

Video → Proteus Simulation Testing { Microcontroller + }
→ PCB testing PCB
→ Harness ~~testing~~ making

To Illustrate our design methodology

DR:

① → Dept. Proj.

→ Same as earlier → modified

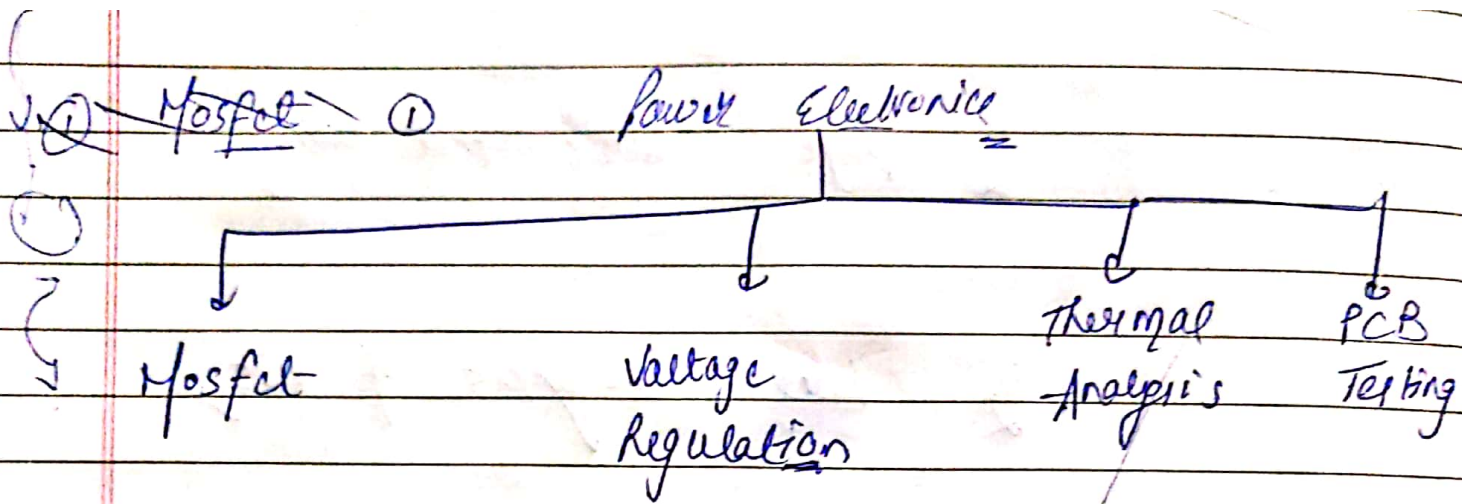
② → Overall Design Process / Methodology

↳ Power Ele

↳ Aux. Ele

↳ Driv. Ass

↳ Wiring Harness



Goals for Subsystem

② MOSFET ✓

3D - Model
of rep. PCB



Comparison Matrix

③ Mosfet cir. \rightarrow waterpump

$\rightarrow \frac{1}{2}$

$\frac{1}{2}$ page blank

naa

① Voltage Regulation

3d - model
of PCB (1)

② Comp. algebra
 $\frac{1}{2}$ (Linear vs Switching)

$\frac{1}{2} \rightarrow$ Calculation

③ Schematic of buck
+ Overvoltage Prot.

\hookrightarrow Explanation of overvoltage Prot.
- circuit

③ Thermal Analysis

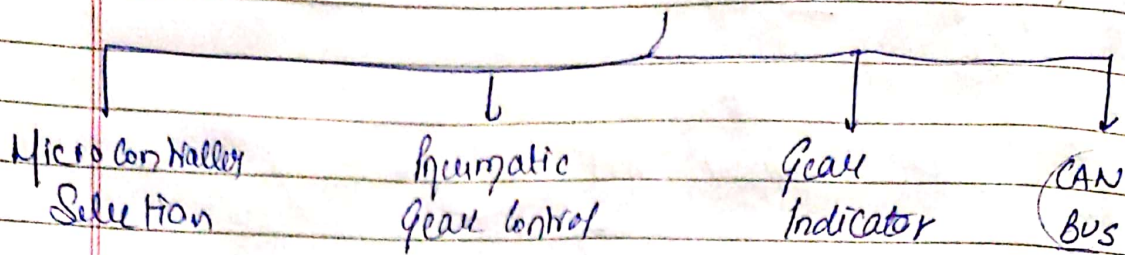
$\frac{1}{2}$ Smart Art \Rightarrow Thermal Analysis ✓

$\frac{1}{2}$ Thermal Analysis photo ✓

$\frac{1}{2}$ Thermal Vias ✓

$\frac{1}{2}$ 2 layer PCB ✓

Auxiliary Electronics



②

+

Goals for Subsystems

① Microcontroller Selection

Smart Art (Aims)

+

Comparison Matrix

② Fully Pneumatic Gear Control

① Why fully pneumatic?

Smart Art

② Functioning & block diagram

③ Schematic Block Diagram

④ Proteus

⑤ Autonomy shifting's block diagram

⑥ Autonomy function block

PCB Testing

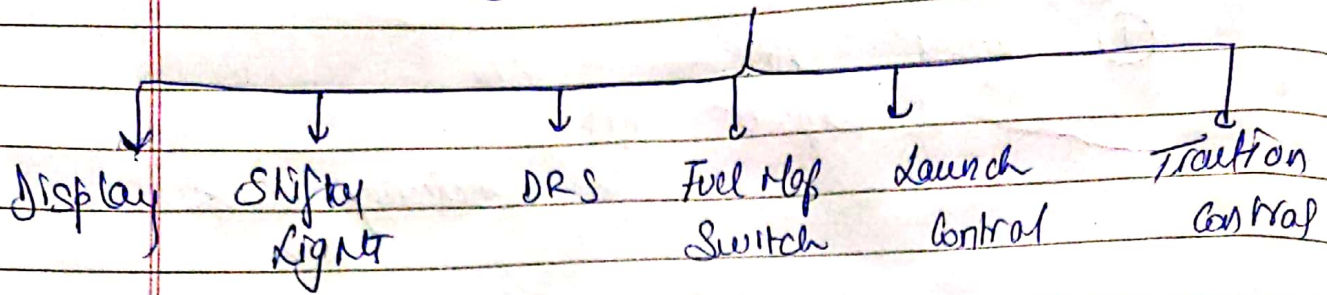
$\frac{1}{2}$ page smart art ✓

$\frac{1}{2}$ page noise red. aim ✓

$\frac{1}{2}$ heat analysis of ICs ✓

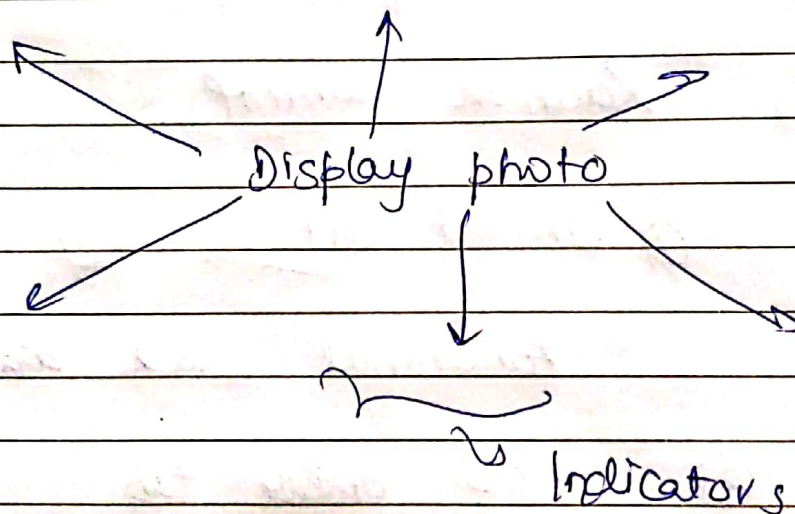
$\frac{1}{2}$ PCB testing photos

Drivly Assistance

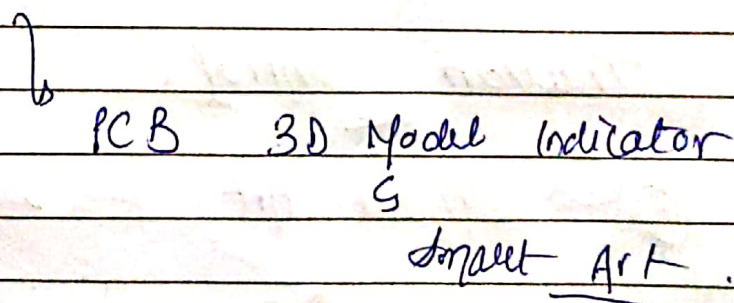


① Display.

Smart Art → OLED to Motion Display.



② Shifter Light.



Gear Indicator

① Smart Art

② Functioning block diagram

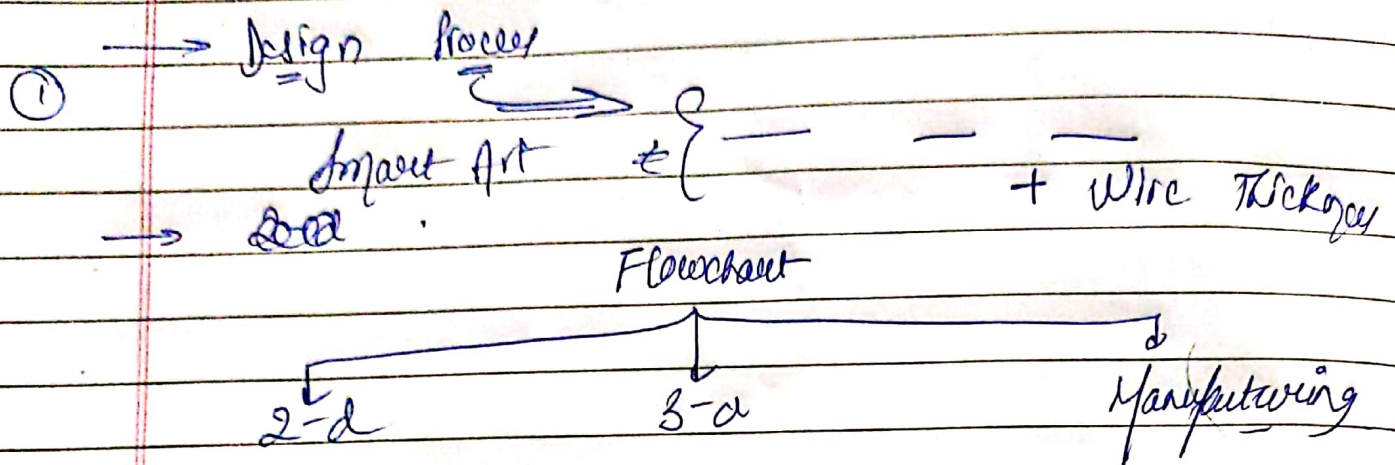
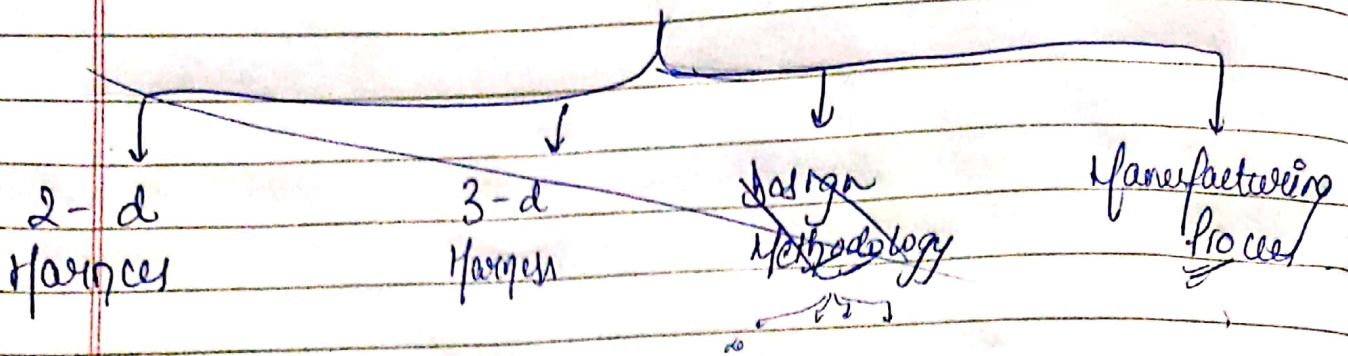
③ Centralized CAN BUS

Smart - Art \rightarrow CAN bus?

CAN Schematic block diagram

Input art

Wiring Harness



② 2-d → —

③ 3-d → —

④ Manufacturing

Input Art → process involved - ①

↓
photos of
manufacture

→ ②③

DRS

① Impact Art → why?
↳ Impact Art
↳ Functioning block dia

↳ schematic

④ Fuel Map Switch

↳ Impact Art
= ↳ why & we.

⑤ Launch Control

① Impact Art → why

→ Functional block dia

② ECU ~~data~~ tab

↳ Dyno data

⑥ Traction Control

① ↳ Impact Art → why

↳ Functional block dia //

② ECU data / tab

= Is dyno