



Winch



The assignment

There are many situations in which it is useful to apply a strong pulling force. This is particularly true on sailing boats. The device that is used for this is the winch. These can be small hand operated devices used for raising and lowering sails, and for altering the angle of the sail to the wind. More powerful motor driven winches are used for raising and lowering the anchor and even moving the boat itself along the slipway. They need to be powerful because boats are heavy and reliable as it would be very dangerous if the winch failed and the boat moved uncontrollably back into the water.

Your task is to design and build a motorized winch to be used to pull a boat out of the water onto a slipway.