

TIU Erbil  
Architecture Engineering  
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# History of architecture II

## 1<sup>st</sup> lecture : Greek Architecture I

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# Content

- The classical period
- Introduction to Greek Architecture
- Influences
- Art
- Architectural character
  - Building materials
  - Structure system.
- Classical Orders



# The Classical Period

The classical period, is a timeline which lies between 5th century BCE to 3rd century AD. Its the period between **the rise of the Greek Empire** and the **fall of the Roman Empire**.

**(Classical antiquity, classical era, or classical age)**

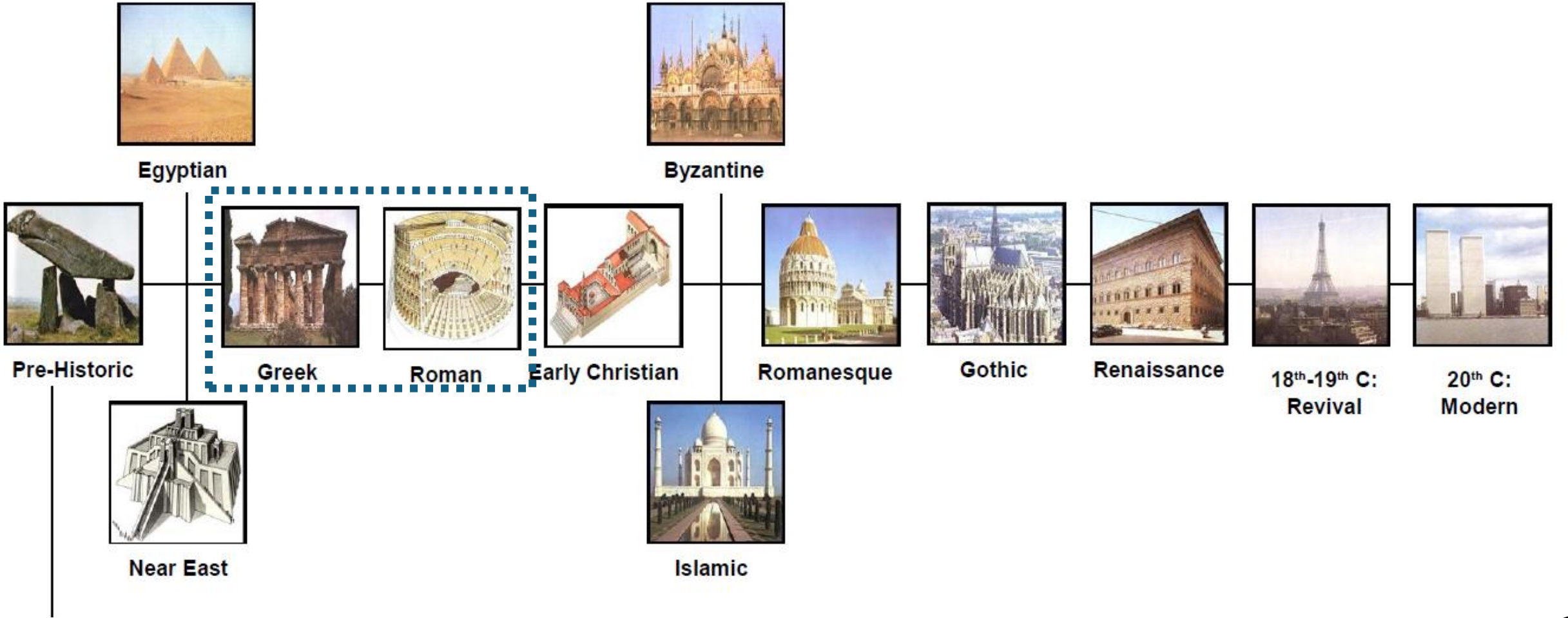
It is the period in which Greek and Roman society flourished and wielded great influence throughout the world.

**The most important** architectural feature that highlights classical architecture and aesthetics include **symmetry, proportion, rational order,** and the **relationship of individual parts to the whole.**



# The Classical Period

The Greek architecture is a part of the classical architecture.



# Introduction

The Greek civilization started from group of islands in the Mediterranean Sea

Greek civilization expanded through the **colonization of nearby areas**, like the Dorian colonies in Sicily and the Ionian colonies in Asia Minor and later Northern Africa (Libya and Egypt). This expansion led to divisions within Greek civilization.

Due to the exiation in water side, it **controlled the sea trade routes and seaports**. (Asia Minor, Cyprus, Syria, Palestine, Egypt and Libya to south Italy and Sicily).

**There are several influences affected the architecture:**

1. Geographical
2. Geological
3. Climate
4. Religion



**Why the Greek flourished around water or coastline ?**

# Influences

The Greek architecture was influenced by number of features including:

## 1. Geographical factor

### Mountainous - costal regions

**mountains** made the transportation/trade harder on land than the sea.

The **rugged landscape** and **mountains** led to the use of terraces and the adaptation of structures to the environment.

**Trade** through coastal towns produced a unity of culture and economic stability.



# Influences

The Greek architecture was influenced by number of features including:

## 2. Geological factor

### Stone, clay and minerals and building material

Ancient Greece had rich building materials due to its mountainous and coastal geography.

- **Limestone:** Readily available and easy to work with.
- **Marble:** High-quality white marble from the mainland and islands (notably Paros and Naxos) for precise architectural and sculptural details
- **Potter's Clay:** Found throughout Greece, especially near Athens, it was used for pottery, roof tiles, and decorative elements.
- Rich with **Lead, Silver and copper**



# Influences

The Greek architecture was influenced by number of features including:

## 3. Climate factor

### Climate, nature and outdoor activities

The Greek climate is a typical Mediterranean climate, characterized by **sunny weather and heavy rains**.

This encouraged outdoor activities and influenced architecture to harmonize with the natural landscape. Key points include:

- **Open-Air Ceremonies:** Most public events were held outdoors, leading to structures like the Greek theatre.
- **Architectural Features:** The sunny climate and sudden showers required porticoes and colonnades, as important elements.





# Influences

The Greek architecture was influenced by number of features including:

## 3. Religion factor

### Religion reflect on art and architecture

Religion greatly influenced ancient Greek art and **architecture**, particularly through the **design of temples** like the Parthenon, built to honor deities.

**Art** showed gods, goddesses, and mythological scenes, serving both **decorative and educational**.

**Public rituals and festivals** led to large-scale artworks and theaters, blending civic life with spirituality.

**Religious symbolism** was central to Greek artistic expression.



The twelve Olympians are the major deities of the Greek

# Greek Art.

➤ The Greek Art passed through 4 Periods :

**Geometric, Archaic, Classical, and Hellenistic**

Each period left a print and shaped the art of Ancient Greek

## 1. **Geometric** (900–700 BC)

Characterized by **geometric and abstract** patterns, figures and shapes. Focused mainly on **Vases and pottery** and **simple sculptures**.



Late Geometric

## 2. **Archaic** (700–480 BC)

Characterized by the development of **human-sized sculptures**, which showed more naturalism.



Kore and Kouros

# Greek Art.

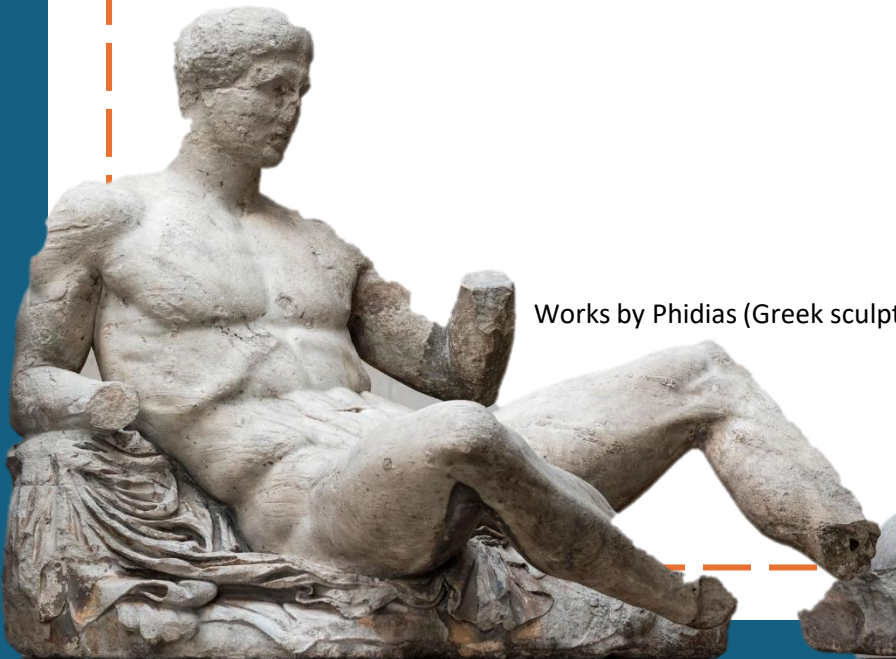
➤ The Greek Art passed through 4 Periods :

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## **3. Classical** (480–323 BC)

Characterized by **focus on realism, proportion, and ideal beauty.**



Works by Phidias (Greek sculptor)

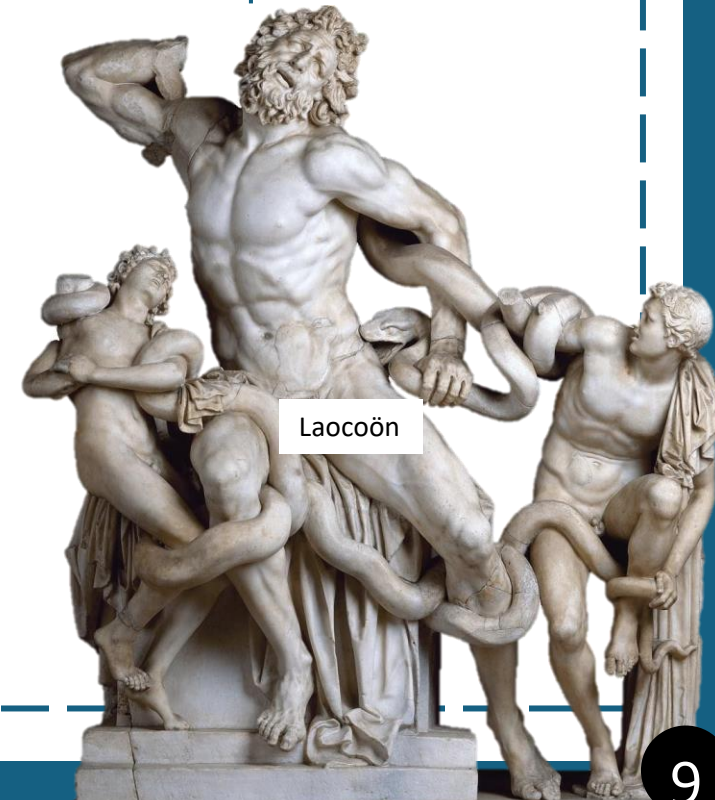


## **4. Hellenistic** (323–31 BC)

Characterized by **dramatic expressions and movement in art.**



The Winged Victory of Samothrace.



Laocoön

# Greek Art.

➤ The Greek art in general showed a rapid development in the quality and techniques.

## The Highlight of Greek art

- Greek paintings were mostly **Frescos and Mosaic in low quality.**
- **Pottery** making and painting was an **iconic art feature**
- **sculptures** was dynamic, respect the proportion and harmony, human-sized scale.
- **themes** that reflect society's values, including **mythology** with gods and heroes, **daily life** showcasing everyday activities, and **athletics** celebrating the Olympic Games and idealized human forms as well as **death and afterlife.**



# Greek Art.

## ★ Fresco

A **fresco** is a **wall painting technique** where water-based pigments are applied to freshly laid wet plaster, resulting in a durable and vibrant artwork, used to decorate walls and ceilings in buildings.



Dolphin fresco in main palace of Cnossos

## ★ Mosaic

A **Mosaic** is an art form that creates images or patterns with small pieces of colored glass, stone, or other materials.



# Greek Art.

## ★ Pottery

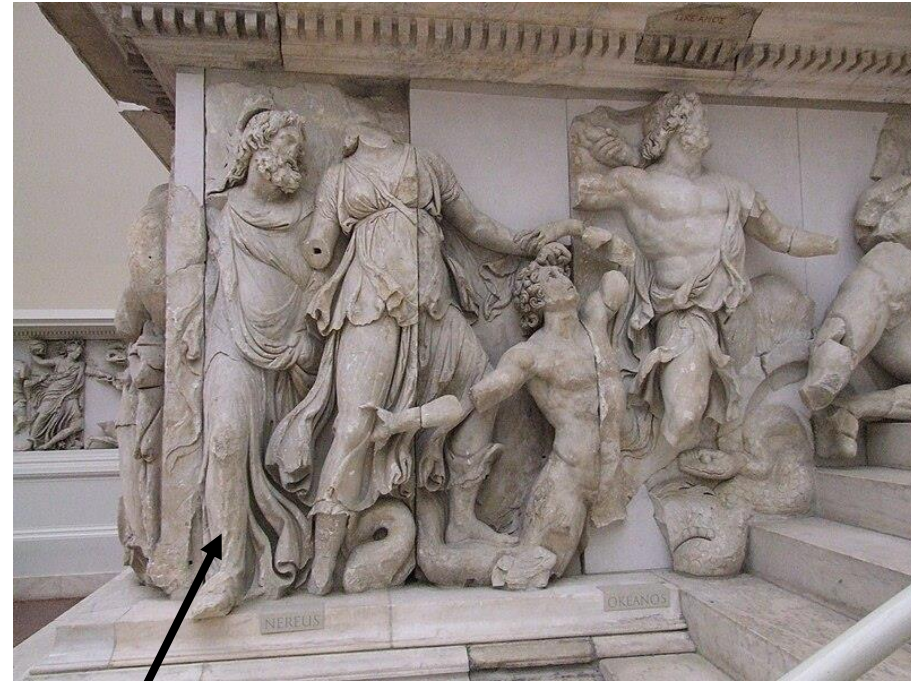
It's the most iconic part in the Greek Art is the pottery.

Sculpted in different sizes and shapes, usually have **black** or **red** figures. it featured scenes from mythology, daily life, and athletic competitions, serving both functional and decorative purposes.



## Sculptures and Reliefs

Relief sculpture is an artwork that projects out from a background surface.



Relief



sculpture

# Architectural character.

## 1. Building materials

What were the main building materials used in Ancient Greek Architecture ?

## 2. Structure system.

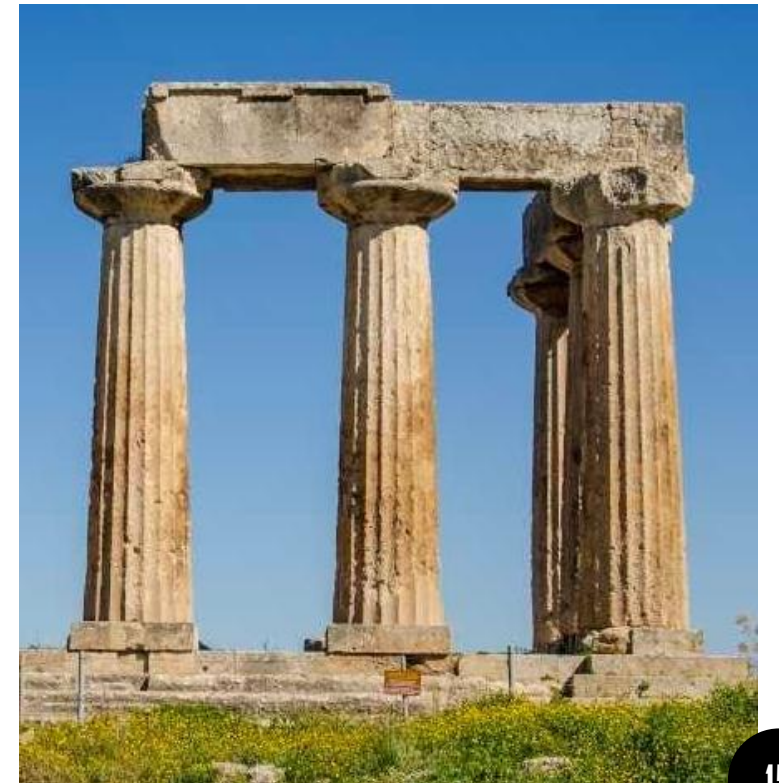
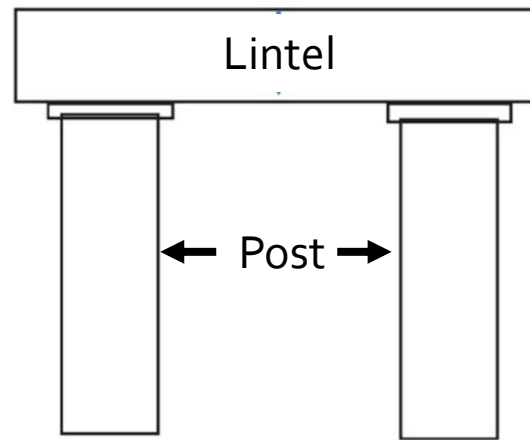
### ➤ The Trabeated system (Post and Lintel)

The primary structural system, consisting of vertical posts (columns) supporting horizontal beams (lintels).

The system later modified to feature a Greek elements that suits their beliefs.

The modifications were :

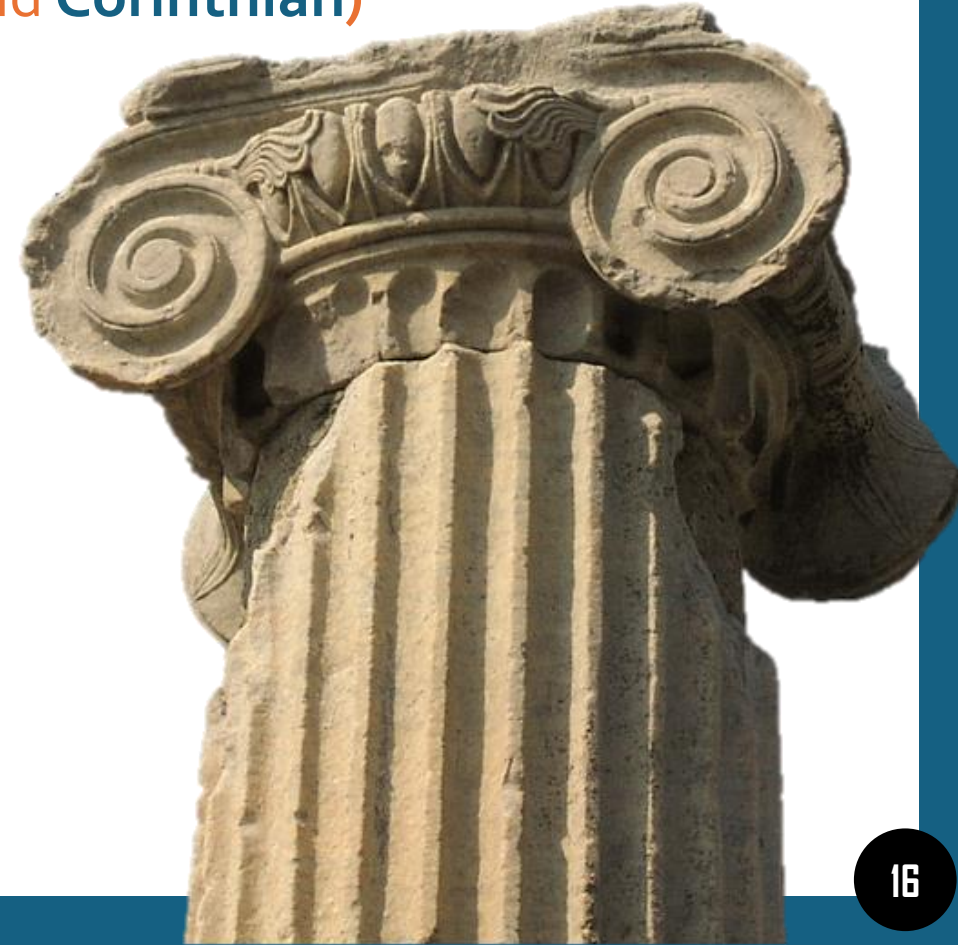
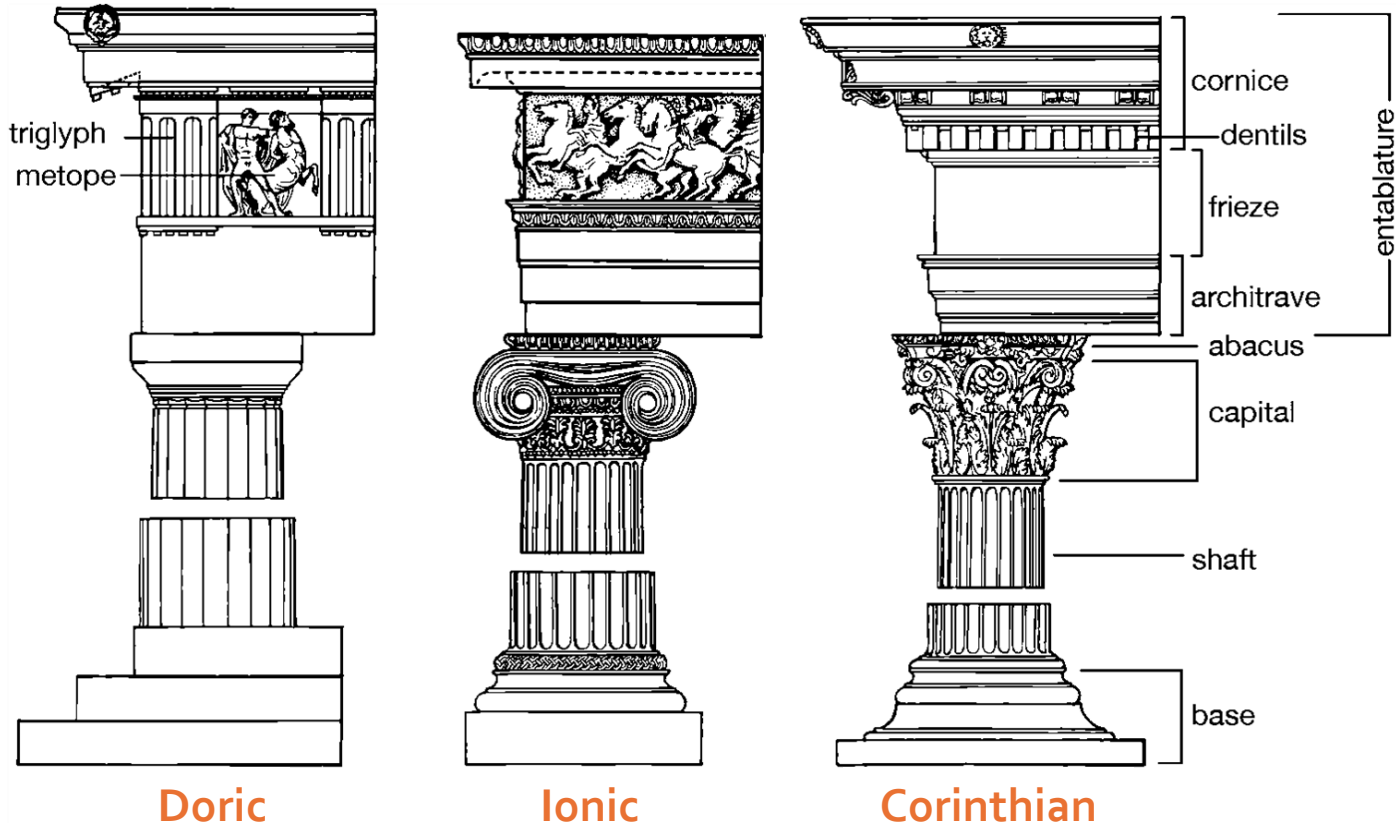
- post = **The classical orders**(Doric, Ionic and Corinthian).
- Lintel = **Entablature and pediment**



# The Classical Orders

The **Classical orders** refer to the architectural styles that originated in ancient Greece and Rome, characterized by specific designs for columns and entablatures.

**Ancient Greek introduced three orders ( Doric, Ionic, and Corinthian)**

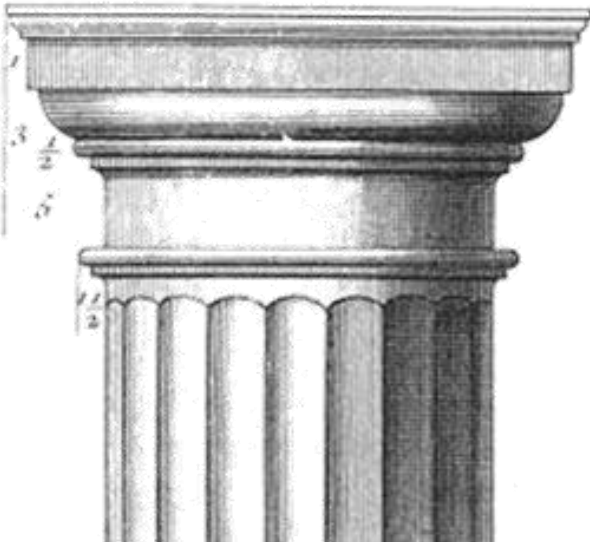




# The Classical Orders

## 1. The Doric order

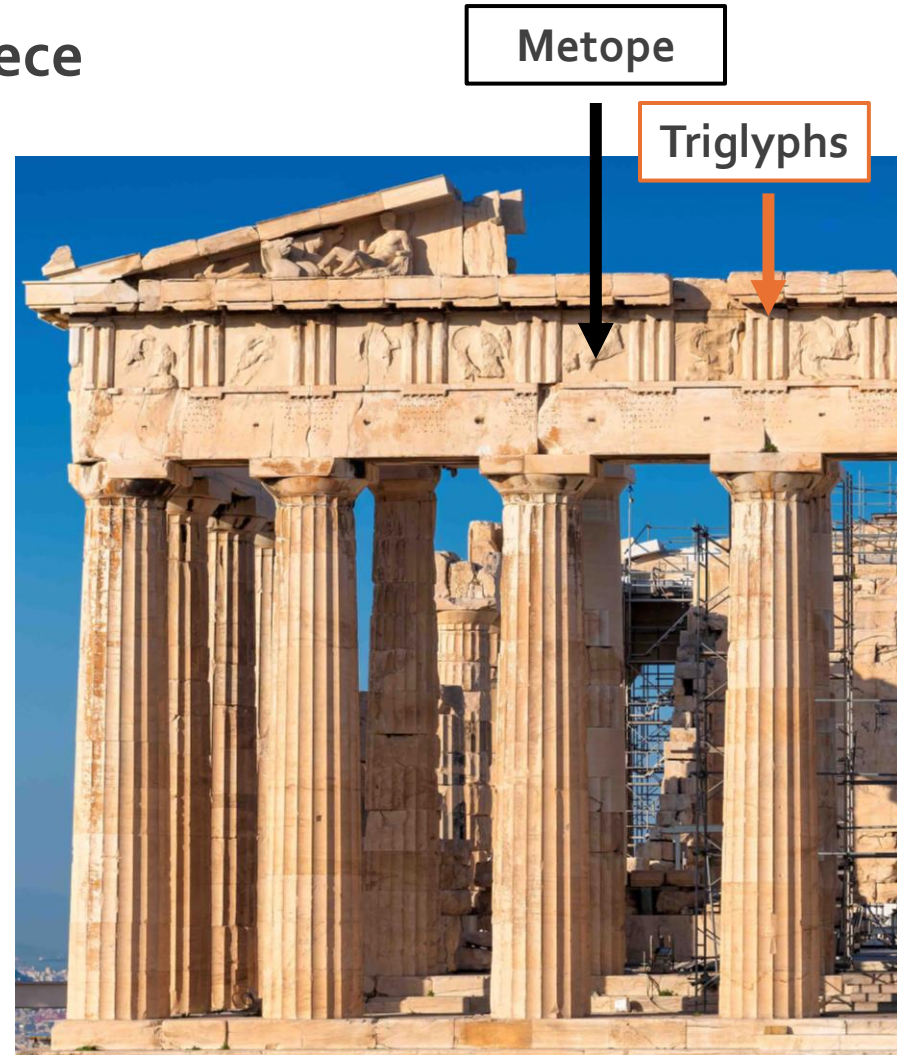
- The **earliest** type of the orders.
- Has **no based** stands directly on stylobate.
- Height to width ratio is **7:1**
- The **Frieze** is decorated with **Triglyphs** and **Metopes**.
- the **capital** has **no decorations**
- **Shaft** is decorated with **20 flutes** separated by **arises** (sharp edges)
- The column has **Entasis** (bent in the middle).



# The Classical Orders

## 1. The Doric order

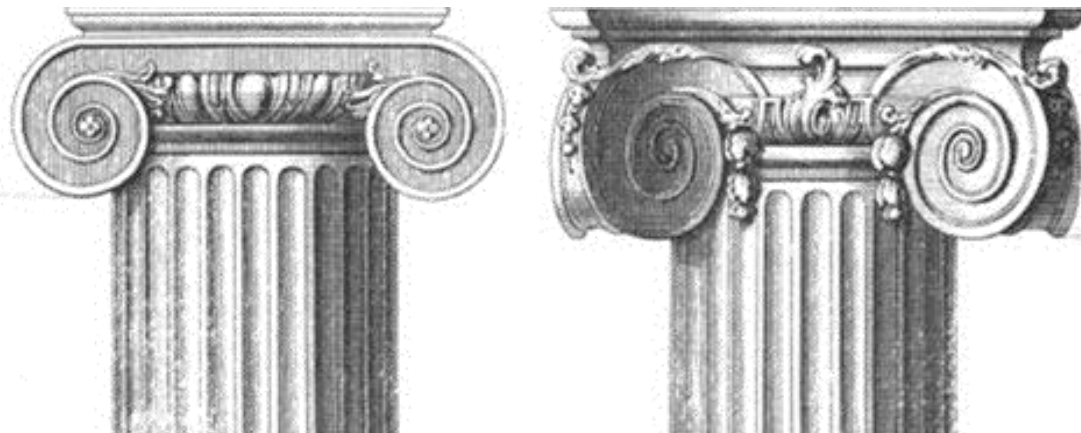
The Parthenon, the Acropolis at Athens, Greece



# The Classical Orders

## 2. The Ionic order

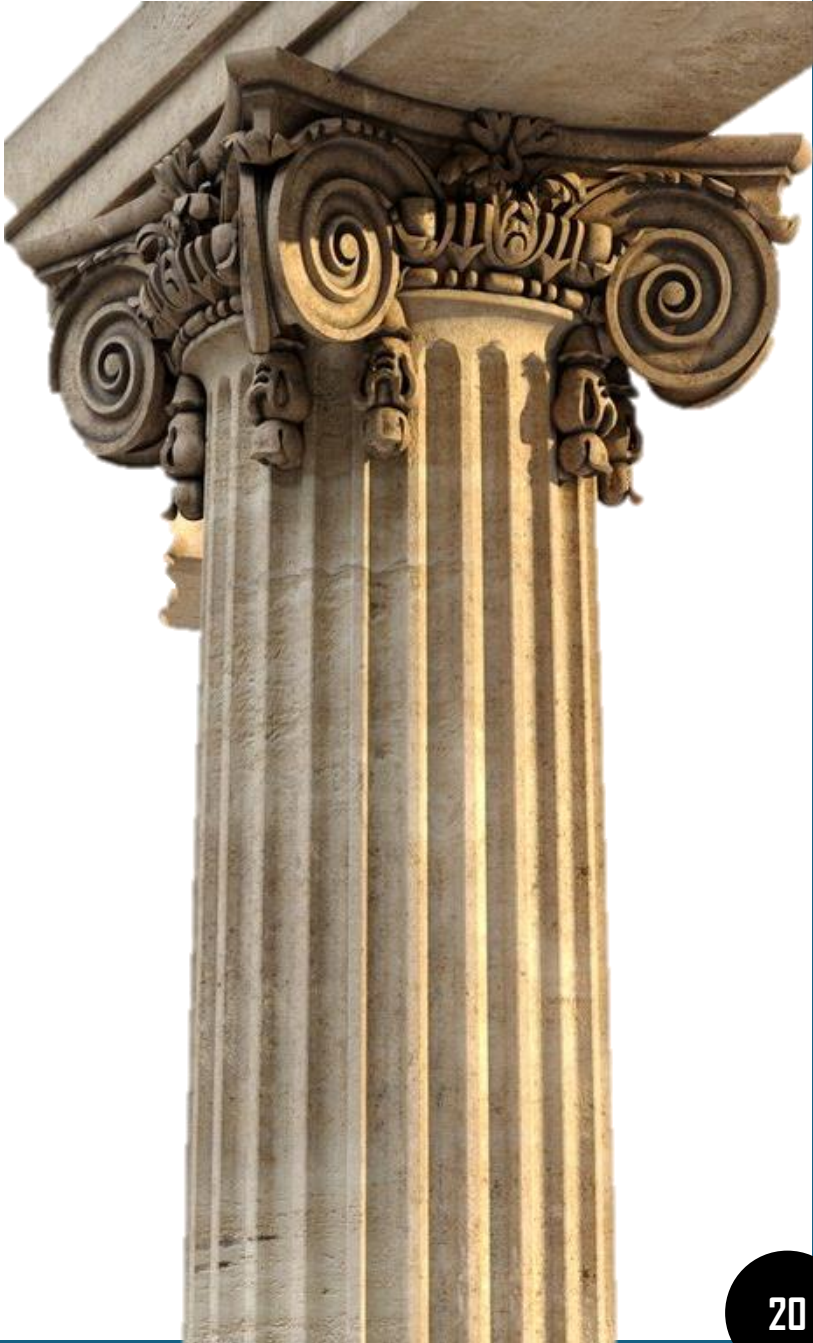
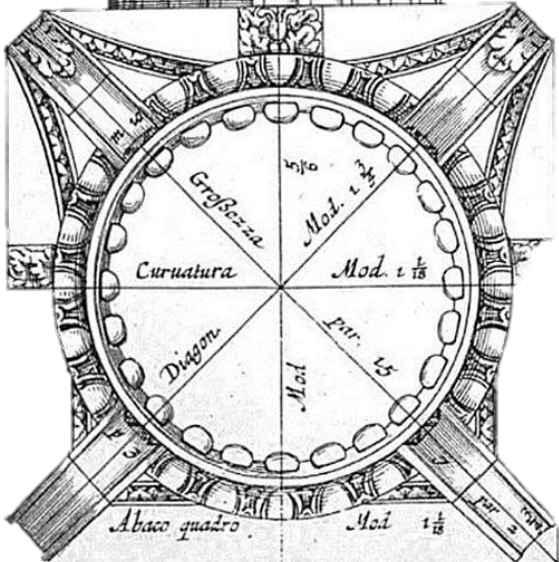
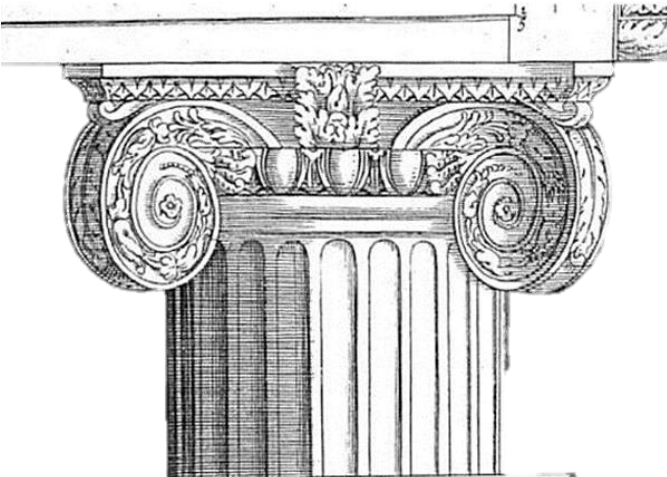
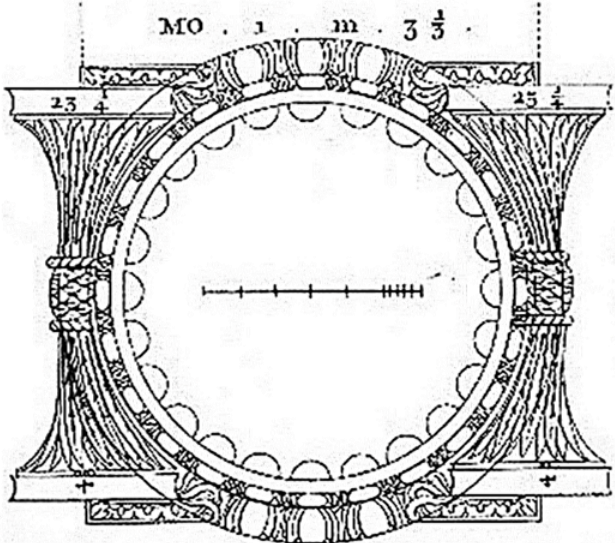
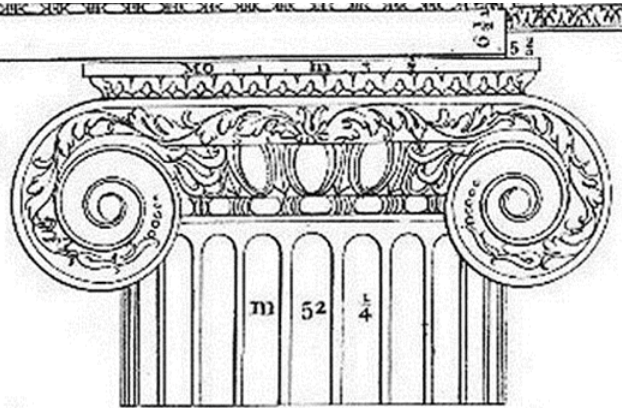
- Has a **base**.
- Height to width ratio is **9:1**.
- The **entablature** consists of (architrave, frieze, cornice).
- The **Frieze** is not decorated
- The **capital** have a pair of scroll characteristics called (Volutes or Spirals).
- The volutes connected at their side by cushion (plain or oriented with egg and dart). A further development showed an approximate  $45^\circ$  rotation to the volutes to face two facades each.



- **Shaft** is decorated with **24 flutes** separated by **fillets** (no sharp edges)

# The Classical Orders

## 2. The Ionic order



# The Classical Orders

## 2. The Ionic order

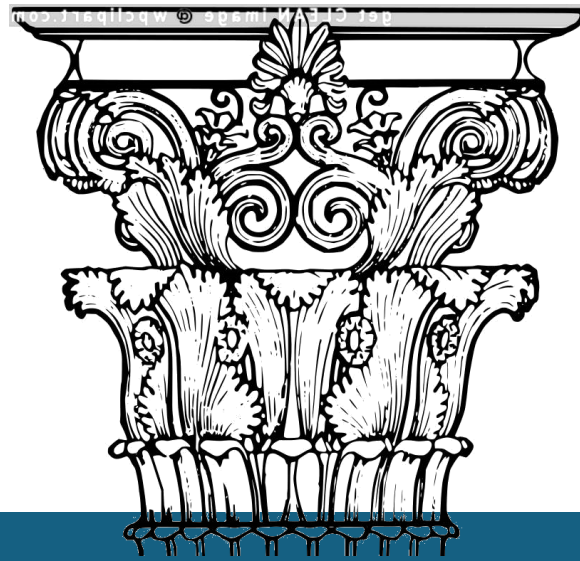
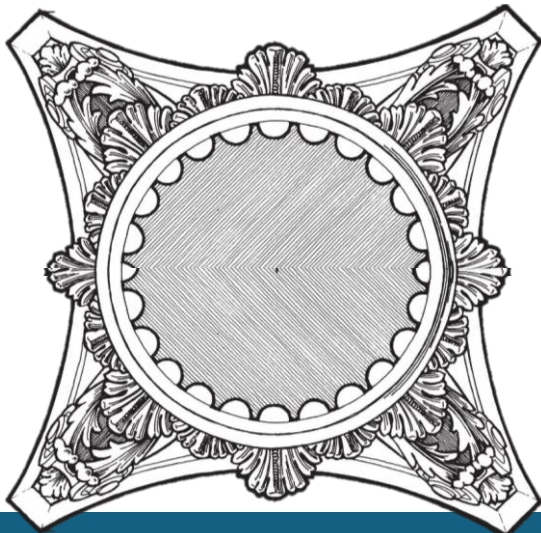
The Erechteion Temple, Athensthe Acropolis at Athens, Greece



# The Classical Orders

## 3. The Corinthian order

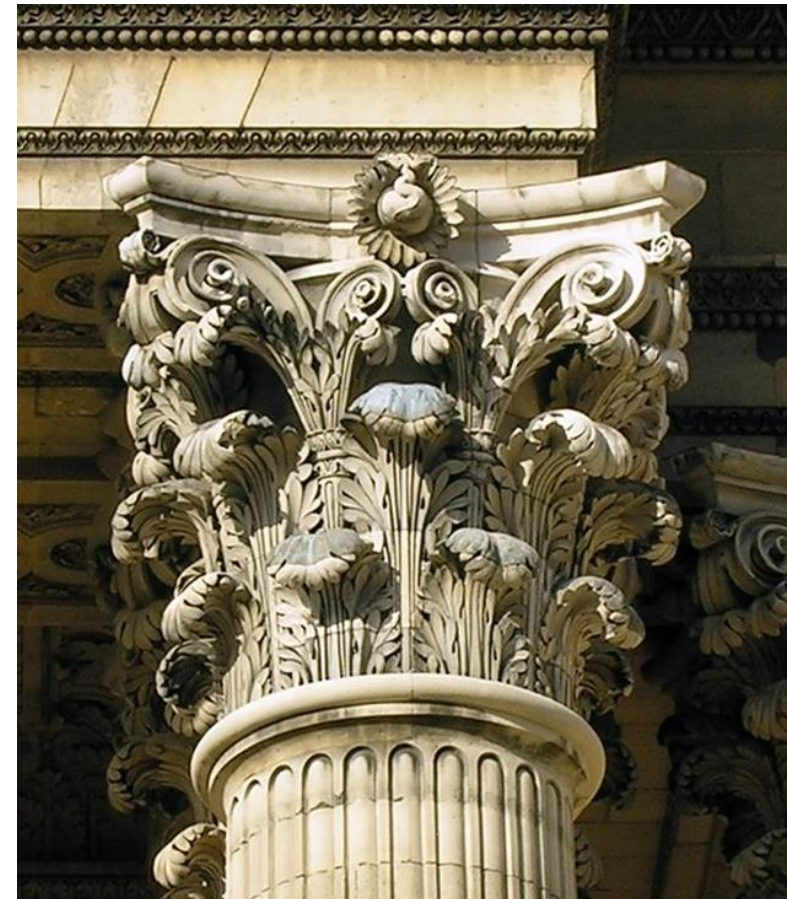
- Has a **base**.
- Height to width ratio is **10:1**.
- The **entablature** consists of (**architrave, frieze, cornice**).
- The **Frieze** is not decorated
- The **capital** decorated with **acanthus leaves, caulis, and volutes**.
- The **Volutes** are supporting the **abacus**.
- **Shaft** is decorated with **24 flutes** separated by fillets (no sharp edges)



# The Classical Orders

## 2. The Corinthian order

Temple of Zeus, Athens, Greece



# Architectural character.



Doric



Ionic



Corinthian



# The Orders of architecture

