WBM::ClassDiagram

UML Class Diagram (WBM) — principal classes and data types:

WBMBase (class)
- +fixed_link: string
- +wf_R_b: matrix
- +wf_p_b: vector
- +g_wf: vector
- +ndof: integer
- +frict_coeff: struct
- +joint_limits: struct (readOnly)
- +robot_model: wbmBaseRobotModel (readOnly)
- +DF_ROBOT_MODEL: string (readOnly)
- +MAX_NUM_JOINTS: integer (readOnly)

WBM (class)
- +stvLen: integer (readOnly)
- +vqT_base: vector (readOnly)
- +vqT_base: vector (readOnly)
- +init_stvChi: vector (readOnly)
- +init_state: wbmStateParams
- +robot_body: wbmBody (readOnly)
- +robot_config: wbmBaseRobotParams (readOnly)
- +robot_params: wbmBaseRobotParams (readOnly)
- +DF_STIFFNESS: double (readOnly)
- +MAX_NUM_TOOLS: integer (readOnly)
- +ZERO_CVEC_12: vector (readOnly)
- +ZERO_CVEC_6: vector (readOnly)
- +mwbTixLnk: logical

«interface» **handle**
- +delete()

«dataType» **wbmRobotDrawProp**
- +joints.marker: char
- +joints.marker_sz: double
- +joints.color
- +links.line_width: double
- +links.color
- +com.marker: char
- +com.marker_sz: double
- +com.color
- +shape.line_width: double
- +shape.edge_color
- +shape.face_color
- +shape.face_alpha: double

«utility» **wbmColor**

«dataType» **wbmSimBody**

«dataType» **wbmBaseRobotModel**
- +ndof: integer
- +urdf_robot_name: string
- +urdf_fixed_link: string
- +wf_R_b: matrix
- +wf_p_b: vector
- +g_wf: vector
- +frict_coeff.v: vector
- +frict_coeff.c: vector
- +jlim.lwr: vector
- +jlim.upr: vector

«dataType» **wbmBaseRobotParams**
- +wf2fixLnk: logical

«dataType» **wbmFltgBaseState**
- +wf_R_b: matrix
- +wf_p_b: vector
- +v_b: vector

«dataType» **wbmStateParams**
- +x_b: matrix
- +qj_b: matrix
- +q_j: matrix
- +dx_b: matrix
- +omega_b: matrix
- +dq_j: matrix

«dataType» **wbmHumanoidConfig**
- +pos_head: vector
- +pos_torso: vector
- +pos_left_arm: vector
- +pos_left_leg: vector
- +pos_left_feet: vector
- +pos_right_arm: vector
- +pos_right_hand: vector
- +pos_right_leg: vector
- +pos_right_feet: vector

«dataType» **wbmPayloadLink**
- +urdf_link_name: string
- +link_p_cm: vector
- +m_rb: double
- +t_idx: matrix

«dataType» **wbmToolLink**
- +urdf_link_name: string
- +ee_vqT_tl: vector

«dataType» **wbmBaseRobotConfig**
- +nCstrs: integer
- +ccstr_link_names: cell
- +nPlds: integer
- +nTools: integer
- +stvLen: integer

«dataType» **wbmBody**
- +chains.name: string[1..*] (readOnly)
- +chains.start_idx: integer[1..*] (readOnly)
- +chains.end_idx: integer[1..*] (readOnly)
- +nChains: integer (readOnly)
- +joints.name: string[1..*] (readOnly)
- +joints.idx: integer[1..*] (readOnly)
- +nJoints: integer (readOnly)

«utility» **wbmErrorMsg**

«dataType» **wbmSimEnvironment**
- +background_color_opt: string
- +ground_shape: matrix
- +ground_color
- +ground_edge_color
- +origin_pt_color
- +origin_pt_size: double

«dataType» **absSimConfig**

«dataType» **genericSimConfig**

Robot.YourRobotName_ModelType «dataType» yourSpecificRobotConfig

Robot.YourRobotName_ModelType «dataType» yourOwnSimConfig