a) World Coordinate System

Global reference frame that all objects in the scene use to define their position, rotation, and scale. It is a fixed system where the axes are aligned with the Unity scene. For example, if you move an object along the world’s X-axis, it will always move in the same direction relative to the world, regardless of the object’s orientation. If you place a rocket at (0, 0, 0) in world coordinates, its position will be at the origin of the scene, which is the center of the world coordinate system.

b) Local Coordinate System

Specific to each object and moves with the object as it rotates or changes position. The local axes are defined relative to the object's orientation. Moving an object along its local X-axis, for example, will move it in a direction that is aligned with the object's forward-facing direction. If a rocket is rotated 45 degrees to the right, moving it along its local X-axis will cause it to move diagonally in the world, rather than horizontally.

c) Vector3

Data structure that holds three float values representing a position or direction in 3D space (x, y, and z coordinates). Vector3 is widely used to define positions, directions, and forces. Vector3.up: This vector represents the direction pointing upward, with values (0, 1, 0).Vector3.forward: This vector represents the forward direction in world space, with values (0, 0, 1).

d) Rigidbody.AddRelativeForce Function

Applies a force to a Rigidbody component relative to the object's local coordinate system, meaning the force will be applied based on the object's current orientation. This is useful for applying forces in the direction an object is facing. Applying AddRelativeForce(Vector3.up) to a rocket will push the rocket upward in its local space, regardless of its orientation in the world.

e) Input.GetKey Function

Used to detect if a specific key on the keyboard is being pressed during the current frame. It returns true as long as the specified key is held down. This function is commonly used for player input in games. Using “if (Input.GetKey(KeyCode.Space)) {“ , the code will execute when the spacebar is held down.