.1 Background: The invention of smart cards was invented by german missile helmutgrotop and world colleague georginedethloff in 1968. the patent was adopted in 1982 and the first collective use cards in france paid in 1983 Roland Moreno patented his invention of the memory card in 1974 and in 1977, Honeywell paul created the first smart card with a microprocessor. in 1978, paul patented the programmable single chip SPOM with the necessary structure for automatic chip programming. three years later, Motorola made the first microprocessor card in accordance with the invention. paul then revered nearly 1,200 patents associated with smart cards.(1)

The contactless smart cards, which operate with chose-range wireless communication technology, are becoming increasingly common in pay and return layers, such as mass transit. visa and master have approved an easy-to-implement version currently in operation in the united states. around the world, contact card systems are being installed to collect tax to emerged in this area local standards and are not compatible with each other.(1)

Smart cards are now being widely used in the national, national and international identity systems, in citizens identification cards, driver`s licenses, patient cards, ect.

The contactless smart cards are also being installed in biometric electronic passports to improve safety in the international travel and tourism industry. (1)

The most famous types of smart cards:

1. Cards with a memory chip. 2. Direct memory cards. 3. SD memory cards. 4. Memory cards with stored value. 5. Memory cards: this type of dwarf used in this project can memory cards storage of about 10 MB of data, but once recorded this data cannot be changed or removed, and this type of data is ideal for keeping records such as medical files and driving records and history travel, and these cards do not have their own processors, and if the cards are similar in the price of chip cards, the reading devices that can handle these cards are not common and very expensive. (1)

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Smart card operating systems :

1. Fixed file structure . 2. Variable application system . 3. Encryption in smart cards . 4. Smart card readers . (1)

The most important areas of application of smart cards :

1. Communication applications . 2. Identification applications . 3. Financial applications . (1)

Medical record : A collection of medical documents created to document a person`s medical condition, recorded by qualified people . the information record includes the details of the patient`s identification and identification, the medical information about the medical treatment received the patient, the patient`s medical history as indicated in the record, diagnosis of the current situation and treatment instructions. (2)

Medical records are used for many purposes: a basis for planning and follow-up of medical care, communication between physicians and other professionals involved in patient care, written and written evidence and evidence of the patient`s condition and illness, physician and medical staff, source of information for research, education, supervision, statistics, and long-term planning.(2)

Electronic medical records remain the most important and best feature of developments in the world of medical records, which enable all doctors in any hospital, wherever they are and at any given moment, to easily access all information about the health of all patients. one of the biggest challenges of this medical development is the follow-up of enormous amounts of patient-related medical information and protection from any violations.(3)