GOTHIC ARCHITECTURE

Formation and Development:

i. In 410, Rome was sacked by the barbarian tribe, the Goths and was again pillaged by the vandals in 455. The Goths who actually wrought little damaged were considered to be mainly responsible for destruction.
ii. The name gothic is now generally given to the pointed style of mediaeval architecture in west Europe.
iii. The people ofWestern Europe who were under the Roman Empireformed into separate nations by the end of12th century. Italy, Germany,France, Spain became independent kingdoms.
iv. The style characterized by the availability of building materials. Thus in Italy white and colored marble that in England, France coarse grained stone and in Germany bricks determined the character of the architecture of those countries.
v. In north due to dull climate large sized windows were used to admit side light, whereas small windows were used to cut off bright light dazing sun shrine in south. Also in account of less rainfall in south, roofs were flat whereas high pitched roofs were used to drain off water and snow in north.
vi. Immense power was vested in bishops and popes.
vii. This includes the loss of English possession in France, division of Germany into number of independent kingdoms.

Characteristics features

i. Gothic architecture was evolved gradually in 12^{th} century from Romanesque architecture.
ii. It is mainly characterized by the introduction of pointed arch, buttress and high pinnacle.
iii. The stability of the structure depends upon the proper adjustment of thrust and counter thrust.
iv. Goths invented the flying buttress which they placed it at right angles to the length of the wall to take the collected pressure of the ribbed vaults and to transmit it to the ground.
v. It represents skeleton structure of building in form of piers, buttresses, arches, and ribbed vaulting, (all held in equilibrium by combination of inclined and vertical forces neutralizing each other).
vi. The walls were hollowed out and reduced to thin layer only to enclose the structure.
vii. Hollow walls gave large space for multiple window openings.
viii. In this way, Gothic style achieved a lot of economy in their construction and also it solved the problems of extracting and transporting of stone.

ix. The technical advantages of the above system are threefold. The tunnel vault rests on the two walls. The Romanesque groin vaults which rests on four points require square bays. The Gothic vault is constructed with rib to increase the strength of groins.

x. The Gothic style is a combination of aesthetic and technical qualities.

xi. Interior halls decoration with stained colored glass was another achievement in gothic style.

xii. Basic properties of stained glass were: First, Creation of transparent pictures, secondly, richness of material gives resemblance to precious stone; thirdly its mystery, because it glowed without fire.

xiii. Gothic architects designed town-halls, royal palaces, court houses, and hospitals.

xiv. They constructed bridges to facilitate transportation.

xv. The interiors were oblong covered with ‘rib’ and ‘panel’ vaulting or with open timber roofs.

xvi. Naves were divides into bays thus producing grandeur.

xvii. The weight of the nave vault is carried down by flying buttresses to the roof of the aisles and then by buttresses to ground level.

xviii. Towers often crowned with spires were predominant.

xix. The introduction of tracery, in Gothic style is a special feature.

xx. In cloisters the openings are often filled-in with tracery.

xxi. In dry weather the cloister would be used for studying and teaching.

xxii. Doorways were proportional to the human scale. Large-sized windows divided by vertical mullions and horizontal transoms were used to display of painted glass

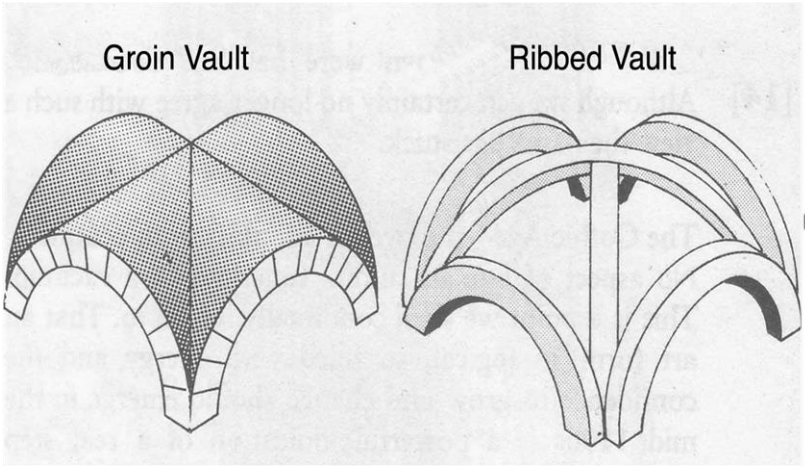
xxiii. Columns were used to support galleries and semi-circular arches.

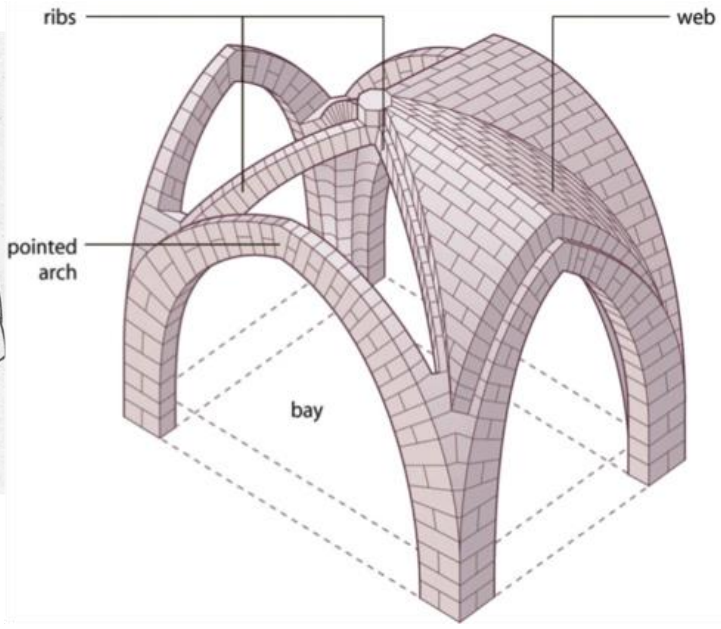
xxiv. Mouldings were enriched with delicate carvings.

xxv. Carving on doors, rose windows, buttresses and pinnacles.

xxvi. Statues which were proportional to the human scale.

xxvii. Ornamentation was in the stained glass of the windows, and over the plinths, the jambs, the voussoirs and up against the buttresses.

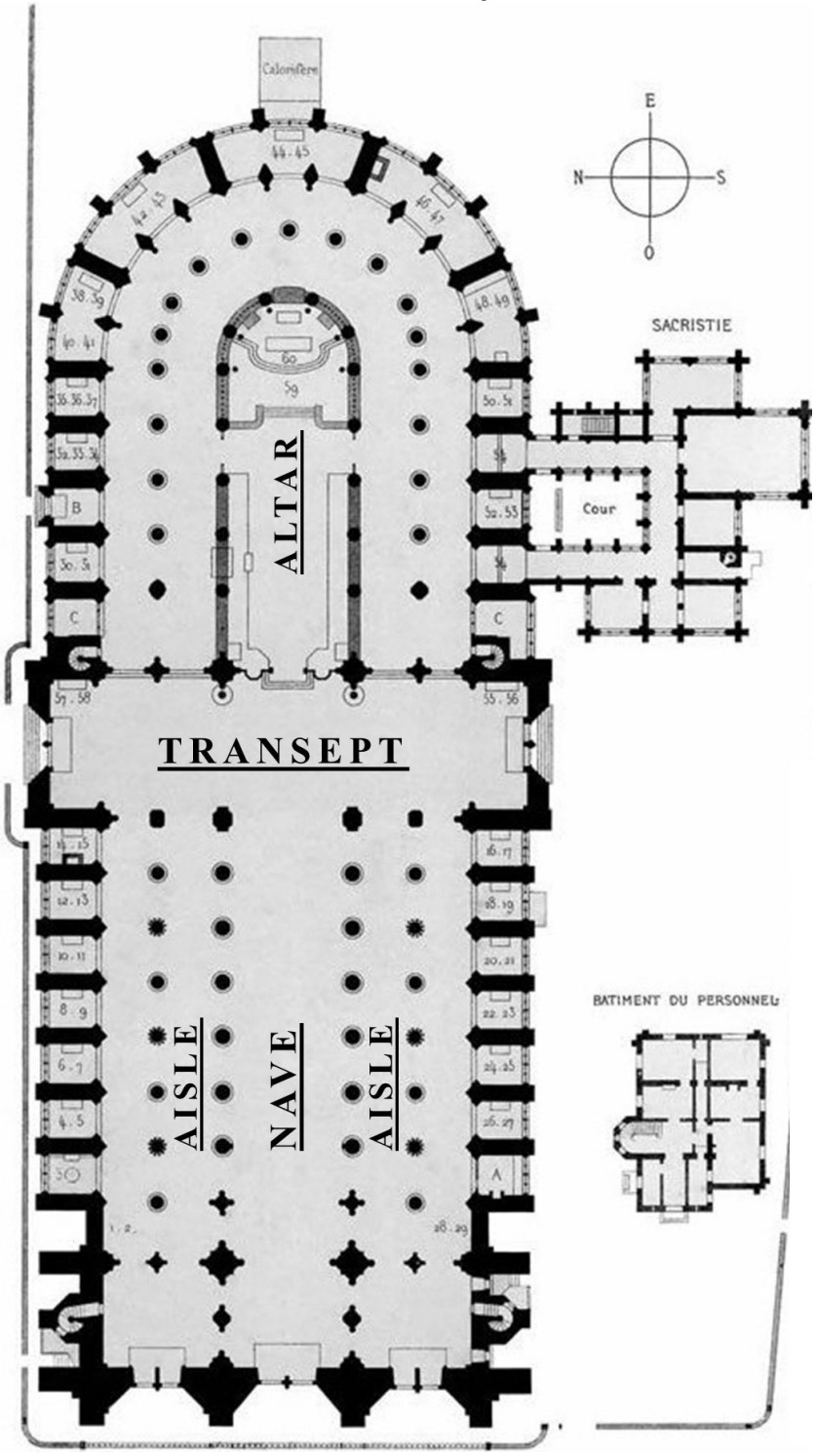


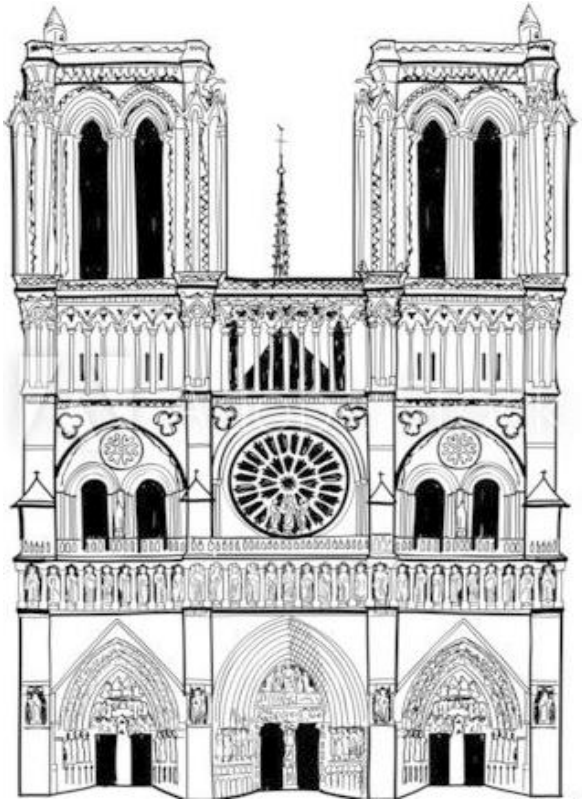


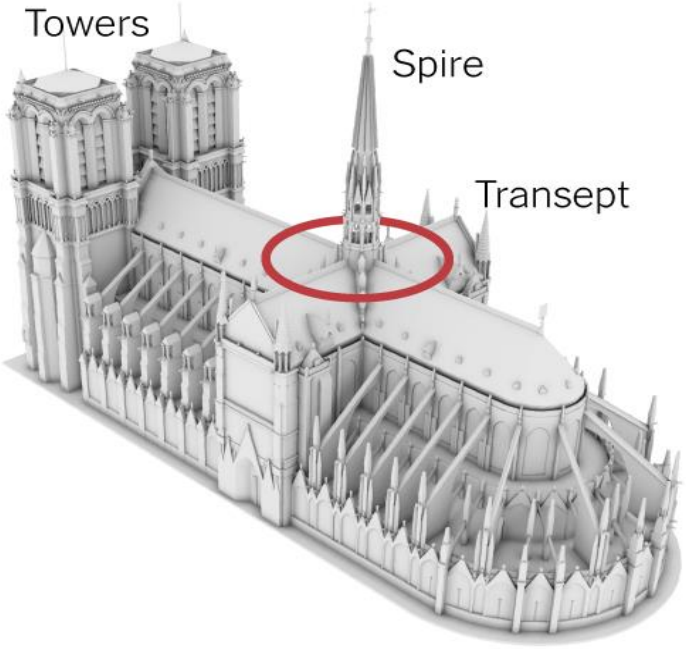
Typical example

1. **Notre Dame, Paris (1163-1250)**

i. This is one of the finest monumental buildings of French Gothic style.
ii. It was started by Bishop Maurice deSully.
iii. It has a wide nave, double aisles, transcepts surrounded with chapels and western towers.
iv. The central nave is divided into number of bays with cylindrical columns of Corinthian capitals carrying pointed arches.
v. The main doorway has a central pillar with a statue of Christ.
vi. The cathedral is crowned with a beautiful central wheel window of 10 m in diameter called rose window.
vii. The building with its impressive facade and imposing towers is one of the best cathedrals of Gothic style.





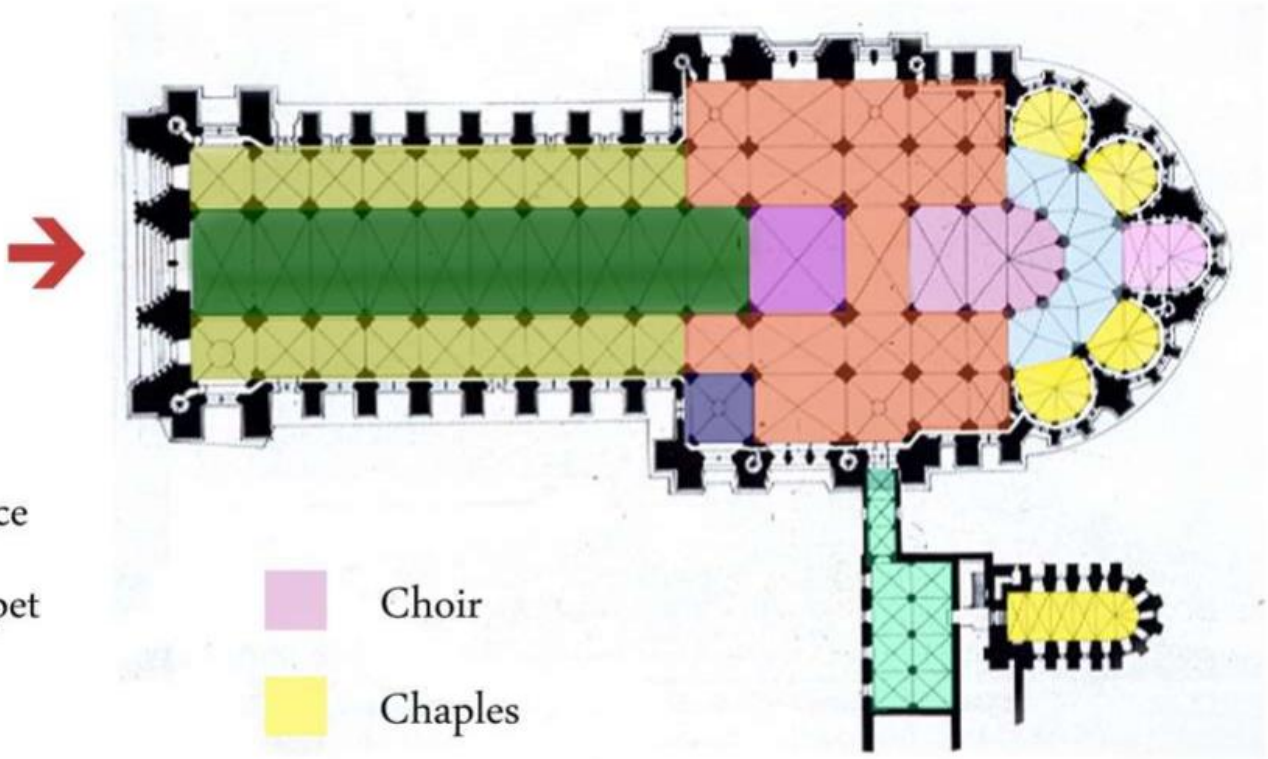


2. The Late Gothic style

i. The style became more ornate in design.
ii. The Decorated style is characterized by geometrical, curvilinear ogee arches which framed the colored glass windows.
iii. Clerestory was made very large.
iv. Vaulting ribs became numerous and complex in design.
v. Star-shaped patterns or stellar vaulting became main features of decoration of the interior of the churches.
vi. The roof had moderate pitch inclined at about 50°
vii. The columns were sometimes diamond shaped, with moulded circular capitals, such ogee and scroll mouldings.
viii. Cornices were provided with carved foliage and the ornament consists of bell flower and tablet flower with carved mouldings.
ix. The large windows were covered win luminous coloured pictures.
x. The shrines tombs, bishop's thrones, pulpit were provided with decorative treatment.
xi. Windows have mullions continued vertically in the whole height upto the main arch.
xii. The heights of clerestory and aisles were also increased.
xiii. Further palm vaulting, pendant vaulting were also introduced.
xiv. The columns became more slender with polygonal capitals carved with foliage.
xv. Vine leaves, grape leave were used as ornamentation.
xvi. Beautiful sculptures were in the form of angels.
xvii. The ceilings were usually plastered.
xviii. Attractive designs were provided in metal work, door fittings and grills, etc.

3. Reims Cathedral (1211-1427)

i. Radiant Gothic façade of unequal dimensions.
ii. Its interior is characterized by vertical heights.
iii. The richness of its sculpture and statues and the technical quality of its construction are the major reasons of remarkable look.
iv. Cathedral of Reims remains one of the most beautiful examples of Gothic art.
v. The front window consists of two lancet arches surmounted by a six-lobed rose window.
vi. The façade and transept towers were initially to be topped by spires, but a fierce fire, destroyed the roof's entire framework in 1481.
vii. Materials used in buildings are Stone, Glass, Wood, Paint, Iron, rib vault.



Entrance

Transpet

Nave

Doorway

Crossing

Choir

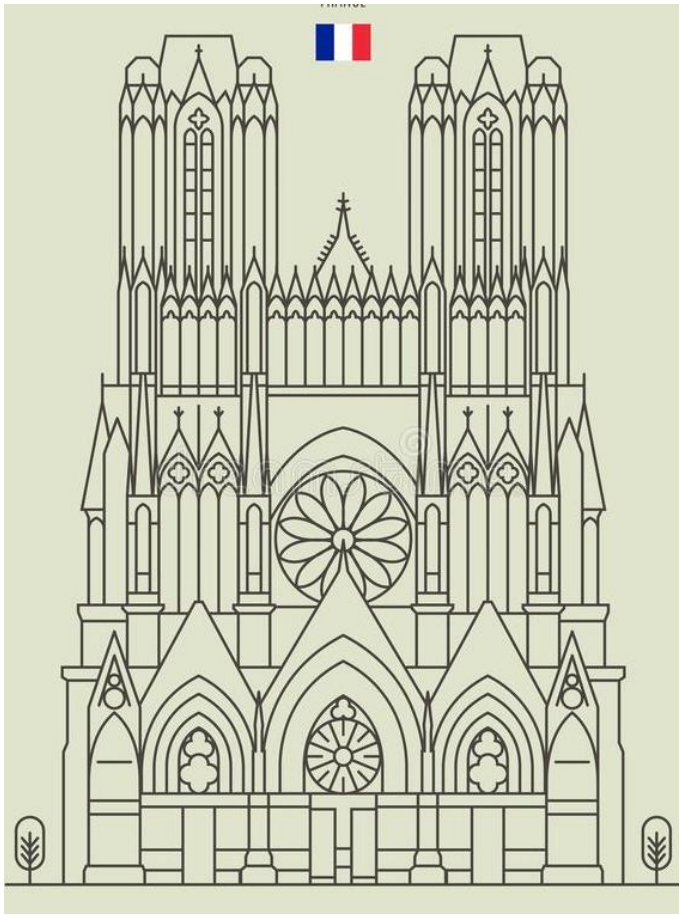
Chaples

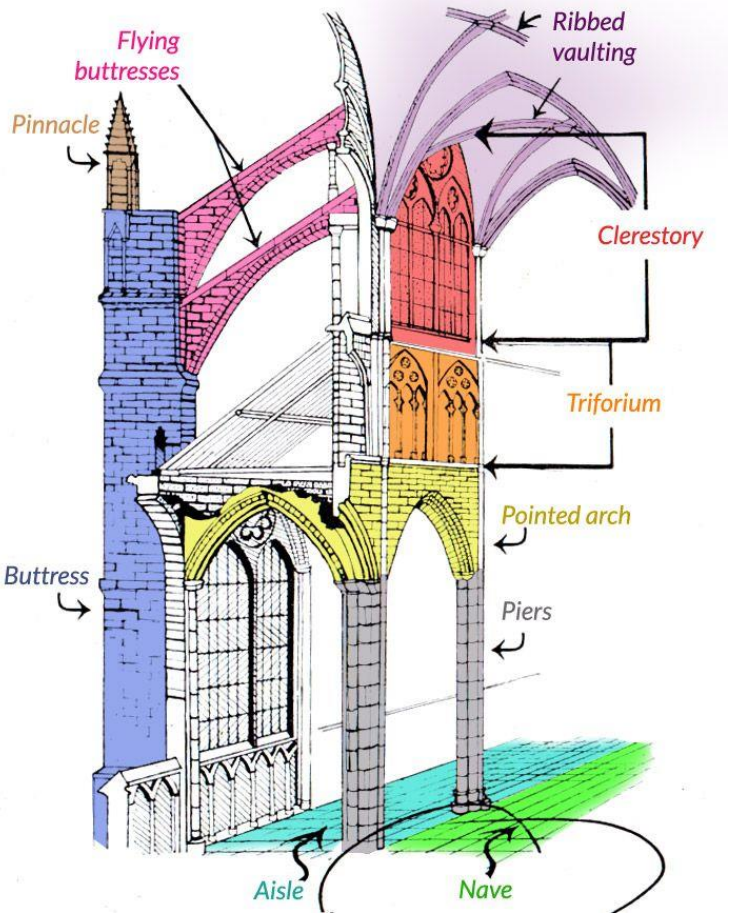
Ambulatory

Window of the baptism

window of the wine -makers

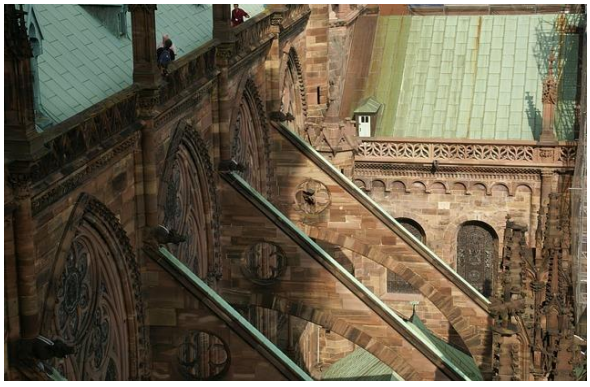
Archibishops palace



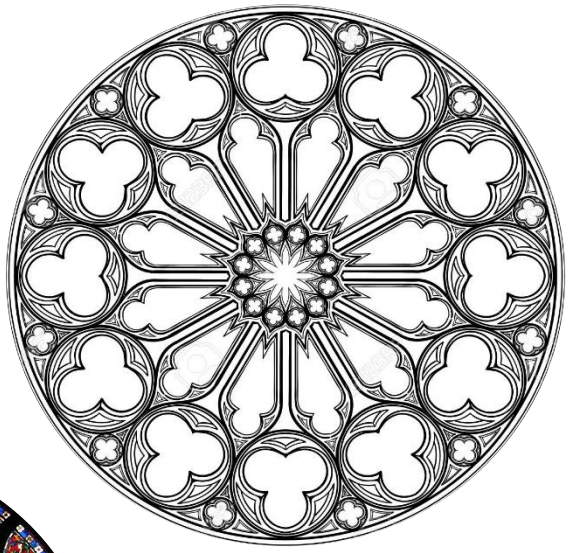


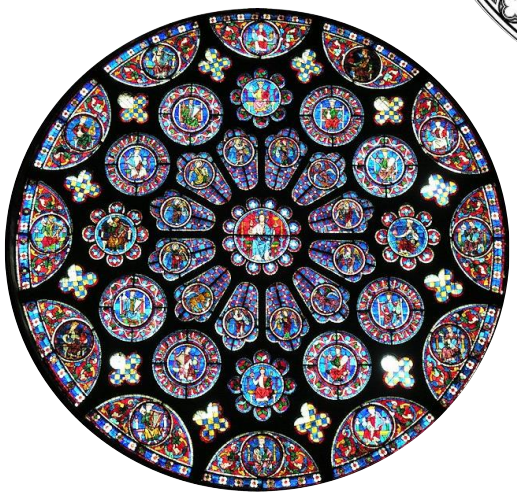
IMPORTANT TERMS:

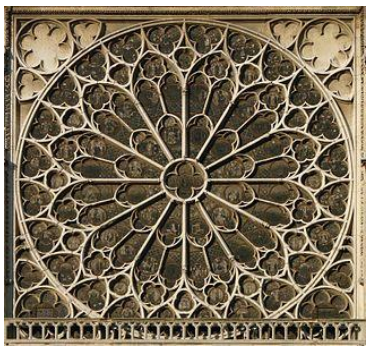
Difference between Buttress and Flying Buttress:-

Buttress	Flying Buttress
A buttress is a structure built against another structure in order to strengthen or support it.	Flying Buttresses are masonry elements that consist of an inclined beam carried on a half arch those projects from the walls of a structure to a pier which supports the weight and horizontal thrust of a roof, dome or vault.
Historically, they have been used to strengthen large walls or buildings such as churches, but they continue to be used in large modern structures such as retaining walls and dams.	The pier is frequently crowned by a pyramidal or conical ornament known as the pinnacle, which helps to add weight and enhance stability.
They are a common feature of Gothic architecture and are often found in medieval cathedrals.	The lateral thrust, produced at the base of the arches and domes due to their weight, is carried by the flying buttress away from the building and down the pier to the ground.
	The balancing of forces by the addition of flying buttresses enabled buildings to become much taller and more elaborate.
	

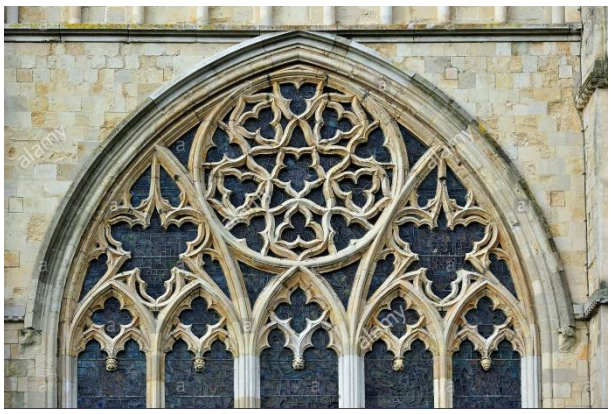
Rose Windows: are the large circular stained glass windows found in Gothic churches. They originated with the oculus, a small, round window in Ancient Roman architecture. During the Gothic period, the development of tracery (decorative supporting stonework) allowed such large windows to be created.

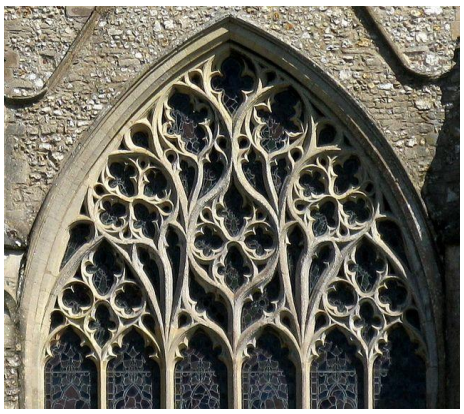


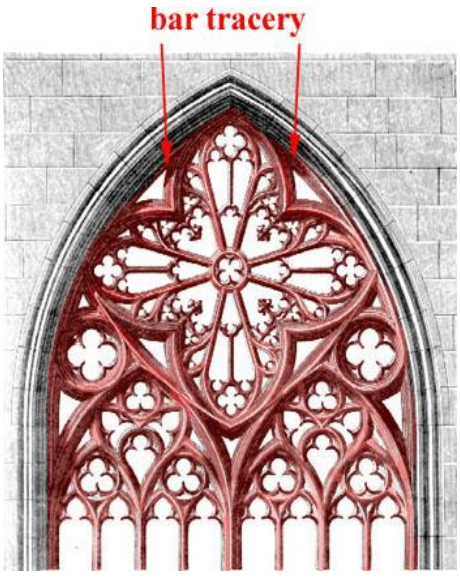




Tracery: In architecture, tracery is the stonework elements that support the glass in a Gothic window. Tracery, in architecture, bars, or ribs, used decoratively in windows or other openings.



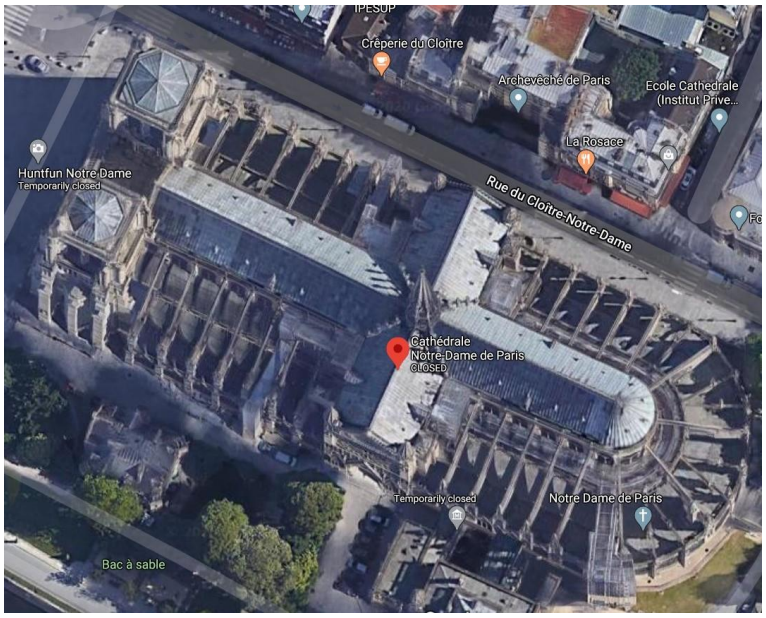




Cloister

Stellar Vaulting

NOTRE DAME, PARIS



REIMS CATHEDRAL

NOTRE DAME, PARIS

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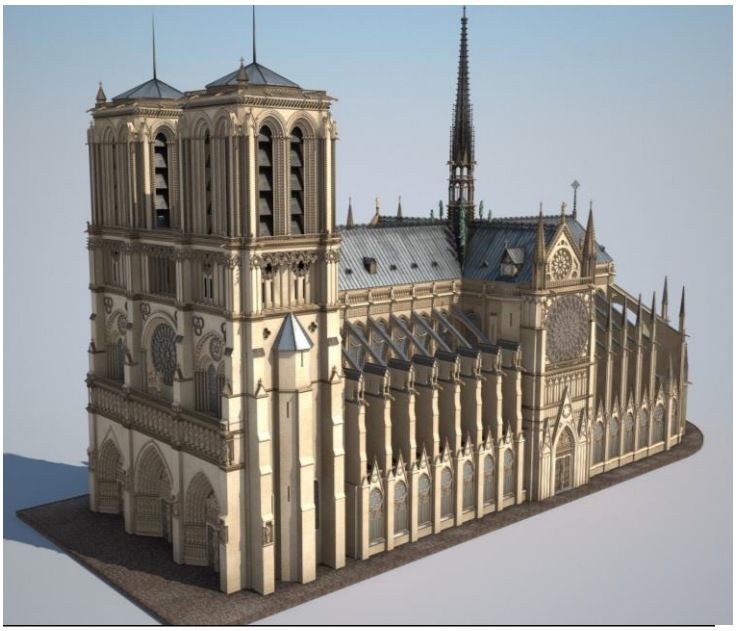

REIMS CATHEDRAL