The Stellar-mass Blackholes → When a star burns through the last of its fuel, the object may collapse, or fall into itself and when this happens, it causes a supernova (in which gravity compresses its core suddenly & violently). For smaller stars (depending on its mass) (those up to about 2 times of the Sun's mass), the new core will become a Neutron star or a White dwarf. But when a larger star collapses, it continues to compress and creates a Stellar-mass Blackhole. These blackholes have masses ranging from a minimum of about 5 times to 60 times of the Sun's mass. After formation, it can continue to grow by consuming the dust & gas from their surrounding galaxies, which keeps them growing in size.

The Supermassive Blackholes →

The largest Blackholes are called "Supermassive". These enormous blackholes are millions or even billions of times as massive as the Sun in terms of masses (Solar Mass - $M_\odot$ → is a standard unit of mass in astronomy, equal to the mass of the Sun, approx. 2×10^{30} kg.) but are about the same size in diameter. Scientists have found proof that every large Galaxy contains a Supermassive Black hole at its centre (eg → Milkyway → Sagittarius A*.) Scientists think Supermassive Blackholes were made at the ~~same time as the Galaxy they are in~~ early history of the Universe (when Galaxy made) from huge collapsing clouds of interstellar (तारों के मध्य का) hydrogen, although their exact origin is unclear.

The Intermediate (Goldilocks) Blackholes → In the past it was believed that Supermassive Blackholes started as Stellar-mass blackholes that accreted matter over time. But space telescopes such as Hubble & ESA's XMM-Newton have observed Supermassive Blackholes in the early universe,

where they wouldn't have had time to grow from small stellar-mass blackholes. The answer is likely to be Medium-Sized Intermediate mass black holes, which grows more quickly, or merged with eachother to become the Supermassive Blackholes. Such bodies (Intermediate Black holes) Could form when stars in a cluster collide in a chain reaction. (घटनाओं की श्रृंखला जिसमें प्रत्येक घटना अगले घटना का कारण बनती है) Scientists announced the discovery of an Intermediate-mass Blackhole in 2021 and suggested that these Blackholes may exist in the Heart of the Dwarf Galaxies with a mass of 26,000 to 55,000 ~~Always~~ to 3,00,000 suns.

(previous is in - page no. 20) Einstein also predicted "Gravitational Waves" — ripples in the fabric of Space-time emitted during the most powerful events in the Universe, such as pairs of Blackholes Coming together and merging. A Blackhole merger was first detected in 2015 by LIGO (Laser Interferometer Gravitation-Wave Observatory), which measured the gravitational waves created by giant collision. LIGO's observations also provide insights into the direction a Blackhole spins & how the Binary Blackholes form. on 10th april (2019), the First direct image of a Blackhole and its vincinity (आस-पास) was published following observations made by the Event Horizon Telescope (EHT) in 2017 of the Supermassive Blackhole in Messier 87's galaxy.
