

**DELMAR INTERNATIONAL**

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Professional Research

*THE EFFECT OF COMMERCIAL LAW RULES ON*

*THE LEGAL PROTECTION OF COMPUTER*

*SOFTWARE*

*A COMPARATIVE STUDY*

The Researcher

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**The Prophet (peace be upon him) said:**

*"How can Allah sanctify a people  
who do not take the rights of the weak  
from the strong?"*

Sunan Ibn Majah — Vol. 3, p. 1329

A Hasan (Good) Hadith

## **Dedication**

I dedicate this humble work:

To those whose worship and obedience Allah the Almighty has linked to kindness toward them and filial piety — to those who raised me in my youth upon the love of knowledge, virtue, and the highest values.

To my wife and children, and their patience alongside my own.

To every oppressed soul who seeks truth and justice, and strives earnestly to reclaim his rights.

To my honored professors, my family, and my friends.

I dedicate this research to all of them.

The Researcher

Marouf Fayd Ismail Abu-Elala

## ***Acknowledgments and Appreciation***

*In compliance with the Word of Allah the Almighty: "If you are grateful, I will surely increase you [in favor]" (Ibrahim: 7), I thank Allah the Almighty for granting me success and guiding me to this — "and we would not have been guided if Allah had not guided us" (Al-A'raf: 43).*

*Following the saying of the Messenger of Allah (peace be upon him): "He who does not thank people does not thank Allah," I extend my most sincere thanks, appreciation, and gratitude to all my professors and to those who have done me the favor of helping me complete my task in this thesis. I also extend my most sincere thanks and appreciation to Prof. Dr. Hajer Ref'at Issa, the supervisor of this research, who cared for me and encouraged me in its preparation and worked to smooth all the scholarly difficulties I encountered.*

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*to all the gentlemen, professors, brothers, colleagues, and library staff at  
the Faculties of Law, Sharia, and Legal Studies.*

## Abstract

*The subject of this research is the effect of the rules of commercial law on the legal protection of computer software — a comparative study between the position of the Egyptian legislator, the Jordanian legislator, and the position of jurisprudence and the judiciary regarding the protection of computer programs under patent law and the provisions of copyright law.*

*Through this research, it was found that there are several approaches to protecting these programs. The first approach is to provide protection under copyright law, which has two aspects: the first aspect is subjecting computer programs to copyright laws, and the second aspect is the judicial and legislative opinion. There is also an approach that contented itself with traditional provisions for this protection, with some competent government agencies having adopted the implementation of copyright laws in this approach. However, the vast majority of countries have moved toward amending existing copyright legislation to include computer software.*

*As for the position of the Jordanian legislator, it was for a long period without a copyright protection law, until the voices calling for the enactment of a law to protect copyright grew louder, until Law No. (22)*

*of 1992 was issued. This law provided protection for literary works, and from the outset it included computer programs within the protection prescribed for literary works, as expressly stated in Article Three thereof and in Item Eight, Paragraph (b).*

*As for the Egyptian legislator, it established legal protection for computer programs through an integrated system that includes a concept of that protection, its nature, and the rights of the program creator — whether moral or financial — the special nature of these programs and the principles governing them. The Egyptian legislator did not distinguish between the protection of computer programs and other works, and it would be preferable for the Egyptian legislator to establish effective legal protection for computer programs and separate it from the rest of the protected works.*

*The legislative position on the protection of computer programs under patent law and the position of jurisprudence and the judiciary on the protection of these programs under the provisions of copyright law was also studied.*

*This research consisted of a preliminary chapter in which the nature of the computer, programs, and the reasons for their protection were examined. In Chapter One, the rights of the author of a computer*

*program were examined in terms of the definition of copyright and its legal nature, and the rules prescribed for the protection of computer programs, who is the competent party to initiate a rights claim, the preliminary investigation stage, and the competent court. In Chapter Two, the types of legal protection for the financial rights of the program's author were addressed, including temporary emergency protection and the conditions for issuing emergency orders, the forms of emergency orders for temporary protection, the civil protection for the programmer's financial rights, the conditions for accepting a civil liability lawsuit, the penal protection for the programmer's financial rights, and finally the elements of crimes committed against the copyright of computer program authors. In Chapter Three, the protection of computer programs under national laws was examined.*

- 1. Procedural protection for computer programs.*
- 2. Forms of this protection.*
- 3. Preventive protection procedures.*
- 4. Substantive protection means for computer programs, both civil and penal.*

*The protection of computer programs under international law was then studied, including the protection of these programs through international*

*organizations — specifically the World Intellectual Property Organization (WIPO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO).*

*The international conventions on copyright protection were then studied, including the Berne Convention for the Protection of Literary and Artistic Works, the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), the Universal Copyright Convention, and finally the Arab Agreement for the Protection of Copyright.*

## Introduction

*Praise be to Allah alone, and peace and blessings be upon the guiding Prophet, the Chosen One. O Allah, bestow peace, blessings, and grace upon our master Muhammad and his family, at every moment and breath, at every blink of an eye, as many times as encompassed by the knowledge of Allah the All-Knowing.*

*The world has developed tangibly in all areas of life, especially in recent times, and this development has primarily included means of transportation and communications. The emergence of the Industrial Revolution was accompanied by developments in all other aspects of life in society, which reflected the requirements of that revolution on information by increasing its abundance and the huge number of books containing it, to a degree where it became difficult to preserve and store it, as that would require many libraries, spacious places, and great effort for its classification and tabulation. With the emergence of the computer, which began with computational operations and then evolved to include the storage, absorption, collection, organization, and the possibility of retrieving information at extraordinary speed and precision, information became within reach with minimum effort and in the shortest time.*

*It is no secret to anyone the importance enjoyed by computer programs in all aspects of scientific life, and their performance of many tasks and duties at extraordinary speed and precision. Therefore, it is a duty to keep pace with the accelerating progress of these programs and to provide the necessary legal protection for them, because the many advantages of the computer have made resorting to it and using it a necessary need in all fields and communications systems, particularly with the emergence of the Internet, which has made the world like a small village, where anyone can travel throughout the entire world through this network while sitting at home without effort or fatigue.*

*The Internet enables the user to access computer documents and make modifications to them. From this, it is clear that the information criminal is not an ordinary person, but rather someone with high skills and extraordinary ability to use his expertise to penetrate the secret code to change information, imitate programs, or transfer funds through the unauthorized use of the computer.*

*Most countries have sought to provide the necessary protection for these programs through the enactment of domestic laws on one hand, and the holding of international conferences and agreements on the other hand, to provide this protection. However, this protection did not address computer programs specifically, but rather addressed them within the*

*framework of copyright protection. The problem is more acute for developing countries, as they are consumer and not producer countries for these programs or other technology products, and what these countries do in the matter of enacting the necessary legislation amounts to nothing more than copying the legislation of other countries, and their legal provisions suffer from many deficiencies in the field of protecting computer programs. Therefore, if we examined the laws in force in these countries, we would not find provisions that address this technology and specifically computer programs with special protection or treatment, even though they have addressed the issue of intellectual property in some of its aspects in certain laws, such as the protection of copyright and the protection of drawings and industrial designs, yet they have not delved into this subject, either due to a shortcoming in classifying it within any field of intellectual property or because these countries do not produce such technology or programs.*

*Upon reviewing prior studies, it is found that they were related to the subject of intellectual property in general; even if they addressed the subject of literary and artistic property, this treatment was in general terms and did not address the subject of the protection of computer programs from all its aspects.*

*In this research, I will address the study of everything related to computer programs in detail, while clarifying the position of the protection of computer programs within literary and artistic property, and therefore its position within intellectual property in general. What is useful to us in this research is following what is new in legislation, court decisions, and jurisprudence. I hope that the analytical study of this subject will in turn reflect on the relevant legislation and on the most important legal issues created by the use of the computer: determining the nature of computer programs and their legal nature, and whether they are works protectable under copyright law, or whether they are inventions that can be protected within the framework of industrial property, such as patent laws.*

*And determining the appropriate legal means to provide protection for these programs, given the increasing forms of infringement to which they are exposed.*

## Significance of the Study

*The emergence of computers has been accompanied by many crimes arising from them, which pirates and criminals have exploited to achieve their personal goals. In this study, these crimes will be identified, a brief overview of them and means of prevention will be provided, by clarifying the role of laws in addressing and overcoming them. The significance of this study lies in its novelty and the scarcity of references and sources addressing it, and this gives the research importance because of the urgent need for it — it is necessary for every person who deals with computer programs, to achieve security and confidentiality for private information and to provide them with means to prevent cybercrime.*

*The significance of the study is also attributable to the enormity of the investments and budgets used in producing these programs. These investments constitute a strong driver for the national economy, and the protection of such programs leads to achieving economic development goals and encouraging those working in this field to increase their investments.*

*It is no secret to anyone the importance enjoyed by computer programs in all aspects of scientific life, and their performance of many tasks and duties at extraordinary speed and precision. Therefore, it is a duty to keep*

*pace with the accelerating progress of these programs and to provide the necessary legal protection for them, because the many advantages of the computer have made resorting to it and using it a necessary need in all fields and communications systems, particularly with the emergence of the Internet, which has made the world like a small village, where anyone can travel throughout the entire world through this network while sitting at home without effort or fatigue.*

### **Research Difficulties and Problems**

Provisions specifically addressing this technology — and in particular computer programs — with special protection or treatment are not found, even though some laws have addressed the issue of intellectual property in certain aspects, such as the protection of copyright and the protection of drawings and industrial designs; yet they have not delved into this subject, either due to a shortcoming in classifying it within any field of intellectual property or because these countries do not produce such technology or programs.

Upon reviewing prior studies, it is found that they were related to the subject of intellectual property in general; even if they addressed the subject of literary and artistic property, this treatment was in general terms and did not address the subject of the protection of computer

programs from all its aspects. The matter was not without some difficulties that I faced in preparing this research, particularly with regard to obtaining references and sources.

### **Study Objectives**

\* To encourage innovation in the field of computer programs, which leads to encouraging the program author to continue his innovation and work if he receives a fair material remuneration for the work he has done. Failure to do so will be a reason for abandoning this creative activity and for companies and institutions not funding these programs.

\* This study aims to eliminate software piracy, as it constitutes unjust enrichment of a certain class at the expense of the original authors. Despite the high technical skills possessed by pirates, instead of using these skills to produce new programs, they use them to steal the creations and ideas of others by cracking codes, copying programs, and selling them at cheap prices.

\* The objective of providing legal protection for computer programs is that these programs can be marketed without exaggerating their price, as price exaggeration causes infringement upon these programs.

\* The study aims to provide legal protection for creators, which motivates them to continue their creativity without fear of poverty and need,

because intellectual creativity in any form is considered a civilizational image in any society and must be protected. If a pirate possesses their creations and monopolizes the financial returns, this will lead the creator to stop his creative activity and search for another source of livelihood, as long as he is deprived of enjoying his financial and moral rights — which are the least that must be offered to this creator.

\* The study aims to encourage the creators of these programs to publish them, so that everyone can benefit from them, rather than keeping them within a limited circle.

\* To develop local programs, by allocating a portion of the price of each program for development operations. As is evident to everyone, the specialty of computer programming is considered one of the important specialties produced by universities, and the reason for this is the intense competition for it and the increasing need of the labor market for it, and because the computer system has entered all aspects of life, leading to a demand for more programmers and programs.

\* To compensate those in charge of programs — whether authors or holders of the right of exploitation — for the damages inflicted upon them by others.

\* Technical means for protecting programs are insufficient on their own to protect them from unlawful transfer and plagiarism, no matter how advanced and modern these technical means may be, they will not be able to withstand the modernity of piracy methods. Technical protection will not substitute for legal protection, but is necessary for its existence.

\* The enormity of investments and budgets used in producing these programs. These investments constitute a strong driver for the national economy, and the protection of such programs leads to achieving economic development goals and encouraging those working in this field to increase their investments.

### **Research Questions**

From the study of this research and from reviewing what various laws have covered in provisions addressing the legal protection of computer programs:

\* It was observed that most Arab and international legislation has not addressed this subject with special provisions, but rather came within the provisions pertaining to copyright, despite the great difference between computer programs and literary works and others that fall under the heading of copyright, for these programs have now become the foundation upon which advanced countries build, and are the means

through which developing countries and Third World countries can catch up with the caravan of world civilization and keep pace with the enormous technological developments witnessed by the world day after day at an unprecedented pace.

\* Are computer programs and their legal nature considered works protectable under copyright law, or are they inventions that can be protected through patent laws?

\* To determine the appropriate legal means to protect these programs, given the increasing and evolving forms of infringement upon them — in quantity and quality — to the degree that the most complex and advanced programs are no longer protected from unauthorized and illegal reproduction at low costs, which necessitates the need to provide protection for these programs and their producers.

\* As a result, many theories emerged calling for the search for appropriate means of providing legal protection for those programs, with the aim of establishing legal provisions that present appropriate solutions. The study addressed some technological terms related to the computer and its programs for guidance, and addressed many orientations that seek appropriate means of protection — whether through the application of the rules of civil liability in its two branches: tort liability or contractual liability, or through the application of the rules of special laws.

As a result, there was an urgent need to conduct legal studies aimed at establishing the specific controls and standards for protecting these programs and resolving the problems related to the copyright of these programs.

### **Research Methodology**

In this study, the descriptive-analytical method was adopted, as the researcher will work to analyze the relevant legal provisions in the subject, and to examine judicial interpretations by analyzing them and explaining the legal principle upon which they are based. The comparative method was also adopted in this study, as it shows the position of the legislator in each of Egypt, Jordan, France, and the United States of America, and the position of jurisprudence and the judiciary regarding the protection of these programs in each of these countries.

## Study Plan

The study plan will be organized as follows.

**Preliminary Chapter: The Nature of the Computer, Programs, and the Reasons for Their Protection.**

**Section One: The Nature of the Computer.**

**Sub-Section One: Defining the Concept of the Computer.**

**Sub-Section Two: Components of the Computer.**

**Sub-Section Three: Advantages and Benefits of the Computer in Our Lives.**

**Section Two: The Nature of Computer Programs and the Reasons for Their Protection.**

**Sub-Section One: Definition of Computer Programs.**

**Sub-Section Two: Forms of Infringement to Which a Computer Program Is Exposed.**

**Branch One: Literal Copying of Programs.**

**Branch Two: Non-Literal Copying of Programs.**

**Sub-Section Three: The Importance of Protecting Computer Programs.**

Branch One: The Importance of Legal Protection for Computer Programs.

Branch Two: The Importance of Economic Protection for Computer Programs.

Branch Three: Works Covered by Protection.

**Sub-Section Four:** The Legislative Position on the Protection of Computer Programs under Patent Law in Egypt and France.

Branch One: The Legislative Position on the Protection of Computer Programs under Patent Law in France and Egypt.

Branch Two: The Position of Jurisprudence and the Judiciary on the Protection of Computer Programs under the Provisions of Copyright Law.

## **Chapter One: Rights of the Author of a Computer Program.**

**Section One:** Definition of Copyright and Its Legal Nature.

**Sub-Section One:** The Moral Right of the Author.

**Sub-Section Two:** The Financial Right of the Author.

**Section Two:** Rules Prescribed for the Protection of Computer Programs.

**Sub-Section One:** Direct Protection of Computer Programs (Under Special Rules).

Branch One: Partial Protection of Intellectual Property of Programs.

Branch Two: Full Protection of Intellectual Property of Programs.

**Sub-Section Two:** Indirect Protection of Computer Programs (Under General Rules).

**Sub-Section Three:** Competent Authorities for Following Up Crimes Committed Against Programs.

## **Chapter Two: Types of Legal Protection for the Financial Rights of the Program Author.**

**Section One:** Temporary Emergency Protection.

**Sub-Section One:** Conditions for Issuing Emergency Orders.

**Sub-Section Two:** Forms of Emergency Orders for Temporary Protection.

**Section Two:** Civil Liability Lawsuit for the Programmer's Financial Rights and Conditions for Its Acceptance.

**Sub-Section One:** Penal Protection of the Programmer's Financial Rights.

**Sub-Section Two:** Elements of Crimes Committed Against the Copyright of Computer Program Authors.

## **Chapter Three: Protection of Computer Programs under International Laws and Agreements.**

### **Section One: Procedural Protection for Computer Programs.**

#### **Sub-Section One: Forms of Procedural Protection Prescribed for Computer Programs.**

Branch One: Order to Cease Infringement.

Branch Two: Seizure of Counterfeit Works.

#### **Sub-Section Two: Destruction of Counterfeit Works.**

#### **Sub-Section Three: Substantive Protection Means for Computer Programs.**

### **Section Two: Methods of Compensation.**

#### **Sub-Section One: Compensation in Kind (Specific Performance).**

#### **Sub-Section Two: Monetary Compensation.**

### **Section Three: Penal Protection for Computer Programs.**

#### **Sub-Section One: Crimes under Copyright Law Rules.**

#### **Sub-Section Two: Penalty for the Crime of Counterfeiting and Dealing in Counterfeit Copies.**

### **Section Four: Protection of Computer Programs under International Law.**

**Sub-Section One:** Protection of Computer Programs through International Organizations.

Branch One & Two: United Nations Educational, Scientific and Cultural Organization (UNESCO); World Intellectual Property Organization (WIPO).

**Sub-Section Two:** International Conventions on Copyright Protection.

Branch One: The Berne Convention for the Protection of Literary and Artistic Works.

Branch Two: The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

Branch Three: The Universal Copyright Convention.

Branch Four: The Arab Agreement for the Protection of Copyright.

## **Conclusion**

### **List of Sources and References**

## **Conclusion**

From the study of this research and from reviewing what various laws have covered in provisions addressing the legal protection of computer programs, it is observed that most Arab and international legislation has not addressed this subject with special provisions, but rather came within the provisions pertaining to copyright, despite the great difference between computer programs and literary works and others that fall under the heading of copyright, for these programs have now become the foundation upon which advanced countries build, and are the means through which developing countries and Third World countries can catch up with the caravan of world civilization and keep pace with the enormous technological developments witnessed by the world day after day at an unprecedented pace.

**Among the most important legal issues raised by the use of the computer are:**

As mentioned above: determining the nature of computer programs and their legal nature, and whether they are works protectable under

copyright law, or whether they are inventions that can be protected within the framework of industrial property, such as patent laws.

And determining the appropriate legal means to protect these programs given the increasing and evolving forms of infringement upon them — in quantity and quality — to the degree that the most complex and advanced programs are no longer protected from unauthorized and illegal reproduction at low costs, which has led to calls for the necessity of providing protection for these programs and their producers.

As a result, many theories emerged calling for the search for appropriate means of providing legal protection for those programs, with the aim of establishing legal provisions that present appropriate solutions. The study addressed some technological terms related to the computer and its programs for guidance, and addressed many orientations that seek appropriate means of protection — whether through the application of the rules of civil liability in its two branches: tort liability or contractual liability, or through the application of the rules of special laws for the protection of intellectual property rights.

The Egyptian legislator did not establish legal protection for computer programs through an integrated system that includes a concept of that protection, its nature, and the rights of the program creator — whether

moral or financial — and the special nature of these programs and the principles governing them.

The Egyptian legislator also did not distinguish between the protection of computer programs and other works, indicating the existence of a legislative gap regarding the regulation of that protection. To fill this gap, the legislator must establish effective legal protection for computer programs and separate it from the rest of the protected works.

As a result, there was an urgent need to conduct legal studies aimed at establishing the specific controls and standards for protecting these programs and resolving the problems related to the copyright of these programs.

I have divided this study into several chapters. The preliminary chapter was entitled: The Nature of the Computer, Programs, and the Reasons for Their Protection. This chapter consisted of two sections: the first, on the nature of the computer through a study of the concept of the computer, its components, and its advantages in our daily lives; and the second, on the nature of computer programs and the reasons for their protection through the definition of computer programs, the forms of infringement to which computer programs are exposed — namely literal and non-

literal copying of programs — and the importance of legal and economic protection for computer programs.

The works covered by protection and the legislative position in both Egypt and France on the protection of computer programs under patent law were then studied, followed by the position of jurisprudence and the judiciary on the protection of computer programs under the provisions of copyright law.

In Chapter One, the rights of the author of computer programs were studied, where the first section examined the definition of copyright and its legal nature, the types of moral and financial copyright, and the second section examined the rules prescribed for the protection of computer programs, addressing direct protection of computer programs under specific rules — including partial protection of the intellectual property of programs, then full protection of the intellectual property of programs — and indirect protection of computer programs (under general rules), and the study of the competent parties in initiating the lawsuit, the preliminary investigation stage, and the competent court.

In Chapter Two, the types of legal protection for the financial rights of the program author were addressed, including temporary emergency protection and the conditions for issuing emergency orders, the forms of

emergency orders for temporary protection, the civil protection for the programmer's financial rights, the conditions for accepting a civil liability lawsuit, the penal protection for the programmer's financial rights, and finally the elements of crimes committed against the copyright of computer program authors.

In Chapter Three concerning the protection of computer programs under national laws, the first section addressed the procedural protection of computer programs, the substantive protection means for computer programs, and the penal protection for computer programs. The second section addressed methods of compensation, covering compensation in kind (specific performance) and monetary compensation. The third section examined the penal protection for computer programs, and the fourth section examined the protection of computer programs under international law, where WIPO was discussed, and then UNESCO.

The international conventions on copyright protection were also studied, including the Berne Convention for the Protection of Literary and Artistic Works, the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), the Universal Copyright Convention, and the Arab Agreement for the Protection of Copyright.

## Results and Recommendations

### First: Research Findings

\* Computer programs consist of a set of rules and mathematical equations that are formulated through specialized engineering programming languages and arranged in a manner that can be translated through computer devices and displayed in an applied form to perform various functions.

\* Computer programs are divided, with regard to the nature of the function they perform, into system programs — which are the programs necessary for operating the computer and include the programs that manage the internal functions of the computer and organize the sequence of operations within it — and application programs, which are the set of programs that enable the computer user to execute specific work related to his particular needs and desires, such as drawing, writing, management, imaging programs, and others. This difference between types of programs — whether in terms of their content or the method of their preparation — has no effect on the legal protection of the programs.

\* Computer programs are also considered movable property in the eyes of the law, as long as they can be transferred from one place to another without damage. However, the provisions for the ownership of movable

property contained in civil law do not apply and are not compatible with the nature of immaterial things and computer programs; among these is the non-applicability of the rule "possession of movable property constitutes title to ownership" as a presumption of ownership of computer programs, as not everyone in whose possession a copy of the program is found is considered its owner.

\* Likewise, seizure as a reason for acquiring ownership does not apply to computer programs. This difference in provisions is attributable to the difference between the provisions for material things and immaterial things; therefore, the legislator has allocated specific provisions for material things within special laws and excluded the application of the general rules provisions contained in civil law thereto.

\* At the level of Jordanian legislation, the first copyright protection law was issued in 1992 — the Copyright Protection Law No. (22) of (1992) — which explicitly stated that computer programs are among the works protected under this law and its provisions apply to them. Consequently, the computer program author enjoys both moral and financial rights over the program.

The moral rights, pursuant to the text of Article (8) of this law, consist of: the right to attribute the work to its owner (the author) and to have his name mentioned on all produced copies whenever the work is

presented to the public; the right to decide on the publication of his work and to specify the method and timing of publication; the right to make any modification to his work — whether by change, revision, deletion, or addition; the right to repel any infringement upon his work and to prevent any distortion, falsification, or any other modification thereof or any interference with it that could damage his reputation and honor. Note that if any deletion, change, addition, or other modification occurs in the translation of a work, the author does not have the right to prevent it unless the translator failed to indicate the locations of this modification, or if the translation results in damage to the author's reputation, cultural or artistic standing, or interference with the content of the work; and the right to withdraw his work from circulation if there are serious and legitimate reasons for doing so, in which case the author is required to pay fair compensation to whoever the financial exploitation rights have been transferred to. These rights are considered established for the author alone and are characterized by personal character — in other words, rights inherent to the person — and are also characterized by permanence and perpetuity; they do not transfer due to his death to the heirs and do not lapse due to non-use or limitation.

Moral rights are also characterized by their non-transferability, as the moral right is not valued in money and is not measured by the standard by which wealth is measured — money — and therefore does not fall within the elements of a person's financial estate and is not subject to attachment. However, attachment may be made on the physical copies of the program if it has been published, as they are considered financial things subject to attachment, execution upon them, and sale at public auction.

The second type of rights established for the author are the financial rights, which pursuant to the text of Article (9) of the Copyright Protection Law consist of: the author's right to exploit his work by any method he chooses, and others may not perform any act upon the work without written permission from the author or his successor; the right to reproduce the work by any means or form, whether temporarily or permanently, including photographic, cinematic, or digital electronic recording; translating the work into another language or adapting it or distributing it musically or making any modification to it; commercial rental of the original copy of the work or a copy thereof to the public; distribution of the work or its copies through sale or any other act of transfer of ownership; importing copies of the work in commercial quantities even if these copies were

prepared with the consent of the rights holder; and transmitting the work to the public through recitation, delivery, presentation, performance, or radio, television, cinematographic, or any other broadcast. Financial rights are characterized by their transferability as they represent financial values, on the condition that it is not legally permissible for the author to dispose of the totality of his future output, as such a disposition is null and void. The financial rights established for the author transfer upon death to the heirs. If the work is an individual work by the author and he has no heir, then the right of financial exploitation passes to the state to which this author belongs. Another characteristic of financial rights is that they are temporary, as the legislator has specified a certain period for the duration of the legal protection for the author's right to exploit his work, which is fifty years from the date of the author's death. Upon the expiry of this period, this right lapses and becomes public common property for anyone who wishes to exploit and use it without the need to obtain permission from anyone.

\* If the program was prepared by an employee and his job requires the preparation of programs, or if in preparing the program he used the employer's tools, expertise, and information placed at his disposal, then copyright belongs to this employee.

However, the Jordanian legislator in the text of Article (4) mentioned above attempted to determine the identity of the rights holder in a work prepared through an employment or contracting agreement, without clearly indicating the nature of the rights enjoyed by the employee or the employer — whether they include what the author enjoys in terms of moral rights over the program in addition to the financial rights, or whether they are limited to the financial rights because the moral rights are inherent to the person of the author and do not transfer to others.

\* In the case where more than one person collaborated in the authorship of a work, it is first looked at to determine the identity of the rights holder — whether there is a special agreement regarding copyright rights, in which case this agreement is applied. If there is no agreement, it is then examined whether this collaboration is in a form that allows the separation of the share of each of those who participated in the preparation of the program. In this case, each of them has the right to exploit the copyright in the part they contributed to authoring, provided this does not cause any harm to the exploitation of the work itself or prejudice the rights of the other partners in the work. If it is not possible to separate each person's share in the authorship, they are all considered to be equal owners of the work, and in this case none of them may exercise the author's rights in the work except by agreement among all of

them, but each has the right to file a lawsuit when any infringement occurs against the copyright.

\* The impossibility of applying the specific exception for quotation: the Copyright Protection Law permitted quotation from works, provided the reference to the author of the work quoted from is mentioned. However, this is not applicable to computer programs; rather, it is considered a crime under the Information Systems Crimes Law, because quoting from computer programs requires access to the structure of the programs.

\* Making an additional copy of the program out of necessity: the legitimate user is permitted to make one additional copy and keep it for use in the event of damage or impairment of the original copy in his possession, and to analyze the program to comprehend its mechanism of operation. Thereby, the legitimate user has the right to know how the program works to monitor its performance, which helps in utilizing its capabilities to the maximum possible extent.

\* The right to decompile the program (cracking the program's code): pursuant to this exception, the legitimate user has the right to crack the program's code and access its structure or initial composition (source program), for the purpose of developing it or linking it with other programs, or to make it compatible with the nature of a particular device or other programs, and to rewrite it in a higher-level language that allows

access to new, more effective horizons. It is required that these acts be necessary for the purpose of ensuring optimal use (according to the purpose for which the program was prepared) and compatibility with other programs.

\* The right to translate the program, the right to modify and develop the program: pursuant to this, the legitimate user is permitted to make modifications to the program and fix the errors contained in it, to the extent necessary to ensure optimal use. However, these acts under Jordanian copyright law are considered crimes punishable also under the Information Systems Crimes Law.

**Regarding contracts pertaining to computer programs, or the most common of them, there are two types of programs:**

*The first are programs that meet the needs of a large number of computer users, to the extent that copies of the program are now made and offered to the public through contracts called user license agreements, in which the user's right is limited to the right to download the program onto his device for the purpose of benefiting from the applications of this program.*

*A standard contract form is usually placed with each original copy of the program, containing a restriction of the user's right to use the program without granting him the right to copy, modify, develop, or present the program to others or rent it.*

The second type of programs are those prepared based on the employer's request, according to specifications he specifies for the program preparer, which consequently perform the functions he needs. These contracts thereby approach the concept of a contracting agreement.

Article (49) of the Copyright Protection Law also stipulates that an author whose rights as prescribed under this law have been infringed has the right to obtain fair compensation, taking into account in its estimation the author's cultural status and the literary, scientific, or artistic value of the work, the value of the original work in the market, and the extent to which the infringer benefited from the exploitation of the work. The compensation awarded to the author in this case is considered a privileged debt on the net sale price of the things used in the infringement upon his right and on the amounts seized in the lawsuit, and the judgment awarding compensation is therefore not subject to the provisions of civil law, because the Copyright Protection Law is the special law and civil law is a general law, and the application of the provisions of the special law is mandatory. In addition to the compensation ruling, the court may rule on the destruction of copies of the work or the image taken from it that was published unlawfully, and the materials used in its publication, as well as the power to rule on the publication of the judicial ruling in a

daily or weekly newspaper once or more at the expense of the convicted party.

### ***Second. Research Recommendations***

*Through this study, I have reached some recommendations, which I summarize as follows:*

*1. First — The Egyptian Legislator: To enact a special provision in the Egyptian Intellectual Property Protection Law through which computer programs are granted a certain specificity that prevents those who contributed to preparing the program from working to exploit it independently of the others. The aim of this is to protect the holders of the exploitation right and to protect these programs from infringement by others and to prevent their copying by unlawful means and without the permission of their owner.*

*2. Second: Protection of Computer Programs — By working to establish a national policy for their protection based on effective mechanisms to regulate the computer and communications market, and working to establish a competent central authority affiliated with the government for the purpose of monitoring and supervising this sector.*

*3. Third: Granting full evidentiary weight to computer-derived evidence in proof proceedings.*

4. **Fourth.** Working to establish a specific period of protection for computer programs, similar to the period specified for the protection of special works such as recordings and photographs, with this period beginning from the date of the program's creation or when it is put into circulation.

5. **Fifth.** Establishing special international protection for computer programs by creating competent bodies in the field of computers, such that they have branches in each country, for the purpose of applying the intellectual property protection rules for these works and ensuring they are not violated.

6. **Sixth.** Working to establish a specialized body composed of persons with expertise in the field of computers, including members from the competent judicial authorities, which would undertake the financial exploitation of programs whose authors have died, to prevent their arbitrariness and to protect the public interest and make programs available to the public. In exchange, this body would work to grant the heirs fair compensation for exploiting the programs.

7. **Seventh.** Reducing the price of original copies of programs, especially in developing countries, in a way that gives people in these countries the opportunity to purchase original copies of high quality at reasonable prices relative to the living standards in their countries. This

*fundamentally leads to a reduction in the rate of software piracy in these countries.*

*8. Eighth. Given the difference in the nature of computer programs from the rest of the traditional works protected under copyright law, we hope the legislator will establish a special law governing the rights of computer program preparers without treating these programs as literary and artistic works protected under copyright law, or at least to amend the provisions of the copyright protection law by including special provisions for computer programs containing the recommendations set out below, the most important of which are:*

*\* Amending the text of Article (4) of the Copyright Protection Law such that the transfer of rights over the work is limited to financial rights only, without moral rights — which must remain inherent to the person of the author — and also taking into account what is contained in Article (28) of the same law, which granted the author the right to request participation in the proceeds and income resulting from his work in the event that it becomes apparent that his disposition of his financial rights was not fair or became so due to circumstances and reasons that were hidden at the time of contracting or arose thereafter.*

*9. Ninth. Unifying the terminology and legal meaning in the provisions of the Copyright Protection Law, including what was contained in the text*

*of Article (6) of the Copyright Protection Law, where the legislator used several different terms — sometimes using the expression "copyright" and other times using the expression "intellectual property rights." It would be preferable if the legislator used clear expressions indicating what is meant by "copyright" and "intellectual property rights."*

*10. **Tenth.** Restricting moral rights to natural persons and not to legal persons, because creativity is limited to the human being alone. Thereby we guarantee the moral rights of the actual author of the programs, which do not arise from the legal person. This is the position adopted by both the Egyptian legislator and the Lebanese legislator in the Intellectual Property Law.*

*11. **Eleventh.** Finding solutions for the case of authors' rights in collaborative programs in the event that one of those who contributed to the authorship — regardless of his proportionate contribution — refuses the method of exploitation of the program contrary to the wishes of the other authors wishing to exploit the program, and whether that partner's refusal is legitimate or arbitrary. In this case, the other authors will be unable to exercise any copyright whatsoever, which means damaging the interests of the other authors. It would be preferable if the legislator enacted rules related to the management of the exploitation of collaborative works, such as those stipulated in civil law regarding the*

*disagreement of owners over the management and exploitation of common property or disposing of it, adopting the standard of a simple majority in making decisions about the ordinary management of common property and a two-thirds majority for extraordinary management. It would be preferable if the Jordanian legislator followed the same approach in the field of copyright for collaborative works, or left the matter of choosing the method of exploitation of the collaborative work to the court in the event of disagreement among the partners. Thereby we ensure the benefit and purpose of protecting works in a manner that does not harm the rights of all authors and guarantees the prevention of the arbitrariness of any of them, and at the same time activates the role of the work and its benefits for society.*

*12. Twelfth.* We also hope the legislator will exclude computer programs from the exception specific to the right of quotation, due to the incompatibility of quotation in the field of computer programs, which may be confused with the partial copying of the program.

*13. Thirteenth.* We also hope the legislator will stipulate consideration of lawsuits related to computer programs as urgent cases to ensure speedy resolution of disputes arising therefrom.

14. **Fourteenth.** Supporting administrative, judicial, and security bodies for copyright through what is called the collective management of

copyright, and not limiting the role of copyright protection to national library employees who may lack judicial and legal expertise.

15. **Fifteenth.** In the field of copyright and the formal and substantive conditions for lawsuits involving infringement upon computer programs, awareness must be raised within the community about the need to protect the rights of computer program authors and to promote legal culture in this field.

16. **Sixteenth.** It would be preferable for intellectual property to be taught in universities as a university requirement for all university disciplines and to be considered a compulsory requirement in law faculties.