CLAIMS

1. An object control method in a virtual scene, performed by a terminal device, and comprising:

displaying a virtual scene in a human-computer interaction interface, the virtual scene comprising a virtual object;

controlling a posture of the virtual object to tilt to a left direction or a right direction of the virtual object in response to a first rotation operation, a first reference axis corresponding to the first rotation operation being perpendicular to the human-computer interaction interface;

controlling a lens of the virtual scene to rotate around a second rotation reference axis in response to a second rotation operation, the second rotation reference axis being parallel to a width direction of the human-computer interaction interface; and

controlling the lens of the virtual scene to rotate around a third rotation reference axis in response to a third rotation operation, the third rotation reference axis being parallel to a height direction of the human-computer interaction interface;

before the controlling a posture of the virtual object to tilt to a left direction or a right direction of the virtual object, the method further comprises:

performing the processing of controlling a posture of the virtual object to tilt to a left direction or a right direction of the virtual object in response to a current posture of the virtual object satisfying a first condition,

the first condition comprising: a body part, required to move for tilting based on the current posture, of the virtual object being not in a working state.

2. The method according to claim 1, wherein the controlling a posture of the virtual object to tilt to a left direction or a right direction of the virtual object comprises:

controlling, according to a direction consistent with the rotation of the first rotation operation around the first rotation reference axis, at least part comprising the head of the virtual object to tilt to the left direction or the right direction of the virtual object,

tilt angles of respective downward parts of the head of the virtual object decreasing in sequence, and all of the tilt angles being in positive correlation with an angle of rotation of the first rotation operation around the first rotation reference axis.

3. The method according to claim 2, wherein the controlling at least part comprising the head

of the virtual object to tilt to the left direction or the right direction of the virtual object comprises:

controlling, in a case that the angle of rotation of the first rotation operation around the first rotation reference axis to the left direction of the virtual object is greater than an angle threshold value, at least part comprising the head of the virtual object to tilt to the left direction of the virtual object; and

controlling, in a case that the angle of rotation of the first rotation operation around the first rotation reference axis to the right direction of the virtual object is greater than an angle threshold value, at least part comprising the head of the virtual object to tilt to the right direction of the virtual object.

4. The method according to claim 2, wherein the controlling at least part comprising the head of the virtual object to tilt to the left direction or the right direction of the virtual object comprises:

controlling, in a case that the angle of rotation of the first rotation operation around the first rotation reference axis to the left direction of the virtual object is greater than the angle threshold value and an angular velocity is greater than an angular velocity threshold value, at least part comprising the head of the virtual object to tilt to the left direction of the virtual object; and

controlling, in a case that the angle of rotation of the first rotation operation around the first rotation reference axis to the right direction of the virtual object is greater than the angle threshold value and an angular velocity is greater than an angular velocity threshold value, at least part comprising the head of the virtual object to tilt to the right direction of the virtual object.

5. The method according to claim 4, further comprising:

acquiring historical operation data for the virtual object; and

invoking a threshold value recognition model based on the historical operation data to obtain the angle threshold value and the angular velocity threshold value that are capable of being used for recognizing an abnormal operation for the virtual object,

the threshold value recognition model being trained through a rotation operation data sample and a responsive or non-responsive label marked by the rotation operation data sample.

6. The method according to claim 1, before the controlling a posture of the virtual object to tilt to a left direction or a right direction of the virtual object, further comprising:

performing the processing of controlling a posture of the virtual object to tilt to a left direction or a right direction of the virtual object in a case that a region around the virtual object satisfies a second condition,

the second condition comprising: there being no factor causing state decay to the virtual object in the region.

7. The method according to claim 6, before the controlling a posture of the virtual object to tilt to a left direction or a right direction of the virtual object, further comprising:

displaying prompt information in a case that the region does not satisfy the second condition, the prompt information being used for representing that the virtual object will have a risk in a tilt posture; and

performing the processing of controlling a posture of the virtual object to tilt to a left direction or a right direction of the virtual object in response to the first rotation operation received again.

8. The method according to claim 1, before the controlling a posture of the virtual object to tilt to a left direction or a right direction of the virtual object, further comprising:

performing the processing of controlling a posture of the virtual object to tilt to a left direction or a right direction of the virtual object in a case that a region around the virtual object satisfies a third condition,

the third condition comprising: there being no obstacle that prevents the virtual object from tilting to the left direction or the right direction in a direction consistent with the rotation of the first rotation operation around the first rotation reference axis in the region.

9. The method according to claim 1, wherein the controlling a lens of the virtual scene to rotate around a second rotation reference axis comprises:

controlling, according to the direction consistent with the rotation of the second rotation operation around the second rotation reference axis, the lens of the virtual scene to rotate, a rotation angle of the lens of the virtual scene being in positive correlation with the angle of rotation of the second rotation operation around the second rotation reference axis.

10. The method according to claim 1, wherein the controlling the lens of the virtual scene to rotate around a third rotation reference axis comprises:

controlling, according to the direction consistent with the rotation of the third rotation operation around the third rotation reference axis, the lens of the virtual scene to rotate, a rotation angle of the lens of the virtual scene being in positive correlation with the angle of rotation of the third rotation operation around the third rotation reference axis.

11. The method according to claim 1, before the controlling a posture of the virtual object to tilt to a left direction or a right direction of the virtual object, further comprising:

determining, in a case that a value of the angular velocity of the first rotation operation is in value space associated with a posture tilt mode, that the virtual object is in the posture tilt mode, and performing the processing of controlling the posture of the virtual object to tilt to a left direction or a right direction of the virtual object, the posture tilt mode being a mode of controlling the virtual object to tilt through the first rotation operation.

12. The method according to claim 11, further comprising:

determining, in a case that a value of the angular velocity of the first rotation operation is in value space associated with a lens rotating mode, that the virtual object is in a lens rotating mode, and controlling the lens of the virtual scene to rotate around the first rotation reference axis, a rotation angle of the lens of the virtual scene being in positive correlation with the angle of rotation of the first rotation operation around the first rotation reference axis.

13. The method according to claim 1, before the controlling a posture of the virtual object to tilt to a left direction or a right direction of the virtual object, further comprising:

detecting a state of the posture tilt mode, the state of the posture tilt mode being set on a switch displayed in response to the first rotation operation, or being set before receiving the first rotation operation;

performing, in a case that the state of the posture tilt mode is in an on state, the processing of controlling the posture of the virtual object to tilt to a left direction or a right direction of the virtual object; and

in a case that the state of the posture tilt mode is in a shielded state, further comprising:

determining to be in a lens rotating mode, and controlling the lens of the virtual scene to rotate around the first rotation reference axis, a rotation angle of the lens of the virtual scene being in positive correlation with the angle of rotation of the first rotation operation around the first rotation reference axis.

14. The method according to claim 1, wherein

the first rotation operation, the second rotation operation, and the third rotation operation are implemented for the terminal device, and the terminal device is configured to display the human-computer interaction interface; or

the first rotation operation, the second rotation operation, and the third rotation operation are implemented for a wearable device or a handle device, the wearable device or the handle device is configured to transmit a corresponding control signal to the terminal device, and the terminal device

is configured to display the human-computer interaction interface.

15. An object control apparatus in a virtual scene, comprising:

a display module, configured to display a virtual scene in a human-computer interaction interface, the virtual scene comprising a virtual object; and

a first control module, configured to control a posture of the virtual object to tilt to a left direction or a right direction of the virtual object in response to a first rotation operation, a first reference axis corresponding to the first rotation operation being perpendicular to the human-computer interaction interface;

a second control module, configured to control a lens of the virtual scene to rotate around a second rotation reference axis in response to a second rotation operation, the second rotation reference axis being parallel to a width direction of the human-computer interaction interface; and

a third control module, configured to control the lens of the virtual scene to rotate around a third rotation reference axis in response to a third rotation operation, the third rotation reference axis being parallel to a height direction of the human-computer interaction interface;

before the controlling a posture of the virtual object to tilt to a left direction or a right direction of the virtual object, the first control module is further configured to:

perform the processing of controlling a posture of the virtual object to tilt to a left direction or a right direction of the virtual object in response to a current posture of the virtual object satisfying a first condition,

the first condition comprising: a body part, required to move for tilting based on the current posture, of the virtual object being not in a working state.

16. A terminal device, the terminal device comprising:

a memory, configured to store executable instructions; and

a processor, configured to implement the object control method in a virtual scene according to any one of claims 1 to 14 when executing the executable instructions stored in the memory.

17. A computer-readable storage medium having stored thereon executable instructions that when executed by a processor, implement the object control method in a virtual scene according to any one of claims 1 to 14.

18. A computer program product, comprising a computer program or instructions, the

computer program or instructions that when executed by a processor, implement the object control method in a virtual scene according to any one of claims 1 to 14.