

**S.Seifullin Kazakh AgroTechnical University**

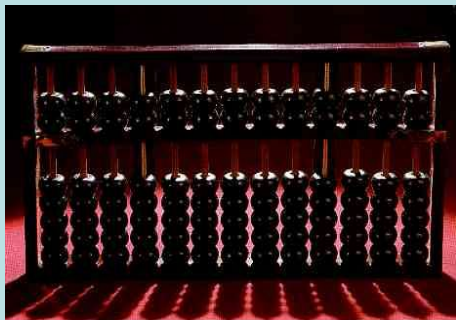
**Department of of the ICT**

**Discipline: Information and communication technologies**

## **Lecture 4**

**The theme: Review the main structure of the computer system. Evolution developing of computer systems.**

***Senior teacher Koxegen A. E.***



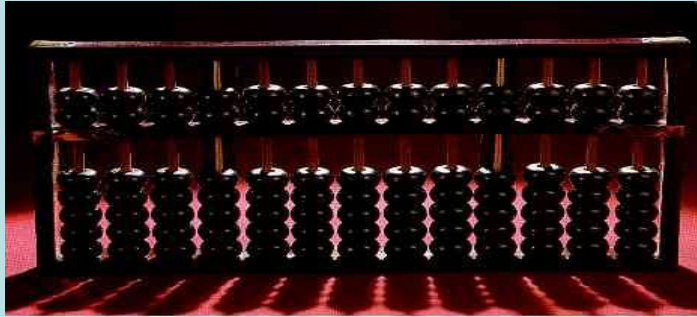
# History of the development of the computer



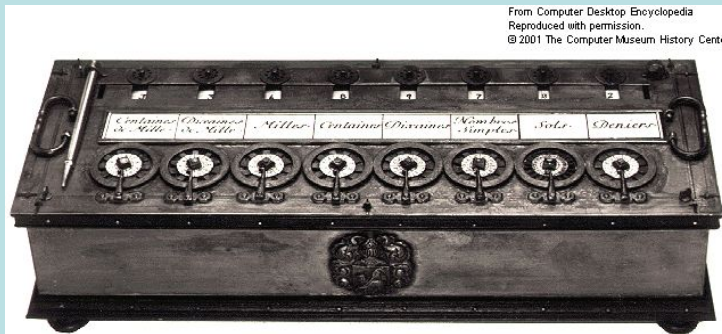
## История развития ВТ



Abacus is known to be the first mechanical calculating device.



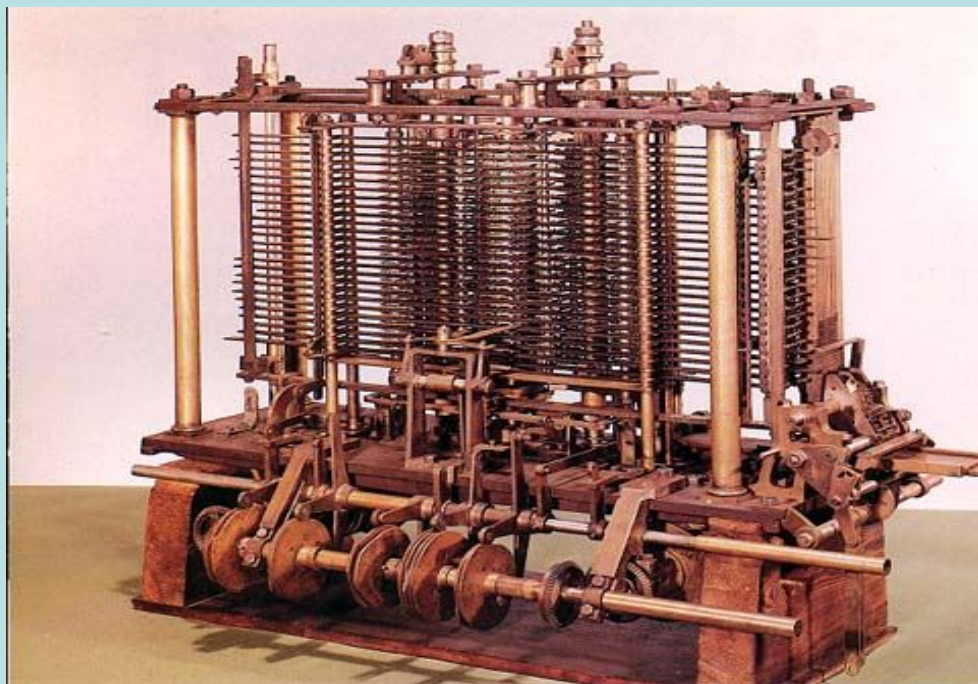
## Счеты Аббакс



## 1642 - Блез Паскаль счетная механическая машина

In the year 1642, Blaise Pascal a French scientist invented an adding machine called Pascal's calculator, which represents the position of digit with the help of gears in it.

In the year 1833, a scientist from England known to be Charles Babbage invented such a machine. This device was called Analytical engine and it is deemed the first mechanical computer.



**Счетная машина Чарлза Бебиджа  
1833 г. – первый механический  
компьютер**



# Five Generations of Computers

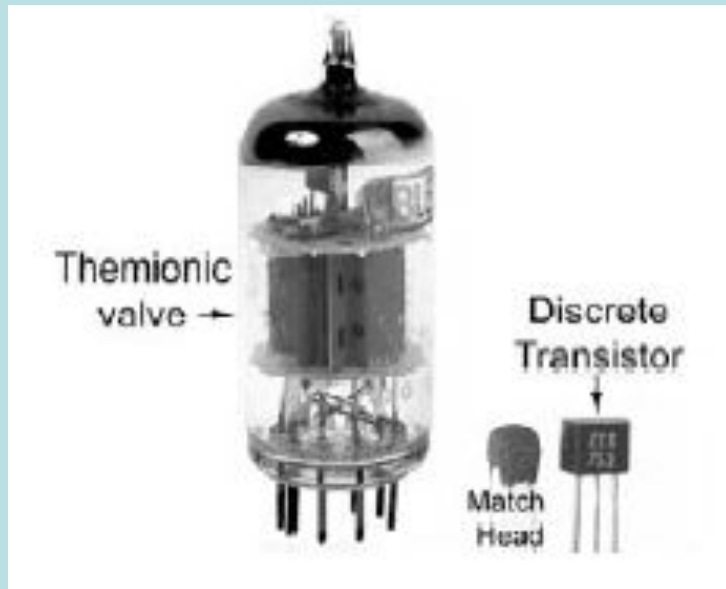
## First Generation. Первое поколение ЭВМ (1945-1956)



**ENIAC** was the world first successful electronic computer which was developed by the two scientists namely J. P. Eckert and J. W. Mauchly. It was the beginning of first generation computer. Their early digital designs were composed of thousands of pairs of electronic valves each one similar in size and appearance to a small light bulb.

**ENIAC** - первая ЭВМ основным компонентом которой были электронные лампы

## Second Generation Computers (1956-1963)



By **1948**, the invention of **the transistor** greatly changed the computer's development. The transistor was at work in the computer by 1956. Transistors make use of the properties of a special group of elements called Semiconductors. The two main Semiconductors used in electronics are **germanium and silicon.**

### Второе поколение ЭВМ (1956-1963)

1948 – появился транзистор

1956- первый компьютер на полупроводниковых приборах

## Third Generation Computers (1964-1971)

Instruments, developed the integrated circuiting 1958.

Technology of developed computers, full circuits containing more than one transistor could be fabricated onto a thin chip of semiconductor. These miniscule but nonetheless powerful circuits are called “**integrate circuits**” (ICs).



## Третье поколение ЭВМ (1964-1971)

Компьютеры на основе интегральных электронных схем (ИС)

## **Fourth Generation (1971-Present)**

**‘Micro processor’** is the main concept behind this generation of computer. The First personal computer is Alitair which made 1974.



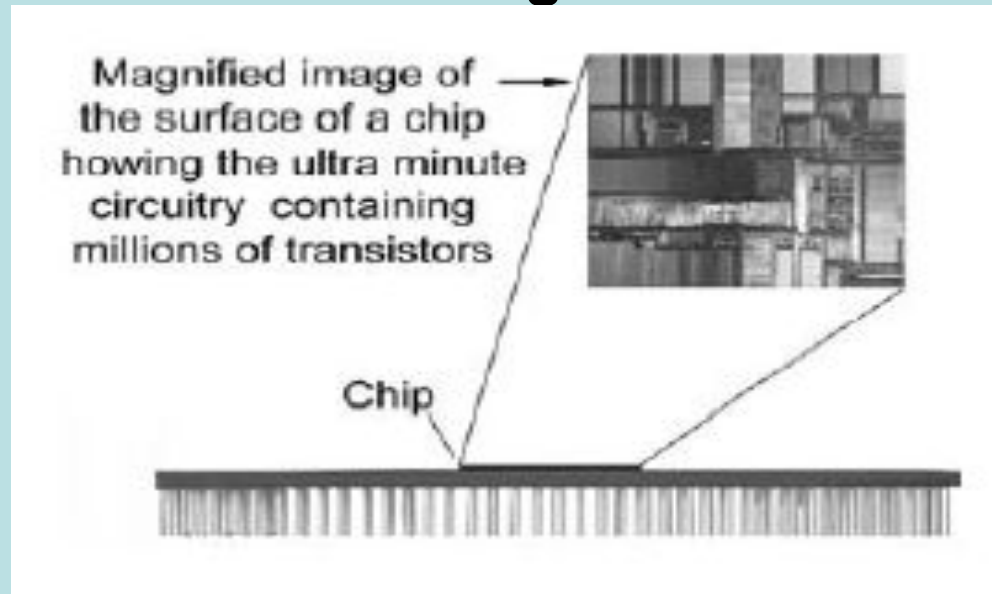
**First Micro  
processor**

**Четвертое поколение ЭВМ - 1971-** начало эры  
больших интегральных микросхем (БИС)  
«Alitair» первый ПК появился 1974 г. на  
основе БИС и микропроцессора



## **Fifth Generation (Present and Beyond)**

**Many advances in the science of computer design and technology are coming together to enable the creation of fifth-generation computers.**



**Пятое поколение (настоящее и развивающееся)**  
– лазерное ультра напыление. ПК на сверх  
больших интегральных схемах (СБИС)

# The Different Types of Computers

## Разновидности ПК

1.Desktop Computers

2.Laptop Computers

3.Servers

A server is a computer that "serves up" information to other computers on a network.



### Servers



*A server room*

**Tablet Computers:** These use a touch-sensitive screen for typing and navigation. Tablet Computers: These use a touch-sensitive screen for typing and navigation.



*The iPad, a type of tablet computer*



**Mobile Phones:** Many mobile phones can do a lot of things a computer can do, such as browsing the internet or playing games. These phones are often called **smart phones**.