Гумметов Рустам Б18-191-2

1)

How to Choose A Programming Language for a Project

Choosing a programming language for a project is different than choosing one to learn. Often, people will tell you that there’s no choice. Certain languages are chosen as the industry standard, and you just have to adapt. With as little freedom as you have, there are still some considerations to be made when choosing a programming language. After all, it will impact the main constraints on your project, such as time, budget, resources, and maintainability, and etc.

In Corporate IT departments, this is often one of the issues technology managers struggle with at the beginning of many in-house software projects. Sometimes, the decision will stare you in the face when you’re trying to scale up legacy systems and bring them up-to-date.

As a product manager, program manager, and technical manager, knowing all the moving pieces in a project is important. This is why it’s important to know how all the components of your project might lead you to choose specific programming languages. Knowing this will allow for a better view of the future of the project.

Any time you choose a new language, it’s a game-changing amount of overhead (resources, time, and effort) added onto your project. Having a good view at the beginning of the project and making a sensible programming language choice will lead to less time spent in maintaining the project, scaling up the project, and securing the project later on.

Ultimately, you want your software project to stay for the long haul, serving the business needs of your customers even through the business changes that may occur.

What Are the Questions to Ask When Choosing a Programming Language?

This is by no means a comprehensive list of questions. But it’s a list that can serve as a starting point to choose the programming language that you’ll need.

1. Does the language have proper ecosystem support? Will the language survive for the long haul? Is there vendor support provided for the language?

2. What’s the environment that the project will run on — web, mobile, etc.?

3. Are there infrastructure considerations to using the programming language, such as new hardware required? What are the deployment considerations?

4. Does the client prefer a certain programming language to be used?

5. Are there specific libraries, features, and tools for a programming language that are the industry standard for this type of project?

6. Can our developer program in this language? Do we need to hire new developers? Can our developers learn the new programming language quickly?

7. What are the constraints of your project that are non-negotiable — time, budget, resources?

8. What are the performance considerations of the project? Will the language accommodate the benchmarks and the performance?

9. Are there any legacy codebase considerations for the project?

10. Are there any interface issues with upstream and downstream systems or external systems?

11. Does it need to integrate with third-party tools?

12. Are there any security considerations?

# How Are Programming Languages Being Used Today?

1. Web Applications : JavaScript, PHP, Ruby, HTML/CSS, TypeScript
2. Mobile Applications: Swift, Java, JavaScript, Object-C
3. Operating Systems: C, C++
4. Distributed Systems: Go
5. Enterprise Applications: Java, C#, C++, ErLang
6. Analytics & Machine Learning: Python, R, Clojure, Julia
7. Math & Scientific Computing: Matlab, FORTRAN, ALGOL, APL, Julia, R, C++
8. Data Visualization: Python, R, Java, C#
9. Big Data: Java, Python, R, Scala, Clojure
10. Data Storage: SQL, C#, Java, Python

# Final Thoughts

With a list of programming language conventions, no matter what type of project you’re working on, you can make a sensible decision regarding the language that you use. In the end, making the right programming language choice will enable you to develop systems that will weather the changes in business needs.

2)

Аннотированный перевод

В статье описываются правила выбора языка программирования для проекта. Выделены главные проблемы, с которыми можно столкнуться при выборе и проблемы, с которыми можно столкнуться вследствие неправильного выбора. Предлагается перечень вопросов, которые необходимо задать при выборе языка программирования, а также обращается внимание на то, какие языки используются в определенных сферах программирования. Статья посвящена менеджерам продуктов и программистам, которым предстоит делать выбор языка программирования для проектов.

3)

Реферат

The main idea of the article is devoted to the choice of programming language for the project. It will impact the main constraints on your project, such as time, budget, resources, and maintainability, and etc.

In Corporate IT departments, this is often one of the issues technology managers struggle with at the beginning of many in-house software projects. As a product manager, program manager, and technical manager, knowing all the moving pieces in a project is important. Knowing this will allow for a better view of the future of the project.

The author writes that Having a good view at the beginning of the project and making a sensible programming language choice will lead to less time spent in maintaining the project, scaling up the project, and securing the project later on.

Further the author says What Are the Questions to Ask When Choosing a Programming Language and How Are Programming Languages Being Used Today.

According to the article With a list of programming language conventions, no matter what type of project you’re working on, you can make a sensible decision regarding the language that you use.

4)

This article is devoted to choosing a programming language for the project. I think there is a lot of good advice given here about this. The author writes about what problems can be encountered. In my opinion, it is very good that here are questions that should be asked when choosing a programming language, because the answers to these questions will help you make the right choice. I think this article will be very useful for product managers and programmers.