

# Roman Architecture

The Pinnacle Of  
Architecture



# Contents

<i>Roman Architecture</i> .....	4
<i>Roman Collesuem</i> .....	6
<i>Aquaduct system - Mountain to City</i> .....	7
<i>The Panthon</i> .....	8

# Roman Architechture

## Pillers concrete and materials

The Romans were the ultimate combination of all the Mediterranean civilizations and created great buildings that were very intricate. Romans liked the idea of arches unlike the Greeks who defied arches. Romans also built mausoleums out of brick and stones with interior walls including rooms. The Romans loved to use pillars, and to make the pillars they would use concrete which was new at the time, faced with travertine marble. These buildings would also incorporate volcanic stone which

would explain why they liked to live next to volcanoes. They also used travertine white limestone which was available from quarries near tivoli. It allowed precise carvings and had more load bearing strength and was used for paving, doorways, window frames, and steps. There are three types of pillars called ionic doric and corinthian. They created the basilica, triumphal arch, aqueducts, and amphitheater. The Romans also created the tuscan column which was an adaptation of a doric column, but had a smaller capital, more slender shafts without flutes and a molded base. This column was mostly used in domestic architecture such as peristyles and verandahs. The Romans also created the groin and barrel vaults. The groin vaults were 2 groin arches put together and made a 4 way passageway while the barrel vaults

are just tunnels or 1 single passage way. Roman buildings incorporated concrete which began in the first century BCE. In the first concrete walls the workers would fill a framework of rough stones with concrete which was stone rubble soaked in a binder made from volcanic sand and clay. This method was called Opus Incertum. The next method they used was called Opus Reticulatum. This method used as a framework is a diagonal web of smallish, pyramidal concrete bricks in a cross pattern. Then by the first century CE they were setting the bricks in level courses, pointed ends inward, in a technique called Opus testaceum. The bricks were then veneered, with Marble, Stone, Mosaic, etc. This allowed the Romans to be more free with their architecture. This allowed

archeologists to find the architecture. There are three types of pillars called ionic doric and corinthian. They created the basilica, triumphal arch, aqueducts, and amphitheater. The Romans also created the tuscan column which was an adaptation of a doric column, but had a smaller capital, more slender shafts without flutes and a molded base. This column was mostly used in domestic architecture such as peristyles and verandahs. The Romans also created the groin and barrel vaults. The groin vaults were 2 groin arches put together and made a 4 way passageway while the barrel vaults are just tunnels or 1 single passage way.



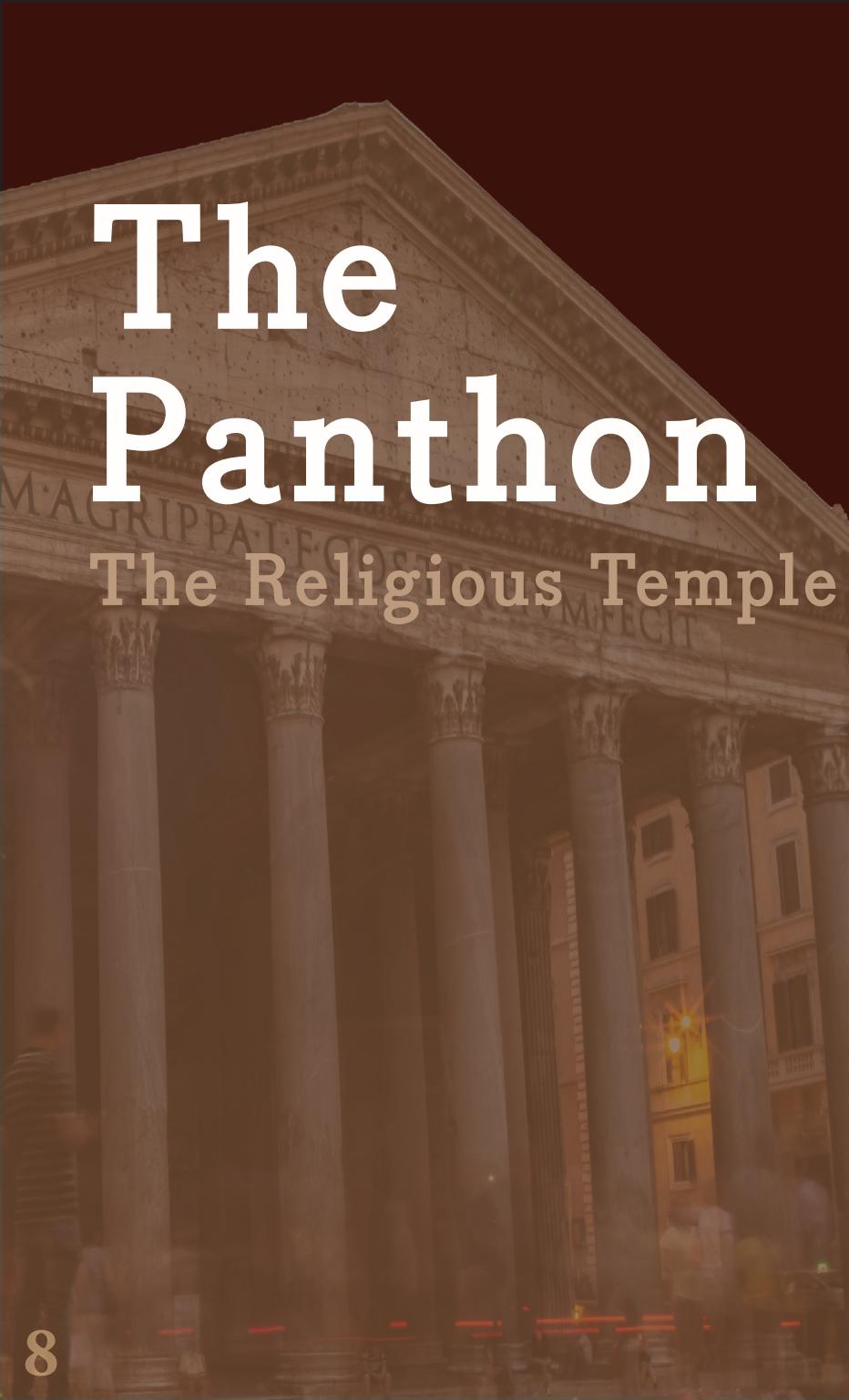
# Roman Collesuem

The Center of Roman architecture

# Fights



This allowed buildings like the Colosseum to be made. The Colosseum's construction started during the reign of Vespasian. It began in 72 CE and was dedicated to Titus in 80 CE after Vespasian died. The Colosseum's dimensions are 615 by 510 feet and 159 feet tall. The Colosseum was the largest amphitheater in the Roman world and a free standing structure made of stone and concrete. The Colosseum held many events like, animal hunts and fights to the death. The Colosseum had built in mechanisms and hidden rooms underneath to make the events run smoothly. The intersection of the entrance tunnels is called a groin vault. Each story contained a different style of column starting with doric, then ionic and finally corinthian. The Colosseum had an attic story that would have gilded bronze shield-shaped ornaments called cartouches that were supported by corbels. The Colosseum had tons of decorative elements but was a marvel of architecture and art.



# The Panthon

## The Religious Temple

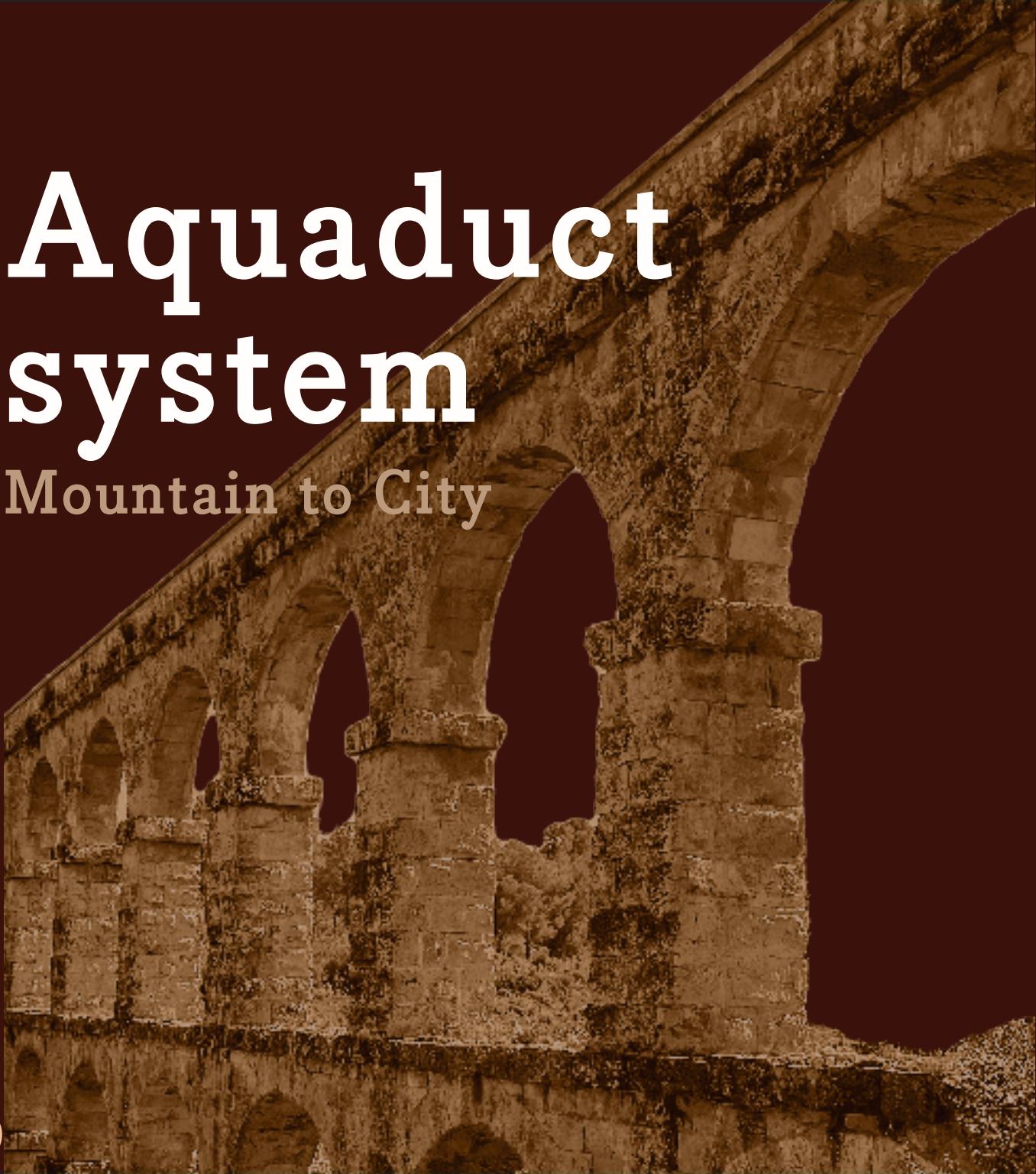
The pantheon was another great piece of roman architecture because it was both religious and political, probably as a building of the ordinary Classical temple type rectangular with a gabled roof supported by a colonnade on all sides. It is a circular building of concrete faced with brick, with a great concrete dome rising from the walls and with a front porch of Corinthian columns supporting a gabled roof with triangular pediment. Beneath the porch are huge bronze double doors, 24 feet (7 metres) high, the earliest known large examples of this type. The Pantheon is remarkable for its size, its construction, and its design. The dome was the largest built for it's time, measuring about 142 feet (43 metres) in diameter and rising to a height of 71 feet (22 metres) above its base. There is no external evidence of brick arch support inside the dome, except in the lowest part,

# Gods

and the exact method of construction has never been determined. Two factors, however, are known to have contributed to its success: the excellent quality of the mortar used in the concrete and the careful selection and grading of the aggregate material, which ranges from heavy basalt in the foundations of the building and the lower part of the walls, through brick and tufa (a stone formed from volcanic dust), to the lightest of pumice toward the centre of the vault. In addition, the uppermost third of the drum of the walls, seen from the outside, coincides with the lower part of the dome, seen from the inside, and helps contain the thrust with internal brick arches. The drum itself is strengthened by huge brick arches and piers set above one another inside the walls, which are 20 feet (6 meters) thick. The porch is conventional in design, but the body of the building, an immense circular space lit solely by the light that floods through the 27-foot (8-meter) "eye," or oculus, opening at the centre of the dome, was revolutionary; possibly this was the first of several great buildings of antiquity that were designed to favor the interior rather than the exterior. In contrast to the plain appearance of the outside, the interior of the building is lined with coloured marble, and the walls are marked by seven deep recesses, screened by pairs of columns whose modest size gives scale to the immensity of the rotunda. Rectangular coffers, or indentations, were cut in the ceiling, probably under Severus, and decorated with bronze rosettes and molding.

# Aqueduct system

Mountain to City

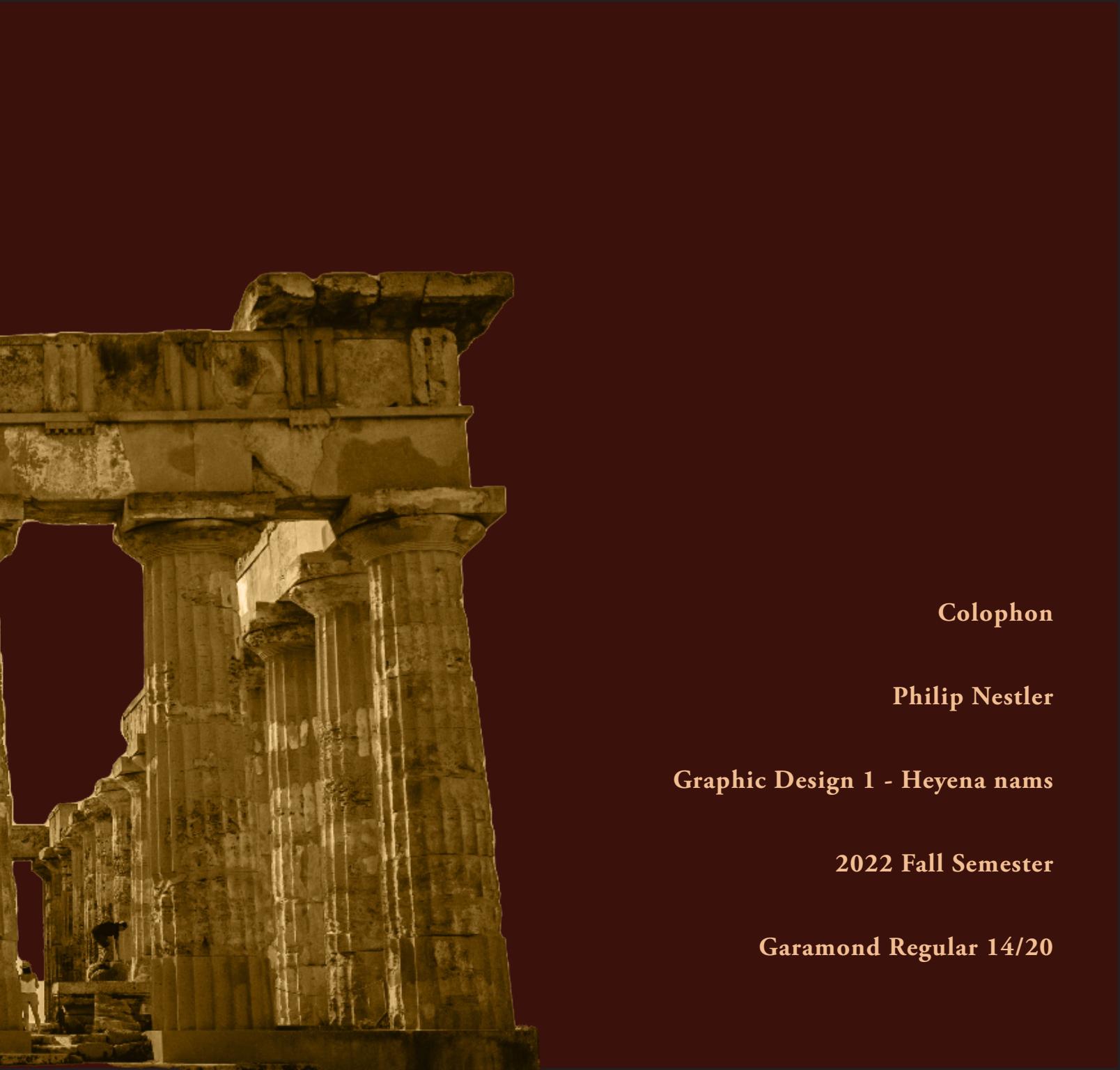


# Water

Another architectural marvel that the Romans built was aqueducts. The aqueducts required a great deal of planning. This was because they were made from a series of pipes, tunnels, canals, and bridges. They supplied cities with fresh, clean water for baths, fountains, and drinking water for ordinary citizens. Gravity and the natural slope of the land allowed aqueducts to move water. The aqueducts took over 500 years to be built and both with public and private funds. The bridges built used rounded stone arches but only made up a small portion of aqueducts. Rome had around 11 aqueducts supplying water from 92 kilometers or 57 miles. Some aqueducts still work such as the aqua virgo, which supplies water to a fountain in the heart of the city.

of  
the  
city  
and  
the  
water  
was  
supplied  
by  
several  
large  
aqueducts  
which  
brought  
water  
from  
various  
sources  
such  
as  
rivers  
and  
lakes.  
The  
most  
famous  
of  
these  
was  
the  
Aqua  
Virgo,  
which  
supplied  
water  
to  
the  
Fountain  
of  
Mars  
in  
the  
Forum  
of  
Augustus.  
The  
aqueduct  
was  
constructed  
around  
19  
BC  
and  
was  
about  
10  
km  
long.  
It  
was  
made  
of  
stone  
and  
had  
a  
slope  
of  
about  
1  
in  
1000.  
The  
water  
was  
carried  
in  
a  
series  
of  
tunnels  
and  
channels  
through  
the  
mountains  
and  
valleys.  
The  
aqueduct  
was  
used  
until  
the  
5th  
century  
AD  
when  
it  
was  
abandoned  
due  
to  
the  
collapse  
of  
the  
empire.  
Today,  
the  
remains  
of  
the  
aqueduct  
can  
still  
be  
seen  
in  
Rome,  
Italy.





**Colophon**

**Philip Nestler**

**Graphic Design 1 - Heyena nams**

**2022 Fall Semester**

**Garamond Regular 14/20**

