

SENSOR BASED AUTOMATIC AND BLUETOOTH CONTROLLED FORKLIFT

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Abstract -The mechanical field is improving day by day Lots of innovative ideas are entering into the field .This report is indeed to endow with a comprehensive study of the technical and theoretical aspects of "FORKLIFT" all the topics covered in this report are essential for the complete understanding and survey of title of "FORKLIFT". In the project we have modified the product called "FORKLIFT MACHINE". THE report engrosses different chapter and each is design in the organized style .covering basic introduction, specification, application, and it is uses in the various industries

Key Words: forklift, Bluetooth, line follower,

1. INTRODUCTION

IN the general the forklift can be defined as a tool capable of lifting hundreds of kilograms. A forklift is a vehicle similar to a small truck that has two metal forks on the front used to lift cargo. THE forklift operates drives the forklift forward until the forks push under the cargo, and lift the cargo several feet in the air by operating the forks. The forks also known as blades or tines are usually made out of steel and can lift up to a few tons. FORKLIFTS are either powered by gasoline, propane, or electricity. Electric forklifts relay on batteries to operate. Gasoline or propane forklift are sometimes stronger or faster than electric forklifts. But they are more difficult to maintain and fuel can be costly. FORKLIFT have revolutionized warehouse work. They made it possible it for one person to move thousand of pounds at once. the mechanical structure of its prototype module is constructed with square metals pipe , this structure looks like rectangle box and the vertical moving mechanism that contains metal fork is assembled over the structure at front side the entire vehicle is designed to drive through four wheels . And four motors are used to drive all the four wheels directly. All these four motors are driven through a single "H" bridge dc motor drive package. All the four wheels are directly coupled to the motor shafts independently .the dc motors are having reduction gear mechanism internally, here by speed is reduced and torque is increased

2. METHODOLOGY:

FORKLIFT are generally used for moving object or heavy goods, and good supplies from one place to another place quickly and with less effort. The forklift are small but compact machine designed to work in tight and narrow areas. In this we have used sensors based forklifts .and it as line following methodology. Now we can control the forklift by using our phones .the line following technique will work

with the help of IR sensor. In this we can control the forklift by using Bluetooth method easily in our cellphones. Nowadays humans are using Bluetooth for essential purpose.it will make the forklift to control easily.

3. WORKING:

FORKLIFT trucks are vehicles designed to move and stack, or heavy or bulky goods. They are mainly used in warehouses, stockyards and other storage areas. forklift trucks are highly mobile with a very small turning circle which allows them to move easily in confined spaces .on front of the trucks two forks operated by b hydraulics .the driver must fit these forks into the pallets on which goods are stored . the operated then uses the hydraulic forks to lift the pallets takes it to where stes it down. Some goods ,such as bricks , and moved by forklift lift without the need for pallets they are stacked in bales with forks. The operates must work carefully as these good not protected by pallets. Some truck are fitted with small computer display panels that direct the operates where to place goods in the warehouse.

Operates may also to keep records and follow instruction written on a worksheet on a worksheet. They are also resopnsibler for the basics maintenance of the truck. yhis includes greasing or oiling parts and changing or recharging the battery. Forklift truck operates may hane to work in noisy and dusty environment. Working outdoors in all weathers conditions may also be necessary.

All lift trucks operates must be trained prior to operating a lift truck. Training is provided by the cocern manufacturer and consists of both formal instruction and practical traning .traning is both vechile and workplace into serverice .the traning is one time requirment unless the operates is involved in a lift truck accident or observed operating the truck in unsafefemanner.

3. MODES OF CONTROL:

THE forklift is controlled by an a sensorand Bluetooth in (mobile applications).there are two modes .

1.bluetoothmode

2.line follower mode.

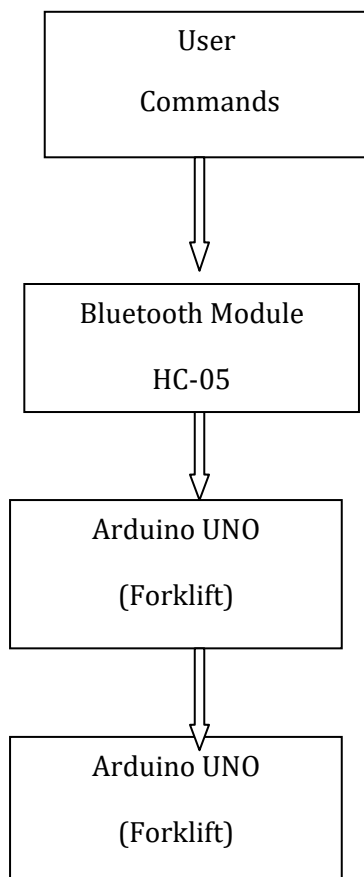
BLUETOOTHMODE:

IN Bluetooth mode we can control the forklift by using our cellphones.it is the easy way to operate the forklift without humans .in this Bluetooth and signal will be received by the Bluetooth module connected with mobile applications. We using the commands we can easily operate our forklift through the mobile. the sending and receiving of Bluetooth module is is1mps.

A	UP
B	DOWN
C	STOP

LINEFOLLOWINGMODE:

IN line following mode, the robot will acts as line follower. When we have to lift an object from one room to another inside a house or in a factory, we can use this forklift in the several industries. Before that we have to turn on yhe line following g mode from our an droid device.



- Block diagram shows the following forklift
- The user gives command

- Command are being reported using Bluetooth module
- Arduinio ececutes command by using Bluetooth.

CONCLUSION:

After completing the major project on "FORKLIFT" we are much happy and would like to thank you professor ,guides and lectures of the concerned department who have guided us.

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