Abstract data type for basic motors without speed regulation or acceleration smoothing. Simple NXT motors will be derived from this type, as will RCX motors.

pragma Restrictions (No_Streams);

with NXT.Motor_Controls; use NXT.Motor_Controls;

package NXT.Motors is
  pragma Elaborate_Body;

  type Abstract_Motor is abstract tagged limited private;

  function Id (This : Abstract_Motor) return Motor_Id;

  procedure Set_Power (This : in out Abstract_Motor;
                       Power : Power_Percentage);

  function Current_Power (This : Abstract_Motor) return Power_Percentage;

  procedure Forward (This : in out Abstract_Motor);

  procedure Backward (This : in out Abstract_Motor);

  procedure Reverse_Direction (This : in out Abstract_Motor);

  function Moving (This : Abstract_Motor) return Boolean;

  procedure Stop (This : in out Abstract_Motor;
                  Apply_Brake : Boolean := False);

private
type Abstract_Motor is abstract tagged limited
  record
    Id : Motor_Id;
    Motion : Motion_Modes;
    Power : Power_Percentage;
  end record;

procedure Update_State (This : in out Abstract_Motor; Mode : Motion_Modes);

end NXT.Motors;