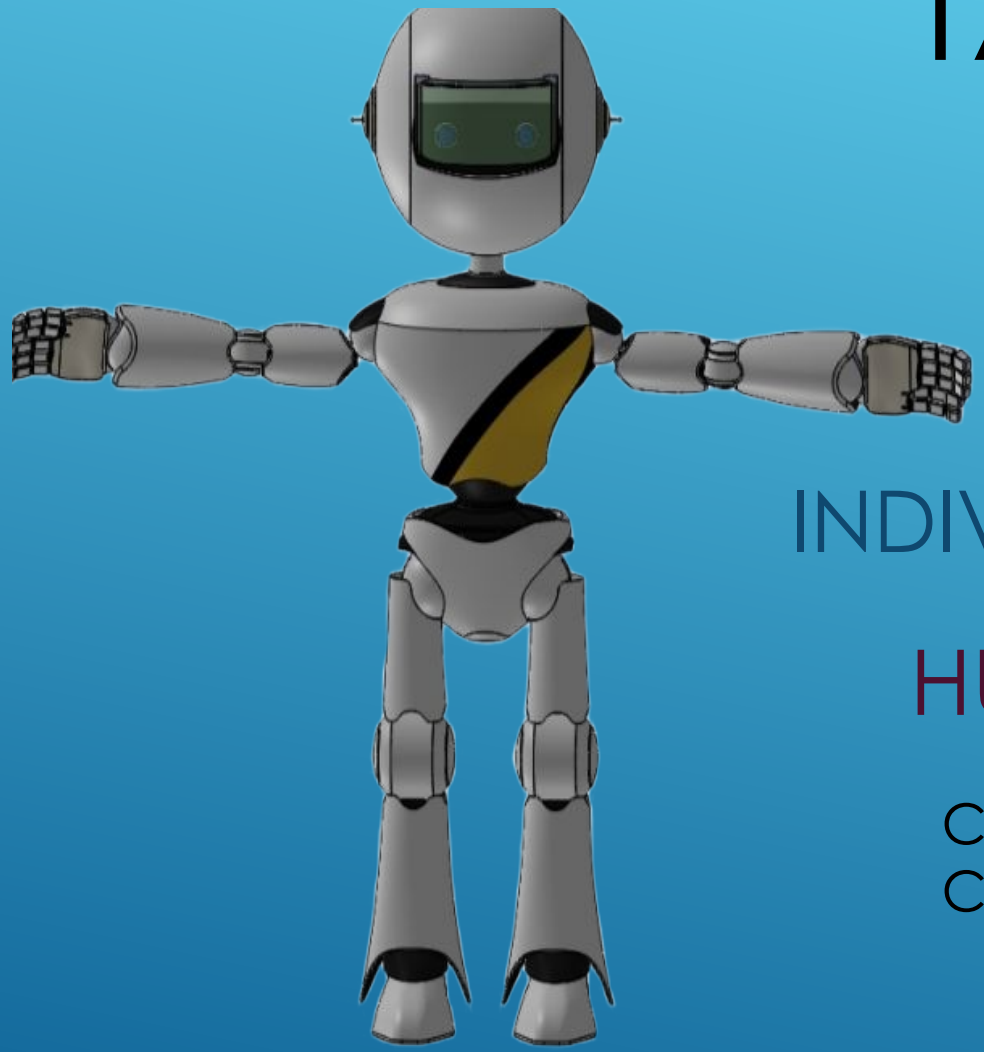
TA201



GANESH KUMAR(200367)
GROUP-S3G6

INDIVIDUAL FABRICATION PROJECT

HUMAN ROBOT(Metallic)

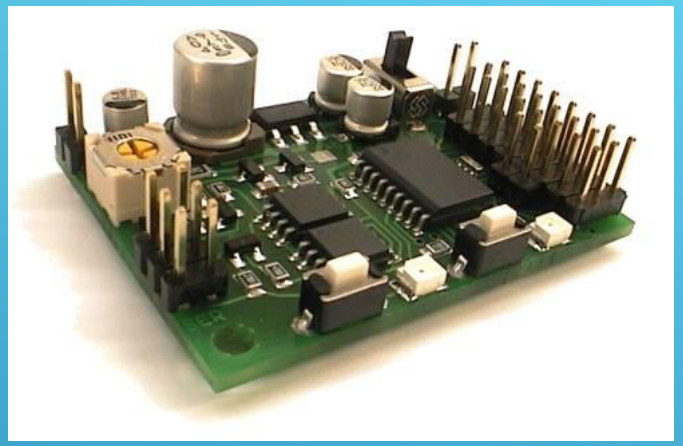
COURSE INSTRUCTOR: Dr. Sudhanshu Shekhar Singh
Course TA:Dr.Shashank Shekhar Singh.
Dr.Anil kumar Verma.

COMPONENTS OF ROBOT:

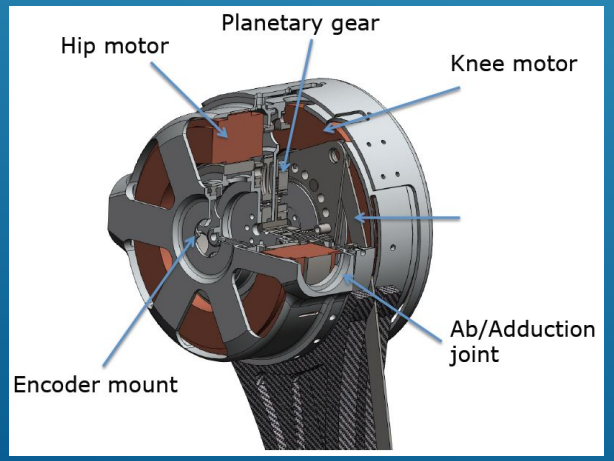
1.Manipulator(just as human arm and joint)

2.End effector.

3.The controller.(Hardware & software)



4.The locomotion device.(MOTOR)



5.The sensor.

In our case ,we are dealing with the design part i.e THE MANIPULATOR

It has 4 sub components.

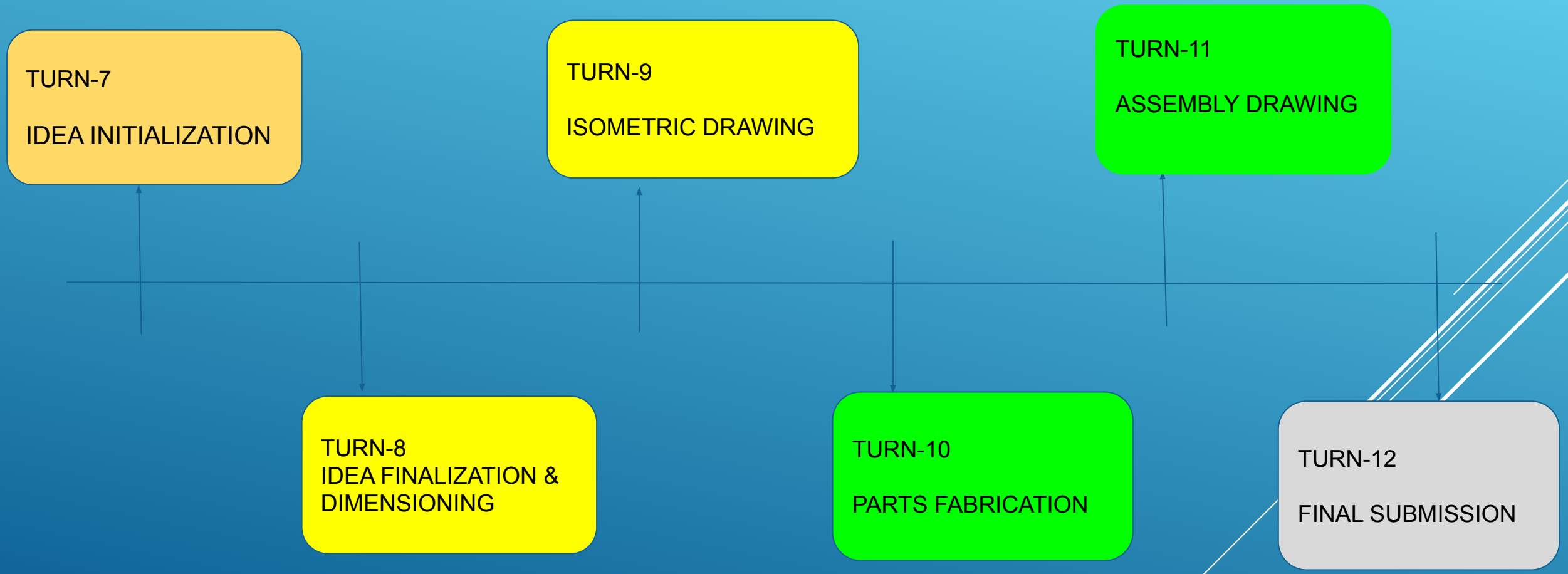
1.Head

2.forearm

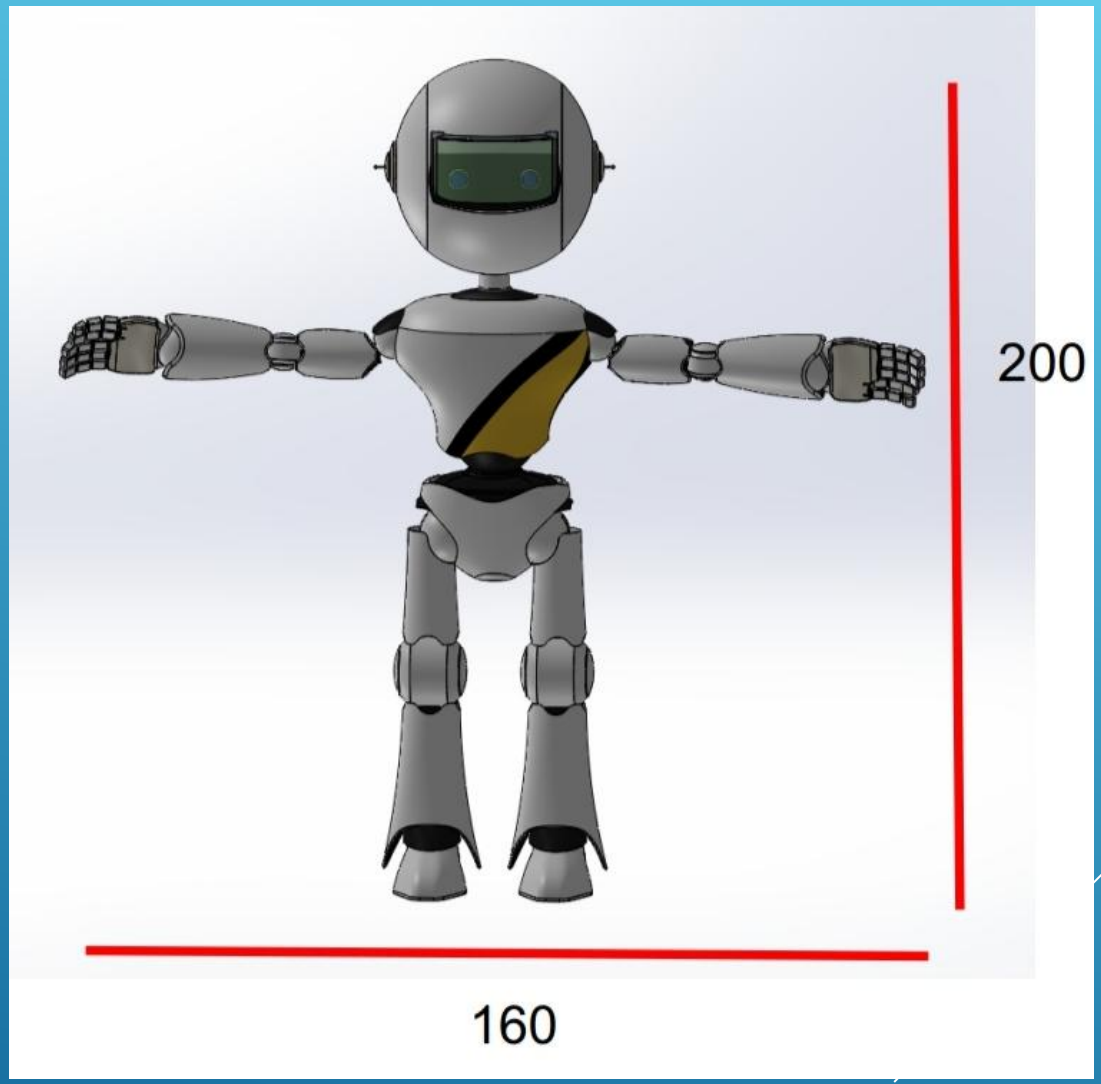
3.Leg

4.Trunk

PROJECT TIMELINE:



Dimension analysis:



12mm in width

*dimensions are in mm

Material Required:

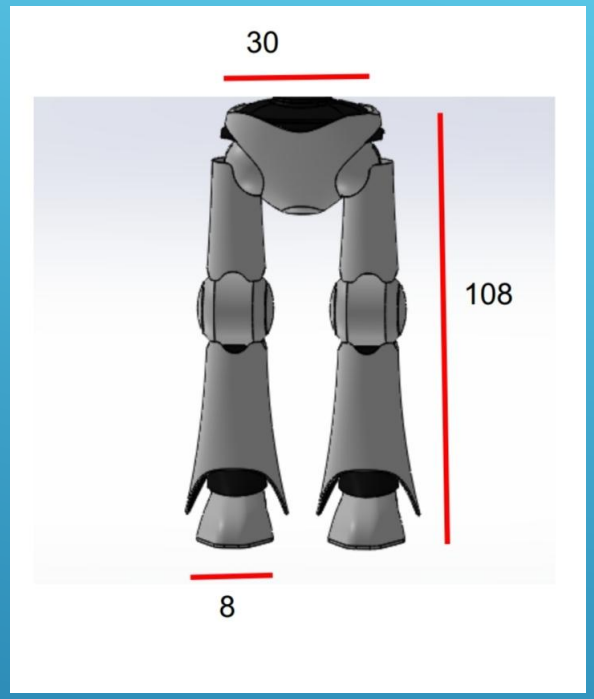
Aluminium sheet(1mm thick)
Nut/volt(3mm radius)
Metallic sheet
Nail
Metallic wire
Fevikwik
Coca can.
Electric tape.
Thermocol

Manufacturing Processes involved:

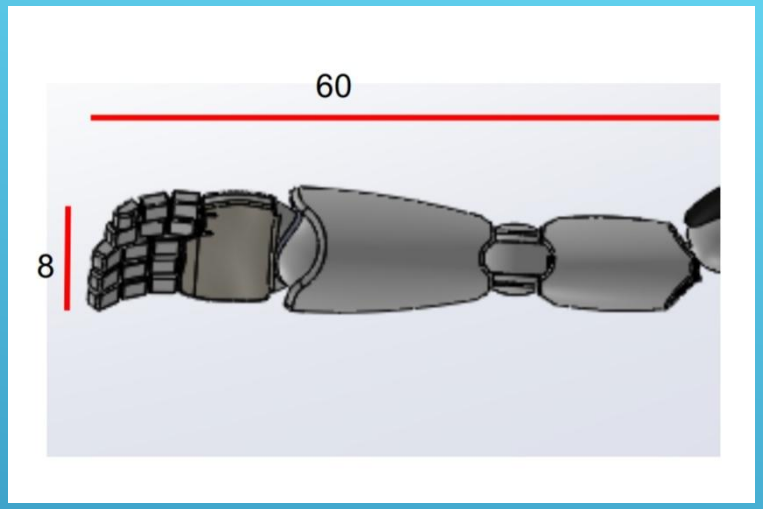
1.cutting.
2.shaping.
3.Adhesive joining.(fevikwik)
4. Casting.
5.Joining.

PARTS ANALYSIS:

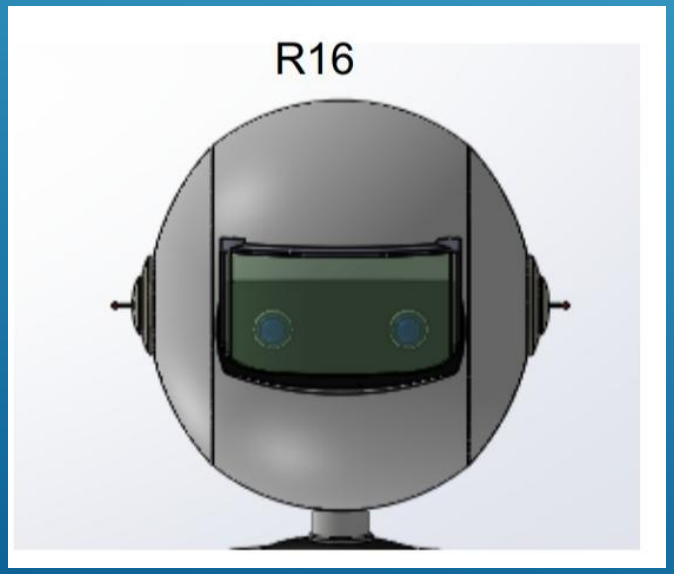
legs:



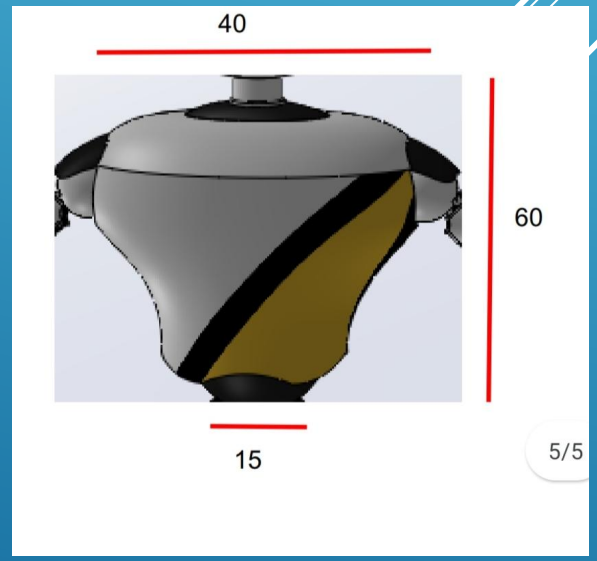
Forearm:



Head:



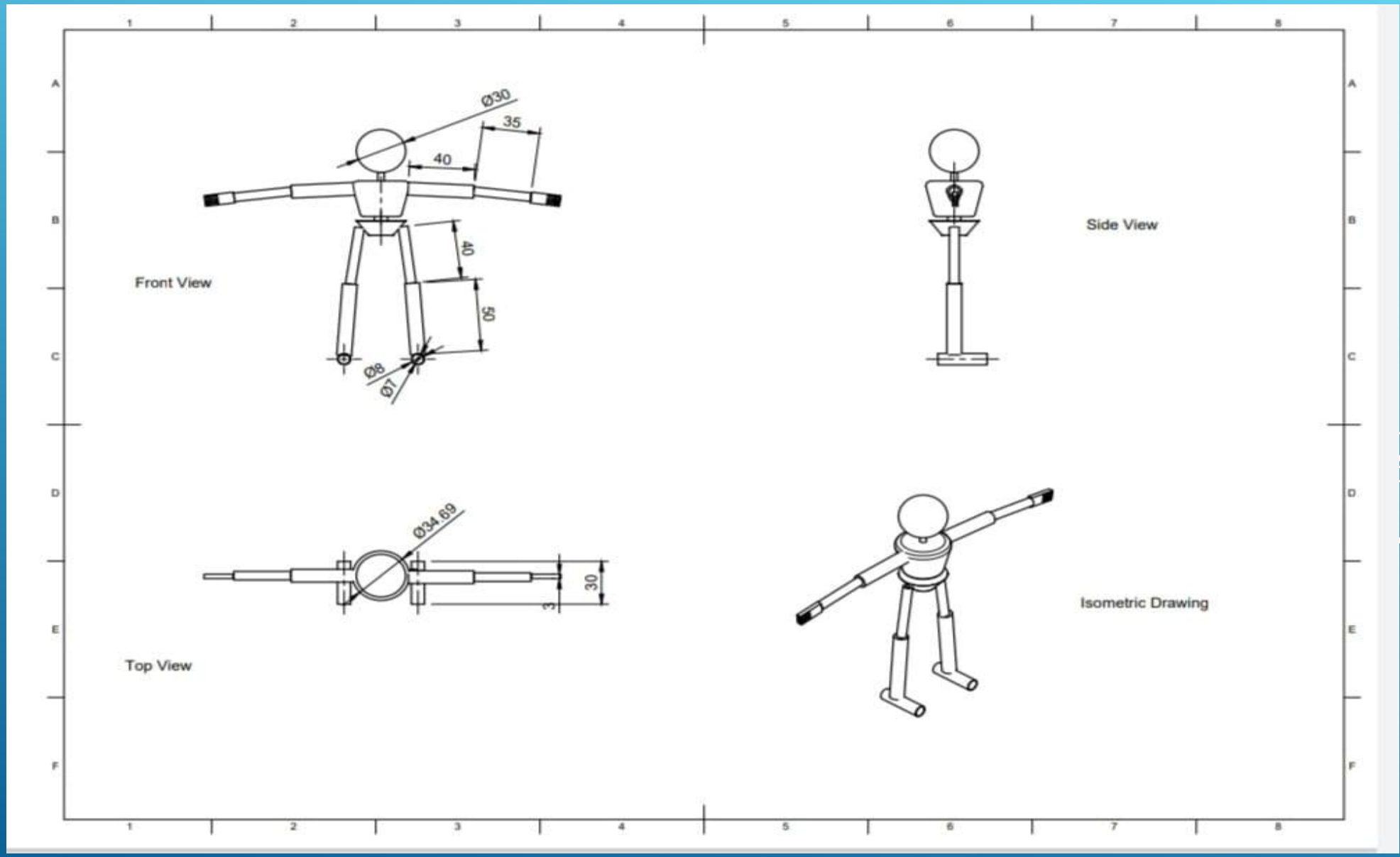
Trunk:



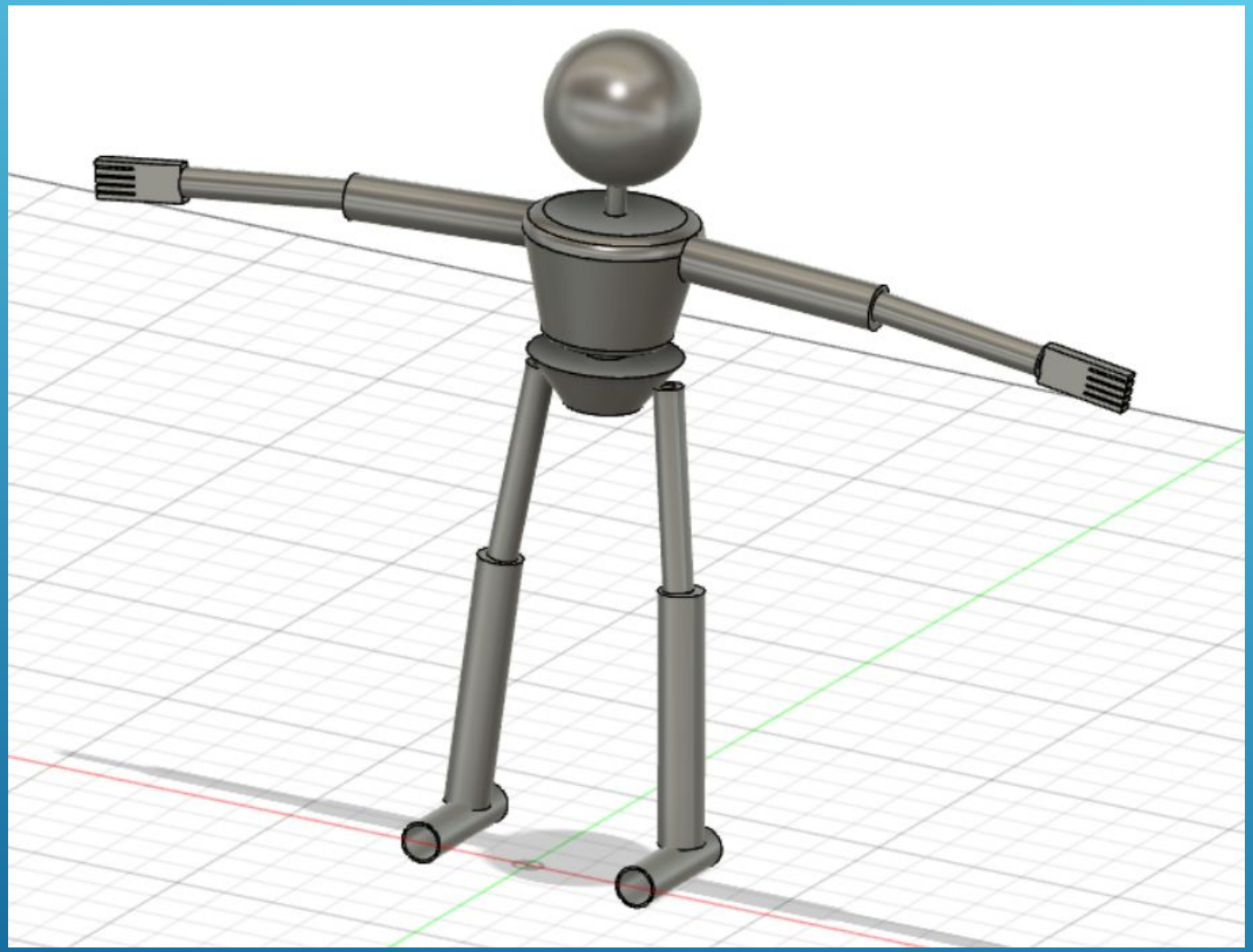
Brief Description About Project:

PARTS	PROCESS INVOLVED	MATERAL REQUIRED
HEAD	Cutting,Tape Joining,Soft drilling.	Bottom coca can,Electric tape,Scope.
FOREARM	Cutting,fewikwik Joining,shaping	Coca Can ,Metallic wire ,Fewikwik,
TRUNK	Cutting,Joining,Shaping,Casting	Thermocol,Coca Can,fewikwik
LEGS	Cutting,Joining,Shaping.	Nut,Coca Can,fewikwik

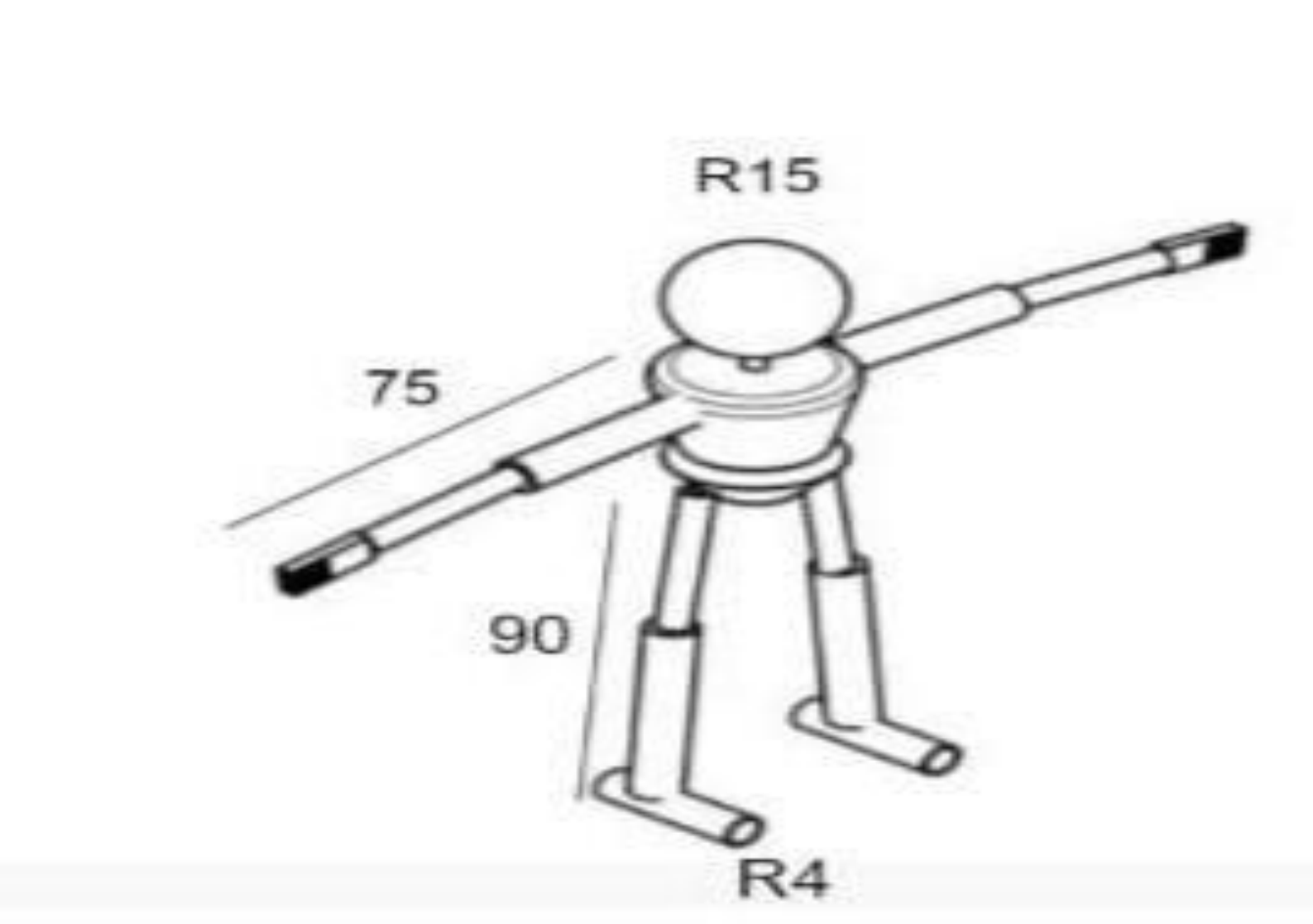
ORTHOGRAPHIC DRAWING:



CAD DESIGN MODEL



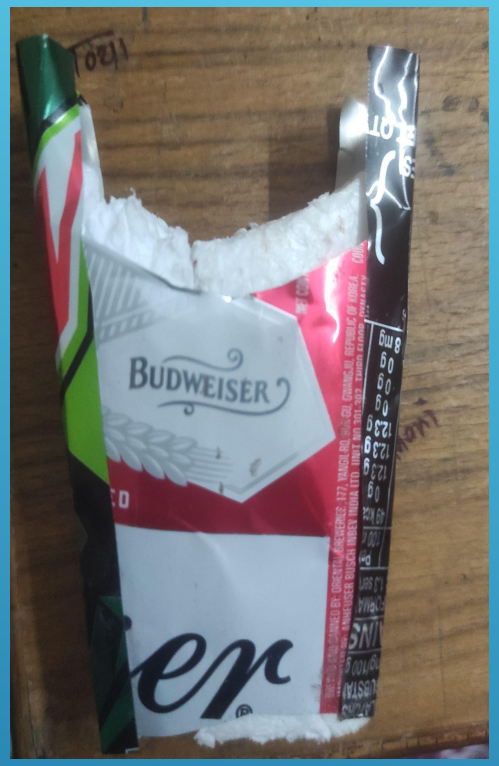
Isometric Drawing



Working part images:

FOREHAND

LEG



TRUNK

HEAD

FINAL PROJECT:

COST ANALYSIS:

Material required	Dimension	Cost per unit	Quantity	TOTAL COST
COCA Can	5 Cm in diametre	Rs.3	3	Rs.9
Nut	1Cm in diameter 5.5 cm in length	Rs.5	2	Rs.10
Metallic wire	.05 cm diametre , 2m length	Rs.3/m	1	Rs.6
Fewikwik	N/A	Rs.5	5	Rs.25
Electric Tape	2 Cm width	Rs 10	N/A	Rs.10
Scope	.5 Cm in diameter 5 Cm in length	Rs 5	1	Rs.10
Thermocol	N/A	Rs.5	1	Rs.5
TOTAL COST				Rs.75

THANK YOU!!