Upon death the little energy (soul) left our body - does it end up in a black hole? In my lifetime I will not know. It is really exciting that we can go as far as light reaches before light disappears. Physicists can explain your travel path almost to the event horizon of the black hole. By definition, a black hole eats everything even light, Physics can prove up to light photons before entering the black hole. Nevertheless, physics can prove that Earth is not a black hole by classical equations of motion, energy, etc.

You need to hit a tennis ball harder and harder at about 25000 mph to escape the earth's gravitation, any less velocity will pull the tennis ball back by earth's gravitational force. There is a force of attraction between two masses (the earth and tennis ball in our case) that is inversely proportional to the distance square. An apple falls from the tree and stops at the ground due to its potential energy. All object (such as a tennis ball) has Potential energy (PE) which is inversely proportional to the distance between the two objects (the distance between the center of the tennis ball and the center of the earth). I wonder if it is true between two people who love each other, as distance grows physical attraction goes down much faster than mental attraction.

Now going back to the force and energy, we can conclude if enough kinetic energy (KE) (velocity around 25000 mph in our case) is given to the object (tennis ball) to escape Earth's gravitational pull. But if potential energy (PE) wins object will fall back to earth, thereby gravity wins. At the end of the journey its velocity, total energy KE, and PE are zero.

Earth is not a black hole because escape velocity is not even .01% of light speed. Let us see the larger picture, of how the earth would look if it were a black hole.
The question is how small the radius of the earth can be when escape velocity is more than the speed of light. The calculation will result - the earth must be compacted to the size of a coin. So dense it is unimaginable.

An apple falls from the tree and stops at the solid wooden bucket on the ground due to its loss of energy. The question is why Earth's gravity can't pull the tennis to squash the wooden bucket. Had the bucket been a soft material of foam it could have made a dent on the basket. The internal energy of the tennis ball (composite material) reacts against the basket so gravitational force has not much effect except holding them on the ground surface. As you are well aware everything is about force.

Scientists found there are 4 fundamental forces of nature:-
Electromagnetism
Gravitation
Strong interaction
Weak interaction.
Everything in the universe is bound by these forces.

The inherent forces of the nuclear and molecular objects (such as an apple or tennis ball) hold against the earth's gravitational force, the object will stop on the earth's surface.

Scientists' calculation shows Earth only exerts a 10-newton (not huge) force on a 1kg object, but an imaginary black hole Earth with only an 8 mm diameter and unimaginably dense with an entire mass of the Earth will exert billions of newton gravitational force so all surrounding objects will push further and further and tried to squeeze the imaginary black hole earth mass to a singularity.
Mathematically, Schwarzschild proved an imaginary boundary around the singularity point.

Does Indian mythology refer to the existence of black hole existence implicitly? The mythological destruction of the universe is known as pralaya, and it is believed that everything in the universe is destroyed and absorbed back into the ultimate reality (creator of the universe-Brahman. This idea of absorption is analogous to the concept of black holes). If multi-verse exists then GOD is so far away so our attention should be on the reality of modern-day physics including astrophysics.

The imaginary boundary of the radius is the event horizon of a black hole. The concept of the black hole lies in special relativity (speed of light) and general relativity (mix of gravity) by Einstein around early 1900. We find that light that is emitted inside the Schwarzschild radius cannot escape. Once inside the Schwarzschild radius, everything plunges inevitably to the central singularity. As everything goes inside the mass of singularity increases, the ability to observe even a photon decreases as the Schwarzschild radius increases. Around 1916 this gravitational radius is defined as the event horizon of Schwarzschild black hole. Understanding the physics of electric charge, the momentum of mass, and cosmological constant are required. Frankly speaking, I don't have. All the gifts humanity got as special relativity which gives us relations of space, time, mass, and energy, then the explanation of gravity by general relativity. In 1930 Mathematics behind black holes took shape when astrophysicist Subrahmanyan Chandrasekhar was using Einstein’s theory of special relativity for far away objects.

The concept of spaceTime is not an everyday job, but its understanding is needed to accept the existence of a black hole.

Newtonian equation denotes gravity as a force. The general relativity theory considers gravity not as a force, but as a consequence of the curvature of spacetime.
Newtonian Gravity concept didn’t consider acceleration. Einstein's Gravity concept added the effect of acceleration.

Einstein felt that x, y, and z coordinates are not enough to define any entity/object, the time factor must be added to the calculation. He realized space and time (spacetime) as an integral part of the entity.

But gravity creates acceleration. So space will be a curved line. So Einstein thought space was a curved space. His idea is the movement of mass distorts the space. The bigger the mass creates more distortion of space.

Einstein’s general theory of relativity says –

Time and space are neither flat nor fixed; they are curved and distorted by mass and energy. The gravitational effect is minuscule due to the acceleration when objects are close. Therefore concept and equation of Newtonian Gravity are quite appropriate to use at close orientation. So, every day's physics is fine. Truly speaking using the classical equation gives only a fractional error with a faraway star.
$R\mu\gamma - \frac{1}{2} g\mu\gamma R + g\mu\gamma \Lambda = 8\pi G/C4 T\mu\gamma$. I don't understand but added to explain the following two lines.

The left side of the equation relates to the curvature of the spacetime (It tells mass and energy how to move).

The right side of the equation relates to mass and energy. (It tells spacetime how to curve)

To understand more read Advanced Physics from many websites and books.

please read this link https://usbengalforum.com/gravity-concept/

In the latter half of the 20th century, eminent theoretical scientists, including Steven Hawking at Cambridge, John Wheeler and Jacob Bekenstein at Princeton, Chandrasekhar, and Robert Wald at the University of Chicago, and many others, explored the details of mathematics and physics behind black holes. Confirmation of their existence by the detection of gravitational waves and direct imaging of the event horizon of the black hole in the nearby galaxy M87 are landmarks.

Going forward with the Blackhole. We must not forget Aryabhata (ad 476) is one of the greatest mathematicians and astronomers of ancient India and the Islamic world in particular Al-Kindi (c. 801–873), Ibn Sahl (c. 940-1000), and Ibn al-Haytham (965–1040).

As a massive black hole evaporates, it slowly shrinks and, as it loses mass, the rate of particles escaping also increases until all the remaining energy escapes at once. Could it cause a big bang? Could it create our universe which in turn created many black holes?

The patented first telescope came around 1600 during Galilo's time, did anyone realize then that science and technology started to see the universe's birth pictures through the telescope? Thermal imaging can take pictures of black holes, galaxies, etc. Just to name a few two space telescopes — Webb and Chandra use a technique called gravitational lensing. But the fundamental technique of seeing black holes is still seeing the movements around the black holes. Someday GOD may allow us to see inside of black holes.

Black holes can be of different sizes, a very old giant one was almost 13.2 billion years ago close to the birth of our universe, seen and analyzed by the James Webb Space Telescope and Chandra X-ray telescope.
In the 1960s, quasars were discovered—faraway objects that were emitting such strong

radiation that there was no explanation other than gigantic black holes chewing up and spitting out matter.

A quasar is an event created by a black hole when it has sucked in so much matter. The matter is then super heated and expelled by the black hole creating energy that is a trillion times that of our sun, this is what we call a quasar.