



ENGINEERING MARVEL ARCHITECTURE CAPTURES HERITAGE OF ANGKOR WAT OF CAMBODIA

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ABSTRACT

Angkor Wat is the world's largest religious complex, built in the 12th century by King Suryavarman II as a Hindu temple to honor Vishnu. It later transitioned into a Buddhist shrine. This is a mixture of Architectural Masterpiece, Cosmological Blueprint, Cultural History and Spiritual Evolution. Angkor Wat is the largest religious monument in the world. Built in the 12th century by the Khmer Empire, it is profoundly important as a masterpiece of classical architecture, a symbol of Cambodian national identity, and an enduring bridge between the Hindu and Buddhist faith. Architectural & Engineering Marvel: Built as a representation of Mount Meru (the home of the gods) in Hindu and Buddhist cosmology, it spans over 400 acres. The scale is staggering—its construction required millions of tons of sandstone quarried from 40 kilometers away, all fitted together without the use of mortar. Religious & Cultural Evolution: Constructed by King Suryavarman II as a Hindu temple dedicated to Vishnu, it was gradually transformed into a Theravada Buddhist site by the late 13th century. It remains an active, revered center of worship today. Historical Archive: The temple's sprawling walls are covered in thousands of intricate bas-reliefs that offer an unparalleled visual history of the Khmer Empire's daily life, military might, and mythological legends. Symbol of a Nation: Angkor Wat is the supreme cultural icon of Cambodia. It is so deeply woven into the country's identity that it has been featured on the Cambodian national flag since 1863. Global Heritage: Recognized as a UNESCO World Heritage Site, it represents a high point of human civilization and remains a vital economic driver for modern Cambodia's tourism industry.

KEYWORDS: heritage, cultural, marvel, religious, deity.

INTRODUCTION

Angkor Wat, located in Siem Reap, Cambodia, is the largest religious monument in the world. **Angkor Wat**, **Angkor Thom** and **Ta Prohm** are the 'big three' that visitors invariably want to experience. Located on a site measuring 162.6 hectares (1.6 km²; 401.8 acres) within the ancient capital of Angkor. Built in the 12th century by King Suryavarman II [Born: 1094 or 1098 AD; Died: 1150 AD; Reign: 1113–1150 AD], it is a masterpiece of Khmer architecture, celebrated for its staggering scale,

perfect symmetry, and miles of intricate, hand-carved bas-relief. Angkor Wat is located in Cambodia, the famous temple complex is situated in the city of Siem Reap in the country's northern region. It is the largest religious structure in the world and serves as a major cultural and historical symbol for the nation.^[1-4]



Figure-1: Map of Cambodia.

□ **Unprecedented Scale:** Spanning over 400 acres, the complex is so massive that it is visible from space. It is estimated that building Angkor Wat took roughly **30 years** and required over **300,000 workers**.

□ **Cosmological Architecture:** The temple is designed as a "temple-mountain" to represent Mount Meru, the mythical home of the gods in Hindu and Buddhist cosmology. Its five iconic central lotus-towers represent the peaks of the mountain, while the massive surrounding moat symbolizes the cosmic ocean.

□ **Westward Orientation:** Unlike the vast majority of Hindu and Khmer temples—which traditionally face east—Angkor Wat faces west. Scholars believe this is because it was intended to serve as a funerary temple for King Suryavarman II, as the west is associated with death and the setting sun.

□ **A Living Heritage:** Though originally built as a Hindu temple dedicated to the god Vishnu, it gradually transformed into a Buddhist shrine in the late 13th century. Unlike many ancient ruins, it was never completely abandoned; it has remained an active place of worship for centuries and holds profound spiritual significance for the Cambodian people.

□ **Engineering Marvel:** The entire monument was constructed with millions of heavy sandstone blocks. These stones were quarried more than 25 miles away and transported using an elaborate canal network. The blocks were fitted together with such precision that mortar was rarely used, relying instead on gravity and tight interlocking joints.



Figure-2: Aerial view & Entrance gate.

Angkor Wat has four main entry gates (gopuras) facing the cardinal directions, though only the West and East gates feature causeways across the massive outer moat. The West Gate serves as the grand, iconic main entrance used by the majority of visitors, while the East Gate provides a quiet alternative to avoid crowds. Angkor Wat has 5 lotus-shaped towers (known as prasats) at its centre, designed to mimic the five peaks of the mythical Mount Meru. Angkor Wat is the world's largest religious structure, covering some 400 acres (160 hectares), and marks the high point of Khmer architecture. The five central towers of Angkor Wat symbolize the peaks of Mount Meru, which according to Hindu mythology is the dwelling place of the gods. Angkor Wat is originally and primarily dedicated to the Hindu god Vishnu. Commissioned in the 12th century by King Suryavarman II, it served as the king's state temple and a symbolic representation of Mount Meru, the mythical home of the Hindu gods.^[5-8]

Here are a few quick facts about the temple's Hindu roots

The Deity: Vishnu is known as the "Protector" or "Preserver" in the Hindu trinity. The temple's grand central shrine originally housed a sacred statue of him.

The Design: The temple's five towers mimic the peaks of Mount Meru, and its massive outer moat represents the cosmic ocean.

The 5 lotus-shaped structures at Angkor Wat refer to its iconic central towers. They are designed as closed lotus buds rather than open flowers.

These towers are architecturally and symbolically significant

Symbolism: They represent the five peaks of Mount Meru, the sacred, mythical mountain at the centre of the universe in Hindu and Buddhist cosmology.

Layout: They are arranged in a quincunx (four corner towers surrounding one central, highest tower), mirroring the centre of the universe on Earth.

Architecture: The towers rise to a height of 65 meters and are built in progressively rising tiers, symbolizing the ascent to the realm of the gods.

The Art: The detailed bas-reliefs carved into the temple walls depict stories from Hindu epics, including the Ramayana and the Mahabharata. Angkor Wat literally translates to "City of Temples" in the Khmer language. Angkor derives from the Sanskrit word *nagara*, meaning "city" or "capital". Wat is the Khmer word for "temple grounds" (derived from the Sanskrit *vata*, meaning enclosure). Angkor is a Khmer word meaning "city" or "capital". It is a localized, vernacular form of the Sanskrit word *nagara*. The term is most famously associated with the medieval Khmer Empire in Cambodia (spanning the 9th to 15th centuries) and the vast archaeological region where the empire's capitals were located. Angkor Wat was originally built in the 12th century as a Hindu temple dedicated primarily to the god Vishnu. Commissioned by King Suryavarman II, the temple represented Mount Meru, the home of the gods, and featured a massive, eight-armed statue of Vishnu in its central sanctuary.



Figure-3: Angkor Wat Temple having five lotus bud shaped towers.

Etymology and Linguistic Roots: Sanskrit origin: *Nagara* (नगर). Vernacular Khmer: *Nokor* was shortened and slurred in common speech to *Angkor*, meaning simply "city" or "city of temples". When people use the word "Angkor," they are usually referring to its most famous monuments: Angkor Wat: The largest religious monument in the world. The name translates to "Temple City" or "City of Temples" in the Khmer language

(Angkor + Wat, which means temple). It was built in the early 12th century by King Suryavarman II, originally as a Hindu temple dedicated to Vishnu.

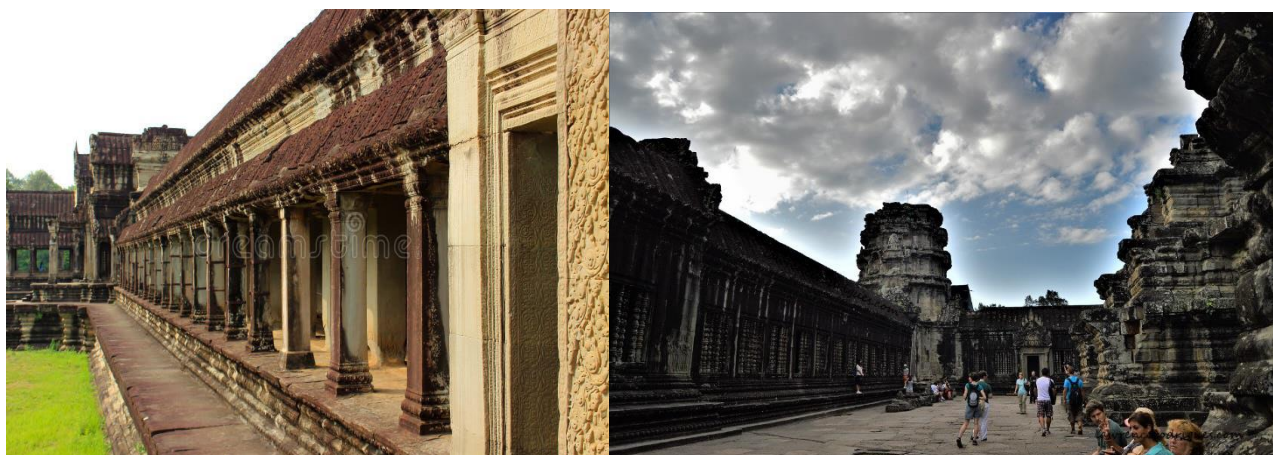


Figure-4: Corridor of Angkor Wat.

Angkor Thom: The last and most enduring capital city of the Khmer Empire, famous for the smiling stone faces built by King Jayavarman VII.

The Angkorian Period: In history, the "Angkorian period" refers to the golden age of the Khmer civilization from 802 CE to 1431 CE. It began when King Jayavarman II declared himself a "universal monarch" and came to an end after the city was sacked by invaders, causing the empire to relocate south toward present-day Phnom Penh. Wat is the Khmer word for "temple grounds" (derived from the Sanskrit vata, meaning enclosure). Commissioned in the 12th century by King Suryavarman II, this massive 400-acre complex in Cambodia is the largest religious monument in the world. **Deeper Meaning & Symbolism.**

Original Hindu Significance: Originally dedicated to the Hindu god Vishnu, the architecture is a microcosm of the Hindu universe. Its five central towers represent the peaks of Mount Meru (the home of the gods), while the vast outer moat represents the cosmic oceans.

The "Sacred Dwelling": Although its true name is unknown, inscriptions suggest it may have been originally referred to as Vrah Viṣṇuloka or Parama Viṣṇuloka, meaning "the sacred dwelling of Vishnu". This title was intended to honor the deity as well as deify the King after his death. **Buddhist Transition:** In the late 13th century, it shifted from a Hindu state temple to a Theravada Buddhist shrine, a role it continues to serve today.^[9-12]



Figure-5: Deity of Vishnu at Angkor Wat & Sculpture.

Angkor Wat is open for worship and visitors daily from 5:00 AM to 6:00 PM. The extended morning hours are specifically designed to allow visitors and worshippers to enter the complex in time for the famous sunrise. **The Upper Tier (Bakan):** While the main grounds are accessible from 5:00 AM, the central sanctuary and highest level usually have restricted hours, allowing entry from 7:30 AM to 5:00 PM. Access is also limited on Buddhist holy days. It was originally built as a Hindu

temple dedicated to the god Vishnu, breaking the previous kings' tradition of worshipping Shaiva. It gradually turned into a Buddhist temple towards the end of the 12th century and is still used for worship today.

Dress Code: As an active religious site (Hindu and Buddhist), modest attire is strictly enforced. Shoulders and knees must be covered.

The corridors of Angkor Wat (located in Siem Reap, Cambodia) feature miles of covered galleries constructed from solid sandstone and laterite. The most renowned passageways, like the Bas-Relief Gallery, stretch for over

800 meters and are adorned with intricately carved stone walls depicting ancient Hindu epics, such as the Ramayana and Mahabharata.

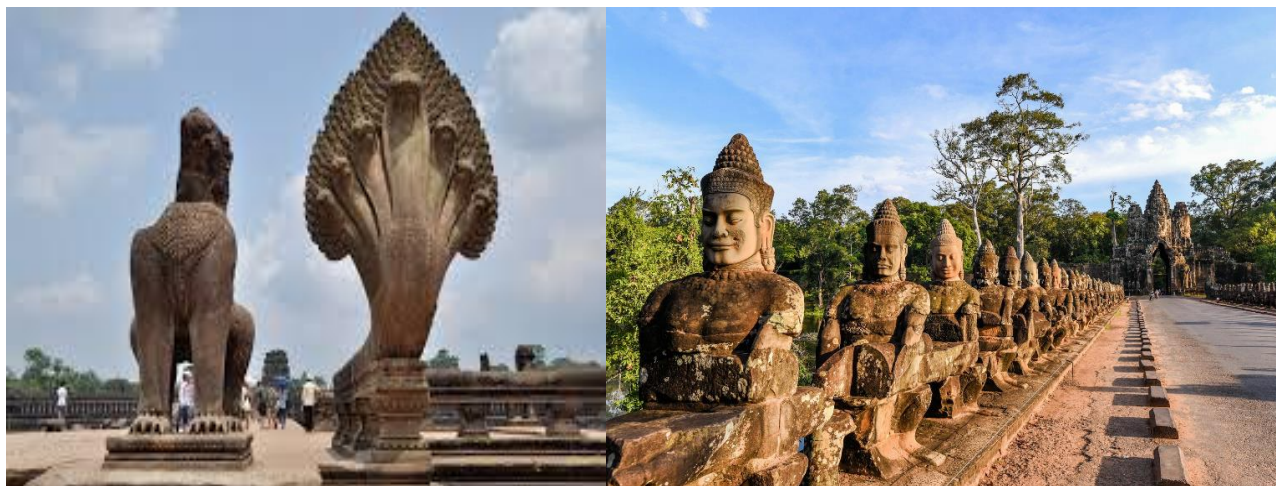


Figure-6: Seven headed snake & Entrance Idols.

1. **Angkor Wat** is a Vaishnava Hindu and Theravada Buddhist temple complex in Siem Reap, Cambodia, and the largest religious complex in the world.

2. **Angkor Thom** (meaning "Great City" in Khmer) is the last and most enduring royal capital of the Khmer Empire. Established in the late 12th century by King Jayavarman VII, the 9km².

3. **Ta Prohm** is the modern name of a temple near the city of Siem Reap, Cambodia, approximately one kilometre east of Angkor Thom and on the southern edge of the East Baray. It was built in the Bayon style largely in the late 12th century and early 13th century and was originally called Rajavihara. It was founded by the Khmer King Jayavarman VII as a Mahayana Buddhist monastery and center of learning dedicated to his mother. Almost 80,000 people were required to maintain or attend at the temple, including over 2,700 officials and 615 dancers.

The Shifting Deities of Angkor Wat

The temple's religious focus evolved significantly over time

Hindu Origin: The temple was built to honour Vishnu, the Hindu "Protector". Its bas-reliefs depict scenes from Hindu epics like the Ramayana and the Mahabharata, including the famous "Churning of the Ocean of Milk".
The "Sacred Dwelling": Although its true name is unknown, inscriptions suggest it may have been originally referred to as Vrah Viṣṇuloka or Parama Viṣṇuloka, meaning "the sacred dwelling of Vishnu". This title was intended to honor the deity as well as deify the King after his death. Originally dedicated to the Hindu god Vishnu, the architecture is a microcosm of the Hindu universe. Its five central towers represent the peaks of Mount Meru (the home of the gods), while the vast outer moat represents the cosmic oceans.



Figure-7: Angkor Thom and Ta Prohm.

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□ **Buddhist Transition:** Toward the end of the 12th century, the Khmer Empire began transitioning to Buddhism. The site gradually shifted into a Theravada Buddhist temple, with statues of Buddha added to its halls. In the late 13th century, it shifted from a Hindu state temple to a Theravada Buddhist shrine, a role it continues to serve today.

□ **Devaraja Cult:** The temple is also tied to the Devaraja (God-King) cult, which linked the divine authority of the Khmer kings to Hindu deities like Shiva and Vishnu.



Figure-8: Angkor Wat entrance gate & Gopuram.

Angkor Wat's main temple primarily features West and East entrances. The "North" entry usually refers to the **North Gate** of Angkor Thom (a famous ancient city just north of Angkor Wat) or the north side of the Angkor Wat complex. The **South Gate** of Angkor Thom is the most famous and best-preserved entrance to the ancient royal city, located just 1.7 km north of the main Angkor Wat complex. It is an iconic gateway built by King Jayavarman VII featuring 54 stone giants on a causeway

and four colossal smiling faces. The Angkor Wat **East Gate** is a tranquil, crowd-free alternative to the main West Entrance. It features a scenic, unrestored causeway across the moat and a wooden bridge, making it perfect for avoiding the massive sunrise crowds or enjoying a peaceful sunset. The **West Entrance** (or West Gopura) is the main, iconic point of entry to Angkor Wat in Siem Reap, Cambodia. Unlike most Hindu temples that face east, Angkor Wat faces west.



Figure-9: Idols of dancing apsara in Angkor Wat.

CONCLUSION

Khmer primarily refers to the native people of Cambodia and the official language they speak. It is a major Austro-Asiatic language with over 16 million speakers, originating from the ancient Khmer Empire.

The name Angkor Wat literally translates to "City of Temples" in the Khmer language. Angkor: Comes from the Sanskrit/Pali word nagara, meaning "city" or "capital". Wat: Is the Khmer word for "temple grounds". Angkor Wat is a monumental microcosm of the universe, originally built in the 12th century by King Suryavarman II as a dedicated Hindu temple and mausoleum, before later transitioning into a Buddhist site. Its architecture, layout, and art carry profound religious, cosmic, and royal significance. Angkor Wat is often celebrated as the "Eighth Wonder of the World". While it is not one of the official New Seven Wonders, it is the largest religious structure in the world and a designated UNESCO World Heritage Site. Located in Cambodia, Angkor Wat is the world's largest religious monument. Originally built in the 12th century as a Hindu temple dedicated to Vishnu, it later became a Buddhist site. Widely celebrated as the "Eighth Wonder of the World", it is an unparalleled masterpiece of Khmer architecture. The corridors (galiyara) of Angkor Wat are expansive, pillared galleries that wrap around the temple's multiple levels. They are famous for their high vaulted ceilings, intricately carved square columns, and the world's longest continuous bas-reliefs, which depict scenes from Hindu epics and the history of the Khmer Empire.

Exploring the gallery corridors involves stepping into specific architectural marvels.

The Bas-Relief Galleries (Lower Level): This outer corridor stretches nearly 800 meters and features eight massive sections of detailed carvings. The most famous sections include the Churning of the Ocean of Milk and the Battle of Lanka (from the Ramayana).

Cruciform Gallery (Thousand Buddha Gallery): Located on the upper level, this intersection of corridors once housed hundreds of Buddha statues (though many were removed or damaged over the centuries).

Corbelled Ceilings: The walkways are a masterpiece of Khmer engineering. They feature corbelled (stepped) stone roofs without mortar, intricately carved with lotus flower rosettes.

The Angkor Wat gopura refers to the massive entrance gateways at the world's largest religious monument in Siem Reap, Cambodia. These ornate, multi-tiered pavilions serve as ceremonial checkpoints, featuring intricate bas-reliefs, dancing apsaras, and grand causeways spanning the surrounding moat. The outer perimeter wall of Angkor Wat contains gopuras at all four cardinal directions, but the structure is uniquely oriented to the west. The primary architectural highlights

of these gates include: The Western Gopura: The grandest and main entrance. It spans approximately 240 meters, features five separate entrances, and includes an imposing central corridor. It contains historical 18th-century monk paintings, decorated false doors, and the revered Ta Reach statue. The East Gopura: A smaller, unrestored gate built with a different type of sandstone, fronted by an equally unrestored causeway. The North and South Gopuras: Smaller, identical gates that are approximately 56 meters long and feature rich eaves, cornices, and exterior carvings.

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