

DEVELOPMENT OF HEURSTIC ABILITY

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ABSTRACT

The article provides information about communication skills, qualities that programmers should have, participation in projects with instructions for creating independent software projects, and skills required for professionals.

Keywords: Hard skill, soft skill, designer, tester, project manager, project owner, programming languages, frameworks, programming devices, algorithm, patience, Classic, Guide, Intelligent, Reading, Adler.

Two skills are required for any professional: **hard skill and soft skill**. **Hard skills** include job-related knowledge, skills, and experiences. This includes information technology fundamentals, programming languages and frameworks, programming tools, algorithmic problem solving, and other knowledge. Soft skills include personal qualities and characteristics.

Let me list the most important qualities that programmers should have.

The first is **communication skills**. In addition to programmers, UI designers, testers, project managers, project owners and others participate in software projects. The larger the project, the larger the number of participants. Therefore, programmers should be able to communicate with them correctly, listen to them, understand them and express their opinion clearly and confidently. On my first project at Google, I had about 80 professionals, including non-technical people. The cost of this project was 1.8 billion US dollars. Now imagine how much the company will suffer if these 80 people don't understand each other properly, can't communicate properly.

The next **most important quality** required for developers is **teamwork**. When working on team projects, everyone should think about helping others, not just doing their own work. Mutual support is highly encouraged at Google. If you make someone's problem easy, you will receive a cash reward and a certificate as a thank you.

The third main virtue is **patience**. In the process of work, he has no knowledge of programming and has to work with specialists from other professions. For example, a software product owner may not consider certain issues and challenges when discussing project requirements and timelines. And the programmer will have to

patiently explain it. Or when new, inexperienced programmers come to the team, experienced programmers should patiently teach and help them.

This list could be continued, but in order not to make it too long, I will just mention them without explaining them in detail. Open-mindedness - being open to others' opinions, responsibility, creativity, proper time management, critical thinking, flexibility, etc. It helps professionals who have it to be promoted to higher positions.

I mostly created independent software projects while studying at university. I wrote programs for several research projects when I was studying for a master's degree in computer network security in South Korea. Their main goal is to detect attacks on computer networks and protect servers from them. Here I want to tell an interesting story. In one of my research projects, I created a local network for the experiment. It contained a server that needed to be protected, typical network clients (network clients), attacker and defense computers. The purpose of the experiment was to demonstrate the effectiveness of the protective program. The protection program was able to successfully protect the server in my local network, but since the local network was not disconnected from the Internet, the attacker's computer also attacked the university servers and left our faculty without Internet for some time.

How to Read a Book: The Classic Guide to Intelligent Reading by Mortimer J. Adler, Charles Van Doren). This book discusses very important topics such as reading techniques, effective reading, how to approach books on various topics, and what books to refer to when doing scientific research on a topic. Although the book may seem a little boring, it is a must for any reader who is not afraid of reading books on complex topics.

Next, I recommend reading the book "No Excuses!: The Power of Self-Discipline" by Brian Tracy. Achieving success in any field requires strong discipline, and this book offers a wealth of theoretical and practical advice.

The book that gives the third advice is "Attention. Secrets of success in a distracted world" ("Deep Work. Rules for Focused Success in a Distracted World" by Cal Newport).

Admittedly, while IT has made our lives a lot easier, it has also made people less comfortable. The abundance of social networks, light and entertaining information weakens the ability to focus, which is considered important for mental work. If you're interested in how to overcome these distractions and find success today, you should definitely read this book.

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