Justification of Development Choices:

Mug: The mug is the primary subject of the 2D image and serves as the central point of interest. By creating the mug with a combination of basic geometric forms, it not only demonstrates the use of these forms but also provides a realistic representation of the 2D image.

Table: A table is essential to ground the scene and provide a platform for the objects. Using a simple plane primitive shape for the table achieves this purpose effectively without distracting from the main objects.

Saucer: Including a saucer complements the cup and adds visual appeal to the scene. By using a torus primitive shape for the saucer's rim, it mimics the circular edge of a real saucer.

Spoon: Adding a spoon introduces another element to the scene, showcasing the use of additional primitive shapes (cylinder and flattened cube). This enhances the scene's complexity and visual interest.

User Navigation in the 3D Scene:

In this 3D scene, the user can navigate using a combination of mouse and keyboard inputs:

Mouse: The mouse allows the user to control the camera's rotation. By moving the mouse while holding down a mouse button, the user can look around and explore the scene from different angles.

Keyboard: The keyboard provides controls for camera movement. The user can use arrow keys or WASD keys to move the camera forward, backward, left, and right within the scene. Additionally, the user can use the spacebar to move the camera upward and the shift key to move it downward.

These input devices offer an intuitive way for users to explore the 3D scene and interact with the objects.

Custom Functions for Modularity and Organization:

createMug(): This custom function is responsible for creating the mug object by combining a cylinder (representing the body of the cup) and a torus and cylinder (representing the handle). It encapsulates the code for creating the mug, making the code more modular and organized. This function can be reused if multiple mugs need to be added to the scene.

createTable(): Similar to the mug, this custom function creates the table object using a simple plane primitive shape. It encapsulates the code for table creation, enhancing code modularity and reusability.

createSaucer(): This function generates the saucer object with a flat plane (base) and a torus (rim). By separating saucer creation into a custom function, the code is more organized, and the saucer can be easily recreated if needed.

createSpoon(): For the spoon object, this custom function combines a cylinder (handle) and a flattened cube (scoop). It abstracts the creation of the spoon, making the code cleaner and reusable for multiple spoons in the scene.

Each of these custom functions encapsulates the logic for creating specific objects, promoting code reusability and maintainability while keeping the main codebase organized and easy to read.