessary, because you do n’t know what you are doing. This is definitely impossible. The next step is the design document , which is the architecture design. It is what the whole big architecture is like, and then the detailed design document , that is, according to the waterfall development process, that is some class diagrams, data tables , these belong to this, and then the test document , the test document that At the time, I thought it was useless, and then finally it was a user document , which is user-oriented, that is, this function , the main functions and processes of your software are written in the user document. The more important documents, I think, are the requirements , architecture, detailed design and final user documentation just mentioned. Of course, there are some other documents , such as test documents , I think that is for teachers .

【ask】

This is mainly within the team development, that is, for teachers and team members .

【answer】

Yes, I think it is the requirements and design documents that can play a major role. The design documents are divided into the architecture and the detailed design document. Detailed design documents will include interface documents , which I drew in the detailed design documents in this project . This is a relatively complete, relatively large project . But later , for example, I wrote some small GitHub repositories by myself , and that kind of things are generally not divided into such details. For example, if there is a library , what does it do, I usually write a document, and then introduce you first. What does something do, and then write a getting The started part is to teach others how to use it, and then write some processes of an API . No, the next part should be detailed functions, that is, what users should do if they want to do some more advanced functions, this part, and finally a detailed API reference . This is generally the case .

【ask】

This kind of document is generally similar to readme , and it is placed in that repository .

【answer】

Yes, the short readme is enough, and the long one can use the functions of its wiki, or put a DOS directory on the repo , and then put some documents in it.

【ask】

So what do you think were the difficulties you encountered in writing these documents?

【answer】

I think the difficulties encountered , I think one point is more important, that is, the fit between the document and the code, because you are updating things , then in addition to updating the code, your document should also be updated . This is especially true of many documents of poor quality. One of the poor quality points of it is reflected in this place, that is, its documents lag behind the code. This is more complicated, so now I have actually encountered this problem myself . Then now in my own project , that is, I am now in charge of the project in the laboratory , the general measure is to write as few documents as possible, that is, to generate the documents that can be generated as much as possible , and to automate the generation. For example, those interfaces, I don't think it is necessary to write them in code first, and then write them in natural language . I am now using tools to automatically generate interface documents for me , which is very good .

【ask】

What tools are there?

【answer】

RESTful API generally has a tool like smart doc, which can automatically analyze the code according to the API point provided in your code , and then generate a web page, which is all the interfaces in your project . This can partially solve the problem that the document lags behind the code, but it also has its limitations because of the automatic generation , that is, the interface part is doing better now, but other than the API reference, for example, some other new functions, for example, you add If you have a new feature, you have to introduce this new feature to others and teach them how to use it, so you still have to write this part yourself . Well, some open source projects I have seen will say this, it will say, for example, it introduces a function , but this function has a very complicated rule, it is too lazy to write , it does not want to write, it does not want to list the rules sentence by sentence In the documentation, it says that you go to the test directory by yourself , and it lets you go to the test cases of the project by yourself . Although it is annoying to see this myself, I think this method is really good, because the test case is actually more detailed than the document , and it can greatly reduce the pressure on developers to write documents, because everyone knows it. , people really don't like writing documentation. Because in many cases, it takes more time to write documents than to write code , so it is more tiring to write, that's all .

【ask】

The last one is to ask, if there is a more ideal state, that is, there is a document of good quality that can meet your needs, then what do you think the document should look like? That is, what kind of documentation do you expect to use ? You can enumerate the dimensions of the kind of good documentation you expect .

【answer】

In fact, a relatively good document, I think , is actually the same as what we said before, that is, the points of the document that I think are good , those parts are similar, that is, you must first have a getting The started part lets me get started, then lends it to me, and then the next part is to introduce me how to use each common function, and then it is best to have a FAQ , which is the problem that the developer thinks that the developer may encounter. List One point comes out , how to solve this matter, and then preferably this part of the developer can keep adding it .

【ask】

There is a community -like place to ask questions .

【answer】

It's not the community, it's still part of the document, it 's a piece organized in the Q&A format , it's a common problem, and then it's better for developers to maintain this kind of thing , that is, if the developer receives any feedback, the feedback is compared. Many questions can be put on it, and then the A PI reference part is best to have, and then it is best to write the introduction of each interface in detail . Then, in addition to this kind of strict documentation, it's better to have a discussion community, no matter what tool it is, it's better to have a good community with developers , and then it's better for these developers to be able to Go active on various forums , and when you see someone asking this question, go and answer it . There are also comments in the code. I think the comments in the code can also be regarded as the document part . I think the more detailed the writing, the better . Then the comments in the code and the API reference are generally 1-to-1. Generally, there will be tools to generate API references from code comments. The more detailed this part, the better , and it is best to provide examples . Provide some simple usage methods in the API reference, such as how to call this function, and then preferably provide a few example projects in the documentation .

【ask】

this example refer to the code that it provides a concrete implementation ?

【answer】

Just how to use this thing, you write a very small project, although it is relatively small, but like this website architecture , it mainly realizes this function .

【ask】

In addition , most of what you just said was about the content of the document itself, so apart from the content, for example, what are the expectations for this structure of the document ?

【answer】

The structure of the document is the parts just mentioned .

【ask】

You think most of the documentation is written according to this logic .

【answer】

I think this logic is still possible, that is, it can take into account users of various levels and developers of various levels .

【ask】

When you read it , in terms of the interaction between documents and people , such as the UI design of some official documents, etc., what do you think can be improved?

【answer】

For example, you can add some. I think if there is such an example tool , you can run it with a single click . For example, the kubernetes document I think it is very good. It is not only for the beginners I mentioned . There are also documents for each part, each module, and each function point, and then it will also provide the kind of prerun in each document , that is , you click on that, and then it will open a virtual machine for you, this There is a k8s cluster on the virtual machine , and then it will guide you what commands to do and what to do, and then you can practice, open a console, enter and see what can be typed, and I think this experience is very good , k8s itself is a very complex thing, after it has this thing, the learning experience will be much better .

【ask】

Do you think this design will make the reading process more intuitive and easier to understand ?

【answer】

Yes, because I think it's useless to just watch things, you have to practice and learn, then it actually provides you with a good opportunity to practice . If there is no such thing, you may be You have to deploy an environment for it yourself , open a project, and then write what it writes, what you write in your own project . This is actually not a problem for some open source , because those open source frameworks are very simple, but for something like K8s that is very complicated to deploy , if you want to learn this thing, you have to learn how to deploy it yourself , which is actually a cost relatively high.

【ask】

there anything else to add ?

【answer】

It may also be possible to say something related to the team's internal documentation . The things I mentioned just now are all technical frameworks , technical things , not very business-related, but in actual work, in fact, many things are complicated by some business concepts , such as conceptual processes, such as It is said that when I was an intern at Microsoft , the technical framework I used at that time was similar to what I usually use , but I still spent a long time learning, what I was learning , was learning their internal business, such as some of their internal business concept . It's been a few years since this, so I forgot about it . This kind of business concept is inside Microsoft. My group uses a shared one note notebook, and then it will introduce a lot of its business concepts, and then give some documents and some content . Generally, such business-related documents within the company are actually very natural language things . Many times I feel that this kind of thing cannot be automated , and it is strongly related to each company itself. You are not good at unifying . I think if I think about it , because I only have Microsoft for a while, I don't know how other companies are doing, but according to the feedback from my colleagues, the quality of documents in such companies may not be very high. If we want to improve our In terms of quality, I think this kind of internal business documentation is actually a part of the company that needs to be improved .

【ask】

this kind of business document is to facilitate the handover and communication between the people in the group, right?

【answer】

It can be said that, for example, a new person comes , there are many concepts in the company, or the company's own framework, and then the only material for these people to learn is this document , and then in addition to these documents , they can only ask the company's internal people . It is not like this kind of open source project. In fact, it has a wider range of users and more information . So for this kind of learning needs, the requirements for the quality of the company's internal documents are particularly high, but for this kind of documents , in the company , on the other hand, you can ask if you don't understand , this is actually also a better way . But if the document can be more detailed, it will actually be beneficial for the company, for the handover of various work within the team and within the company.

【ask】

there nothing else to add besides the internal ones ?

【answer】

Almost .

【ask】

terms of language , such as domestic documents, do you want any improvement in terms of language?

【answer】

Well, I think it's actually okay, because everyone knows that the document should be more concise , the more concise the better, I think it can be done.

【ask】

That's the end of the question, nothing more.