

Software Intellectual Property Ownership and Chain of Title:

A Practical Guide for Investment and Exit Processes



Introduction

For technology companies and startups, software is often the company's most important asset. The company's business model, valuation, ability to attract investment and prospects of a future sale are largely built around the software it develops. Yet in practice, we often see that the question of who owns the intellectual property rights in the software, in other words, who owns the software, is not addressed sufficiently at an early stage.

The fact that software is used by the company, that the source code has been delivered to the company, or even that third parties have been paid for software development services does not, by itself, mean that the copyright in the software belongs to the company. Under Turkish law, as a rule, the initial author of a work is the person who creates it. Accordingly, who developed the software, the legal relationship established with that person, and whether the economic rights have been transferred to the company must each be assessed separately.

The first question to be answered from a copyright perspective is who developed the software. Whether the software was developed by a founder/shareholder, an employee, a freelancer or a third-party software company directly affects how, and subject to what conditions, the intellectual property rights may pass to the company. Under Turkish law, payment for software development services, use of the software, or delivery of the source code to the company does not, by itself, transfer copyright. It is therefore essential, from the company's incorporation onwards, to structure correctly both the identification of the developer and the valid transfer of economic rights to the company. The ownership of copyright in software becomes particularly relevant in investment and company sale processes. A potential investor or buyer will expect to see clear, documented and uninterrupted ownership of the rights in the software, which is often one of the company's most important assets. This requires a proper chain of title.

If the company cannot document through a chain of title that it owns the rights in the software, this may reduce the company's valuation, extend the transaction timetable, increase contractual liabilities and, in some cases, prevent the transaction from proceeding.

This Guide focuses on practical issues for startups, technology companies and investors rather than addressing software copyright only from a theoretical perspective:

- Who is the author of the software?
- How are economic rights transferred?
- How is a chain of title established?
- Why is copyright important in investment and company sale processes?

The purpose of this Guide is to help structure intellectual property rights correctly from the very beginning of the software development process and to identify in advance risks that may arise at the investment or due diligence stage.

Contents

04	Who is the Author of the Software? • What is a work? • Who is the author? • Who developed the software?
10	How Are the Economic Rights in Software Transferred? • Mandatory elements of a transfer • Common mistakes
14	Chain of Title and Its Impact on Investment and Exit Processes • What is a chain of title? • Consequences of an incomplete chain of title
20	Review of Software Rights in Due Diligence
22	Practical Checklist for Startups

Who is the Author of the Software?

What is a Work?

Who is the Author?

Who Developed the Software?



Who is the Author of the Software?

What Is a Work?

Under Law No. 5846 on Intellectual and Artistic Works (the “FSEK”), any intellectual or artistic product that bears the characteristics of its author and falls within the categories of works of science and literature, music, fine arts or cinema is regarded as a work.

Originality

Copyright protection extends only to original forms of expression. Ideas, facts and elements in the public domain are not protected by copyright. Under Turkish law, the concept of originality is expressed by the term “*hususiyet*”, meaning the author’s individual characteristics.



- Ideas, by themselves, are not works. Ideas that have not yet been developed into a protectable work do not benefit from copyright protection.
- An idea may be protected under a confidentiality agreement. However, it must be sufficiently detailed and confidential to fall within a protectable sphere of confidentiality.

Are Software Programs Works?

Computer programs, together with their preparatory design materials provided that they result in a computer program at a later stage, are included in the category of works of science and literature.

A work created by adapting, arranging or otherwise modifying a computer program constitutes a derivative work.

The originality criterion described above also applies to computer software.



- The ideas and principles underlying any element of a computer program, including those underlying its interfaces, are not regarded as works. (Article 2, FSEK)

Who is the Author?

Under Turkish law, the initial author of a work is the person who creates it. The identity of the person who commissioned the work is irrelevant to authorship. Paying for software development services is not sufficient for the intellectual property rights in the resulting software to belong to you. Accordingly, an employer or a person commissioning a work does not automatically become its author.

Divisible Joint Authorship

Where a work created by more than one person can be divided into separate parts, each person is regarded as the author of the part they created.

Indivisible Joint Authorship

Where a work created through the contributions of more than one person forms an indivisible whole, the authorship belongs jointly to those who created it.



→ Technical assistance or contributions concerning details during the creation of a work do not, by themselves, amount to participation giving rise to authorship.

Who Developed the Software?

1) Software Developed by a Founder / Shareholder

A founder may have developed the software constituting the company's core business before the company was incorporated or before becoming a shareholder of an existing company. In such a case, incorporation of the company or the founder's acquisition of shares does not automatically transfer the rights in the software to the company. The shareholder should transfer the economic rights in the software to the company by means of a written deed of assignment.

Failure to transfer the software to the company by a deed of assignment may create a major problem if a company sale (exit) is contemplated or if the shareholder who developed the software transfers their shares and leaves the company. This risk applies to startups as much as it does to larger companies.

At incorporation or when a shareholder joins the company, the shareholder who is the author of the software should be required, alongside the shareholders' agree-

ment (SHA), to execute a deed of assignment transferring the relevant intellectual property rights to the company. Otherwise, a departing shareholder may demand an additional payment for transferring the rights when a potential investment or exit arises, or may claim ownership of the software and thereby obstruct the transaction.

Sometimes this situation arises without any bad faith, simply because the parties were unaware of the need for a copyright assignment or overlooked it. A missing deed of assignment may be completed retrospectively. In such situations, the importance of managing relations among shareholders, transparency and alignment around a common objective becomes particularly clear.

2) Software Developed by Employees

Under Turkish law, copyright is not regarded as automatically transferring to the employer.

The Concept of “Work Made for Hire”

In common law jurisdictions such as the United States, the concept of “*work made for hire*” frequently arises where intellectual property is created within a contractual relationship.

Under the “*work made for hire*” concept, rights in the work belong not to the person who physically created it, but to the employer or commissioning party. Where a work

qualifies as a work made for hire, copyright in the work belongs to the employer. A common example is a company engaging a graphic designer to create its corporate logo; under a work-made-for-hire arrangement, the commissioning company owns the copyright in the logo.

A work may qualify as work made for hire where it is created at the direction of the commissioning party, the costs are borne by that party, that party causes the work to be created, and it has the right to direct and supervise how the creation process is carried out.

Employee-Created Works under Turkish Law

Authorship:

Under the FSEK, where an employee creates a work within the scope of the employment relationship, the author remains the person who created the work. However, taking into account the nature of the work and the purpose of the employment agreement, the employer may be entitled to exercise certain economic rights in the employee-created work. Even in this case, however, the economic rights do not automatically transfer to the employer as they may under common law systems; rather, the employer may, by virtue of the nature of the employment, be entitled to use, reproduce or publish the work.

Exercise of Economic Rights:

Under the FSEK, three conditions must be satisfied together for an employer to exercise the economic rights in a work created by an employee:

- The work must have been created within the scope of the employee’s employment agreement and while performing their duties.
- There must be no contractual provision providing that the economic rights remain with the employee or that the employer may exercise them only to a limited extent.
- The nature of the work must not indicate otherwise.

If these conditions are met, the employer may exercise the economic rights in the work by operation of law. Moral rights remain with the employee in all cases.



- Employment agreements should clearly define software development and programming duties falling within the employee’s scope of work, as well as the objectives assigned to the employee.
- If software is created outside the employee’s scope of duties, the employee will hold the rights in that software.
- In other cases, obtaining deeds of assignment from employees is the most reliable approach.

3) Software Developed by Freelancers / Third-Party Developers

As noted above, under Turkish law the initial author of a work is the person who creates it. The identity of the person who commissioned software qualifying as a work is not, by itself, determinative of copyright ownership. Paying for software development services is not sufficient for the intellectual property rights in the resulting software to belong to the customer.

Whether your software is developed by a freelance developer or by a third-party software company, payment of a development fee does not mean that you own the copyright in the software. You may be able to use the delivered software in practice, but you may not be entitled to exercise the economic rights in it, such as freely reproducing, licensing or commercialising the software.

Unless a written rights assignment agreement is executed, a contractor remains the author and rights holder of the work it develops. Full payment of the contract price does not, by itself, transfer ownership of the rights.

In practice, companies often engage freelance developers without entering into a written agreement. Sometimes the developer is a former employee and the parties rely on a relationship of trust. One of the most common mistakes is to assume that payment of the service fee against an invoice automatically transfers the rights in the software to the company. This assumption is often incorrect and is usually discovered only when an investor or buyer raises the issue during an investment or company sale process.

In some cases, the commercial relationship between the company and the developer may have ended and it may no longer be possible to contact the developer. A subsequent assignment may then become difficult or require additional cost.

In another common scenario, a software development agreement exists but contains no provisions assigning copyright, or provisions copied from a standard agreement do not create a legally valid assignment.

Delivery of the source code to the company or storage of the source code on company servers does not, by itself, constitute an assignment. Actual use of the software or its integration into the company's infrastructure does

not establish that copyright has legally passed to the company.

Software for which the rights have not been assigned may not be capable of being sold, licensed or transferred to an investor by the company. This may cause serious delays, additional costs or changes to transaction terms, particularly during an investment or company sale process.

Although an assignment may be completed later, this does not always eliminate the risk. If the assignment is not structured to have retrospective effect or if the relevant person asserts rights in the software, the company's authority to dispose of the software may become disputed.



IMPORTANT

Common Assumption: If the software has been paid for, the rights have also passed to the company.

Actual Position: Copyright in software may be transferred only through a written rights assignment agreement.

- Unless a written rights assignment agreement is executed, a contractor remains the owner of the software it develops.
- Payment of the price for the work does not mean that the rights have been assigned. Without a written assignment, the company may not have the legal right to use, license or sell the software.

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How Are the Economic Rights in Software Transferred?

Mandatory Elements of a Transfer

Common Mistakes



How are the Economic Rights in Software Transferred?

Economic rights in a work may be transferred by the author or their heirs to third parties. The transfer may be for a fixed or indefinite period, limited to a particular territory or unrestricted, and for consideration or free of charge (Article 48, FSEK).

The transfer of economic rights in software to a third party does not change the identity of the author. The person who created the software remains the author. Only the economic rights pass to the transferee, who may exercise them within the scope specified in the assignment agreement or deed of assignment

Economic Rights

The principal economic rights that may be transferred in relation to software are

- Right of adaptation
- Right of reproduction
- Right of distribution
- Right of performance
- Right of communication to the public

All of these rights may be transferred, or only some of them. For example, the author may transfer the rights of reproduction and distribution while retaining the right of adaptation.

What Is a Deed of Assignment?

In practice, economic rights may be transferred through an assignment agreement between the parties or by means of a deed of assignment. Particularly for founders, employees and freelance developers, obtaining a separate deed of assignment is often preferred because it facilitates proof of ownership.

Mandatory Elements of an Assignment

➤ The economic rights being transferred must be specified individually.

A general statement such as “*all economic rights are transferred*” is not sufficient by itself. The economic rights intended to be transferred must be expressly and individually identified in the agreement.

Accordingly, the assignment agreement or deed of assignment should list the economic rights being transferred in a manner that leaves no room for doubt.

➤ The transfer of economic rights must be made in writing.

Economic rights must be transferred through a written agreement or written deed of assignment.

Delivery of the software, sharing of the source code, payment of the service fee, or the parties' belief that they have agreed on an assignment does not, by itself, result in the transfer of economic rights.

➤ **The transferee cannot always transfer the economic rights to third parties.**

A person who has acquired economic rights or a right of use from the author may transfer those rights to third parties only with the author's written consent. In practice, obtaining this authority in the original assignment agreement helps avoid difficulties later.

Common Mistakes

- Failure to obtain the author's consent required for subsequent transfer of the software to third parties.
- Failure to identify individually the economic rights intended to be transferred.
- Entering into a software development agreement without including any provision on the transfer of economic rights.
- Assuming that payment of the service fee is sufficient to transfer the rights.
- Assuming that delivery of the software or sharing of the source code also transfers the economic rights.
- Assuming that an assignment can be completed through an oral agreement or email correspondence.
- Postponing deeds of assignment from founders or freelance developers until an investment process.

IMPORTANT

→ Entering into an agreement for the development of software does not, by itself, mean that the economic rights in the software have also been transferred. For the software to be regarded legally as belonging to the company, the economic rights must be transferred in writing in the manner required by the FSEK.

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Chain of Title and Its Impact on Investment and Exit Processes

What is a Chain of Title?

Consequences of an Incomplete Chain of Title



Chain of Title and Its Impact on Investment and Exit Processes

What Is a Chain of Title?

A chain of title is the sequence showing all transfers and the ownership history of intellectual property rights, starting with the initial author of the software and continuing through to the current rights holder.

It is called a chain of title because each transaction concerning ownership and rights must connect to the next, like links in a chain, without gaps. A potential investor will reasonably expect there to be no uncertainty regarding the intellectual property rights in the software, one of the company's important assets, and will therefore want to review the software's chain of title during due diligence.

How Is a Chain of Title Established?

The author of computer software qualifying as a work may be one of the company's shareholders, an employee, or a person engaged to develop the software. Since computer software is continuously developed, different people may also have created different parts of it over time.

Under Turkish law, the author is the natural person who creates the work, and this status does not pass directly to an employer or commissioning party even where the work was created on the employer's instructions or on commission.

A complete chain of title is established by documenting in writing all transactions relating to the creation and transfer of the work. Under the FSEK, agreements and dispositions concerning economic rights must be in writing and must identify the relevant economic rights individually.

Commissioned Software

For the commissioning party to benefit from economic rights beyond the right to use the software, those rights must be acquired from the author under a written agreement. A software development services agreement should therefore contain express undertakings providing for the transfer to the commissioning customer of the economic rights in the work to be created.

Software Created by Employees

A special rule applies to works created by employees. Under the FSEK, taking into account the nature of the work and the purpose of the employment agreement, the employer is entitled to exercise the economic rights in a work created by an employee, provided that:

- The work was created within the scope of the employee's employment agreement and while performing their duties.
- There is no agreement providing that the economic rights in the work remain with the employee.

- The nature of the work does not indicate otherwise.

To reduce the risk of a future dispute, an express undertaking providing for the transfer to the employer of the economic rights in works created by the employee may be included in the employment agreement.

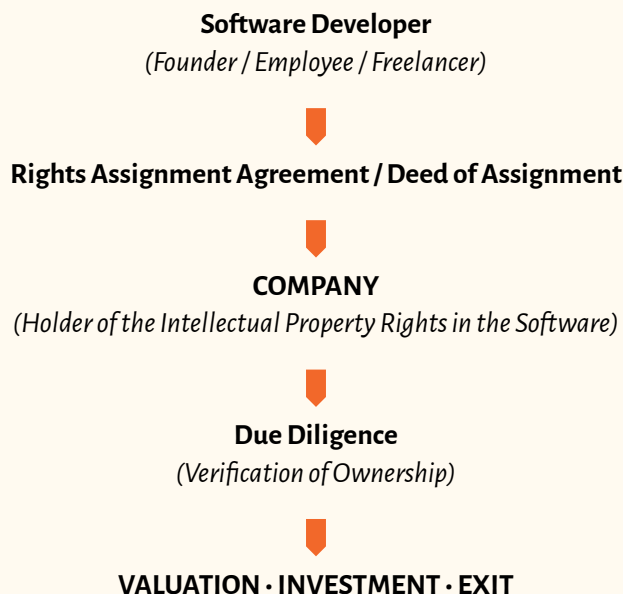


→ Attempting to enter into missing agreements retrospectively with the relevant authors can be difficult in practice. For this reason, ownership of the intellectual property in the software and entitlement to exercise the economic rights should be identified from day one, and each transaction should be documented by agreement.

Author's Consent to Subsequent Transfers

There is another important point that must be addressed for the chain to rest on solid foundations. A person who has acquired economic rights or a right of use from the author may transfer those rights to another person only with the author's consent. This consent may be obtained in the initial agreement under which the economic rights are acquired. If a person who acquires economic rights from the author has not obtained the author's consent to transfer those rights onwards, subsequent transfers will be invalid. To avoid this situation, agreements forming part of the software chain of title should be reviewed to confirm whether consent to subsequent transfers has been granted.

The purpose of the chain of title is to demonstrate that the intellectual property rights in the software belong to the company on an uninterrupted basis and thereby eliminate legal risks that may arise during investment and exit processes.



Consequences of an Incomplete Chain of Title

The absence of a complete chain of title may create significant legal and commercial risks during an investment or company sale process, regardless of the technical quality of the software. For an investor or buyer, the fundamental question is whether the company genuinely owns the rights in the software. Any uncertainty over ownership may directly affect the investment or acquisition decision and the terms of the transaction.

➤ Valuation may be reduced.

For a technology company, the software it has developed is often its most important asset. If the company cannot clearly and demonstrably establish that it owns the intellectual property rights in the software, an investor or buyer assumes legal risk in relation to the company's key asset. This risk may result in a lower valuation than expected.

➤ The transaction may be delayed or postponed.

If missing assignments or an incomplete chain of title are identified during due diligence, the investor may require these deficiencies to be remedied before completion. The need to enter into rights assignment agreements retrospectively with former employees, freelance developers or third-party software companies may significantly extend the investment or exit process.

➤ Contractual protection mechanisms may become more extensive.

Deficiencies in the chain of title may lead an investor or buyer to seek more extensive protections in the transaction documents. Sellers or founders may be asked to give broader representations and warranties, accept longer liability periods or agree to higher indemnity obligations. In some cases,

part of the purchase price may be held back for a period or payment may be deferred until the assignment of rights is completed.

➤ **The transaction may not proceed.**

If deficiencies in the chain of title cannot subsequently be remedied or ownership of the software cannot be established with certainty, the investor or buyer may withdraw from the transaction altogether. Particularly for technology companies whose value is largely based on their software, uncertainty regarding ownership of the rights in the software may, by itself, be sufficient to prevent the investment from proceeding.



→ The chain of title should not be left until the investment process. From the moment software development begins, every transaction relating to ownership should be documented in writing and no link in the chain should be left incomplete. Due diligence is conducted to verify that this chain is complete, not to remedy deficiencies in it.

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Review of Software Rights

in Due Diligence



Review of Software Right in Due Diligence

A standard investment transaction generally begins with the execution of a letter of intent and a confidentiality agreement. A data room is then established in accordance with the investor's due diligence document request and questionnaire, and access is provided to the investor's advisers. At the same time, negotiations on the investment agreements begin in light of the information obtained through due diligence.

For the investor, the principal purpose of due diligence is to assess existing and potential risks and liabilities associated with the startup in which the investment is contemplated, structure the transaction appropriately, identify the founders' responsibilities in the transaction documents and mitigate risk.



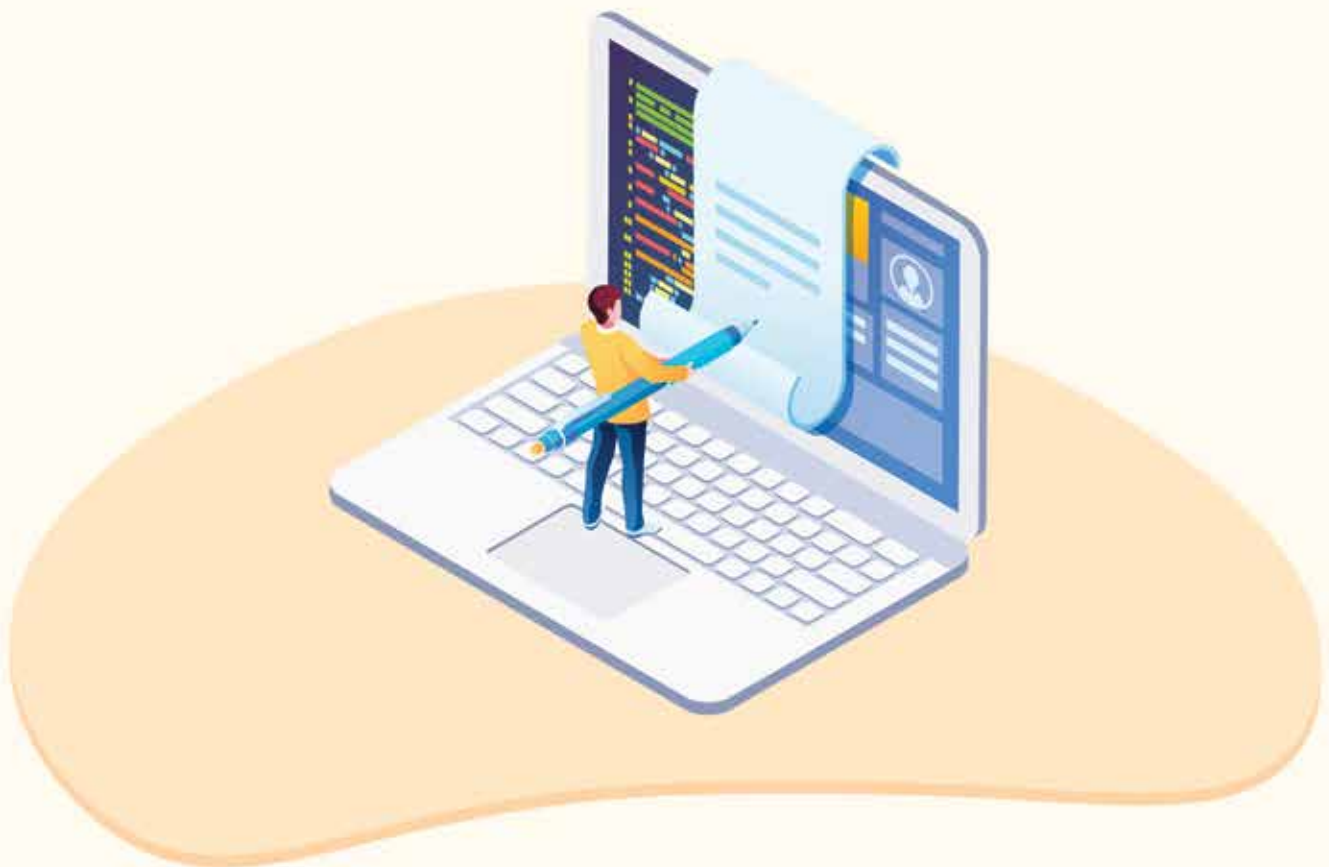
The principal purposes of due diligence for an investor are:

- To assess existing and potential risks associated with the startup; and
- To identify the steps founders should take before and after the investment.

The questions most frequently asked and documents most commonly requested in relation to the company's software during due diligence include:

- Who developed the software?
- Were the rights transferred?
- Was open-source software used?
- Deeds of assignment
- Employment agreements
- Third-party software development service agreements
- Open-source software lists

Preparation Checklist for Startups **and Technology Companies**



Preparation Checklist for Startups and Technology Companies

This checklist is intended to provide a quick assessment of whether a technology company's intellectual property rights have been structured so that the company is ready for investment and exit processes.

A. For Founders

1. Ownership of the Software

- ☐ The intellectual property rights in the software have been transferred to the company.
- ☐ Written rights assignment agreements have been executed for software developed by founders.
- ☐ Software developed before the company was incorporated has been transferred to the company.
- ☐ The company, rather than individual persons, holds the rights in the software.

2. Freelancer / Agency Management

- ☐ Written agreements have been entered into with freelancers or agencies.
- ☐ The agreements contain an express intellectual property rights assignment clause.
- ☐ Delivery of the source code to the company is addressed in the agreements.
- ☐ The agreements contain provisions preventing the freelancer from asserting rights in the software.

3. Employees

- ☐ Employment agreements contain provisions concerning the transfer of intellectual property rights.
- ☐ Software developed by employees falls within the scope of their duties.
- ☐ Confidentiality obligations are regulated.
- ☐ Access rights of departing employees are terminated.

4. Use of Open-Source Software

- ☐ Open-source software used by the company has been listed.
- ☐ Licence types have been recorded.
- ☐ Licence terms are complied with.

B. For Investors

1. Chain of Title

- ☐ All agreements relating to the development of the software are available.
- ☐ Written agreements have been executed with all developers.
- ☐ Rights assignment agreements are complete.
- ☐ The chain of assignment is uninterrupted.

2. Review of Intellectual Property Rights

- ☐ Founders have transferred their rights in the software to the company.
- ☐ Software developed by freelancers or agencies has been transferred to the company.
- ☐ No third party has asserted rights in the software.

3. Risk Indicators for Investors and Buyers

- ☐ No written agreement with a freelancer.
- ☐ Rights have not been assigned.
- ☐ Part of the software belongs to a third party.
- ☐ There is non-compliance with an open-source licence.
- ☐ A third-party developer retains the source code.
- ☐ A founder has not transferred the software to the company.
- ☐ Documentation relating to software development is incomplete.

Contact



Deniz Eray Harvey

deniz@harveyarasan.com

[linkedin.com/in/denizerayharvey/](https://www.linkedin.com/in/denizerayharvey/)



Eren Arasan

eren@harveyarasan.com

[linkedin.com/in/eren-arasan/](https://www.linkedin.com/in/eren-arasan/)

Harvey Arasan

İstanbul: Şakayık Sok. No.32 D.10 K.7 Teşvikiye, Şişli, 34365

Paris: 11 Boulevard de Sébastopol 75001 Paris

Tel: +90 212 931 77 48

www.harveyarasan.com

info@harveyarasan.com

www.linkedin.com/company/harveyarasan/

HARVEY ARASAN

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