Python Enums

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class isaacgym.gymapi.SimType
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Simulation Backend type

Members:

SIM_PHYSX: PhysX Backend

SIM_FLEX: Flex Backend

class isaacgym.gymapi.UpAxis

Up axis

Members:

UP_AXIS_Y: Y axis points up

UP_AXIS_Z: Z axis points up

class isaacgym.gymapi.ContactCollection

Contact collection mode.

Members:

CC_NEVER: Don't collect any contacts (value = 0).

CC_LAST_SUBSTEP: Collect contacts for last substep only (value = 1).

CC ALL SUBSTEPS: Collect contacts for all substeps (value = 2) (default).

class isaacgym.gymapi.JointType

Types of Joint supported by the simulator

Members:

JOINT_INVALID: invalid/unknown/uninitialized joint type.

JOINT_FIXED: Fixed joint. Bodies will move together.

JOINT_REVOLUTE: Revolute or Hinge Joint. Bodies will rotate on one defined axis.

JOINT_PRISMATIC: Prismatic Joints. Bodies will move linearly on one axis.

JOINT BALL: Ball Joint. Bodies will rotate on all directions on point of reference.

JOINT_PLANAR : Planar Joint. Bodies will move on defined plane.

JOINT_FLOATING : Floating Joint. No constraints added between bodies.

class isaacgym.gymapi.DofType

Types of degree of freedom supported by the simulator

Members:

DOF_INVALID: invalid/unknown/uninitialized DOF type

DOF_ROTATION: The degrees of freedom correspond to a rotation between bodies

DOF_TRANSLATION : The degrees of freedom correspond to a translation between bodies.

class isaacgym.gymapi.DofDriveMode

Possible drive modes used to control actor DoFs. A DoF that is set to a specific drive mode will ignore drive commands for other modes.

Members:

DOF_MODE_NONE : The DOF is free to move without any controls.

DOF_MODE_POS: The DOF will respond to position target commands.

DOF_MODE_VEL: The DOF will respond to velocity target commands.

DOF_MODE_EFFORT : The DOF will respond to effort (force or torque) commands.

class isaacgym.gymapi.TendonType

Tendon type

Members:

TENDON FIXED: Fixed tendon

TENDON SPATIAL: Spatial tendon

class isaacgym.gymapi.TensorDataType

Defines the data type of tensors.

Members:

DTYPE_FLOAT32 : float32

DTYPE_UINT32: uint32

DTYPE_UINT64: uint64

DTYPE_UINT8 : uint8

DTYPE_INT16: int16

class isaacgym.gymapi.CoordinateSpace

Coordinate system for positions.

Members:

ENV_SPACE

LOCAL SPACE

GLOBAL SPACE

class isaacgym.gymapi.MeshType

Types of mesh used by the simulator

Members:

MESH_NONE

MESH_COLLISION: Collision mesh. Mesh is used only for Collision checks and calculations of inertia. For improved performance, it should be an approximation of the body volume by a coarse, convex mesh.

MESH_VISUAL: Visual mesh. Mesh is used only for rendering purposes.

MESH_VISUAL_AND_COLLISION: Visual and Collision Mesh. Mesh is used for both rendering and collision checks

class isaacgym.gymapi.ImageType

Types of image generated by the sensors

Members:

IMAGE_COLOR: Image RGB. Regular image as a camera sensor would generate. Each pixel is made of three values of the selected data type GymTensorDataType, representing the intensity of Red, Green and Blue.

IMAGE_DEPTH: Depth Image. Each pixel is one value of the selected data type GymTensorDataType, representing how far that point is from the center of the camera.

IMAGE_SEGMENTATION: Segmentation Image. Each pixel is one integer value from the selected data type GymTensorDataType, that represents the class of the object that is displayed on that pixel

IMAGE_OPTICAL_FLOW: Optical Flow image - each pixel is a 2D vector of the screenspace velocity of the bodies visible in that pixel

class isaacgym.gymapi.IndexDomain

Domain type for indexing into component buffers.

Members:

DOMAIN_ACTOR

DOMAIN_ENV

DOMAIN_SIM

class isaacgym.gymapi.SoftMaterialType

Types of soft material supported in simulation

Members:

MAT_COROTATIONAL: Lagrange co-rotational formulation of finite elements

MAT NEOHOOKEAN: Neo-Hookean formulation of finite elements

class isaacgym.gymapi.CameraFollowMode

Camera follow mode

Members:

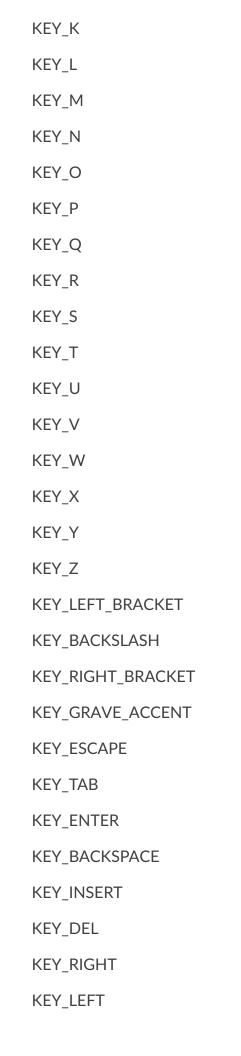
FOLLOW POSITION: Camera attached to a rigid body follows only its position

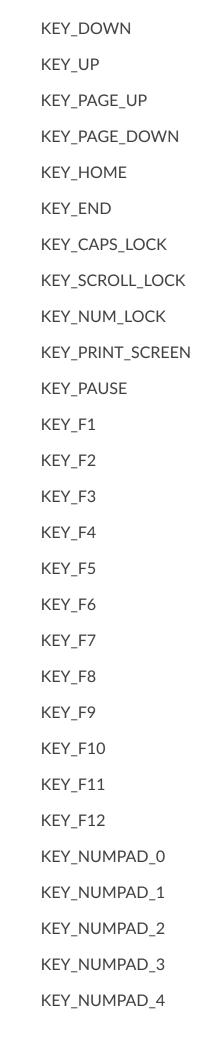
FOLLOW_TRANSFORM : Camera attached to a rigid body follows its transform (both position and orientation)

class isaacgym.gymapi.KeyboardInput

Members:

KEY_SPACE
KEY_APOSTROPHE
KEY_COMMA
KEY_MINUS
KEY_PERIOD
KEY_SLASH
KEY_0
KEY_1
KEY_2
KEY_3
KEY_4
KEY_5
KEY_6
KEY_7
KEY_8
KEY_9
KEY_SEMICOLON
KEY_EQUAL
KEY_A
KEY_B
KEY_C
KEY_D
KEY_E
KEY_F
KEY_G
KEY_H
KEY_I
KEY_J





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KEY_NUMPAD_5
 KEY_NUMPAD_6
 KEY_NUMPAD_7
 KEY_NUMPAD_8
 KEY_NUMPAD_9
 KEY_NUMPAD_DEL
 KEY_NUMPAD_DIVIDE
 KEY_NUMPAD_MULTIPLY
 KEY_NUMPAD_SUBTRACT
 KEY_NUMPAD_ADD
 KEY_NUMPAD_ENTER
 KEY_NUMPAD_EQUAL
 KEY_LEFT_SHIFT
 KEY_LEFT_CONTROL
 KEY_LEFT_ALT
 KEY_LEFT_SUPER
 KEY_RIGHT_SHIFT
 KEY_RIGHT_CONTROL
 KEY_RIGHT_ALT
 KEY_RIGHT_SUPER
 KEY_MENU
class isaacgym.gymapi.MouseInput
 Members:
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MOUSE_LEFT_BUTTON

MOUSE_RIGHT_BUTTON

MOUSE_MIDDLE_BUTTON

MOUSE_FORWARD_BUTTON

MOUSE_BACK_BUTTON

MOUSE_SCROLL_RIGHT

MOUSE_SCROLL_LEFT

MOUSE_SCROLL_UP

MOUSE_SCROLL_DOWN

MOUSE_MOVE_RIGHT

 ${\sf MOUSE_MOVE_LEFT}$

MOUSE_MOVE_UP

MOUSE_MOVE_DOWN