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BASAVESHWAR ENGINEERING COLLEGE
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DEPARTMENT OF MECHANICAL ENGINEERING

A Project report on

**"DRIVERS FRIENDLY GEAR SHIFTING MECHANISM
WITH CLUTCH AUTOMATION"**

Project Guide

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ABSTRACT

This is a four wheel vehicle having rear wheel driven by the gear box and powered by DC motor and backed by DC batteries. The automation of gear shifting and clutch mechanism is adopted in this to aid to the driver. Normally the gear shifting is done by the shifting lever being operated by hand and the leg is actuating the clutch mechanism and both have to be synchronized to operate the shifting which needs the skill of the driver. Here we are automating this action with a single button control which will operate the clutch in sequence with the gear changer to change the gear for up shift or down shift as selected by the buttons.

We are providing a button for doing so, a single toggle switch which by lifting the toggle will connect the up shift and by down pulling the toggle of the switch will connect the down shift gears, operating the clutch first and simultaneously change over will operate in sequence to effect the change over automatically. Here in this model clutch mechanism is not the same as is in the actual vehicle, here we are providing the motorized drive, we are transferring the rotations through gears, and engaging mechanism will not be same as clutch mechanism in actual vehicle, it will be different, but will engage and disengage the transmission during gear shifting. So that there will be synchronized transmission which help to reduce wear and tear of gear and clutch and also help in improving the driver efficiency and drive quality.