
بسم الله الرحمن الرحيم

FINAL YEAR PROJECT REPORT

GSM Monitoring And Tap Changing of aTransformer

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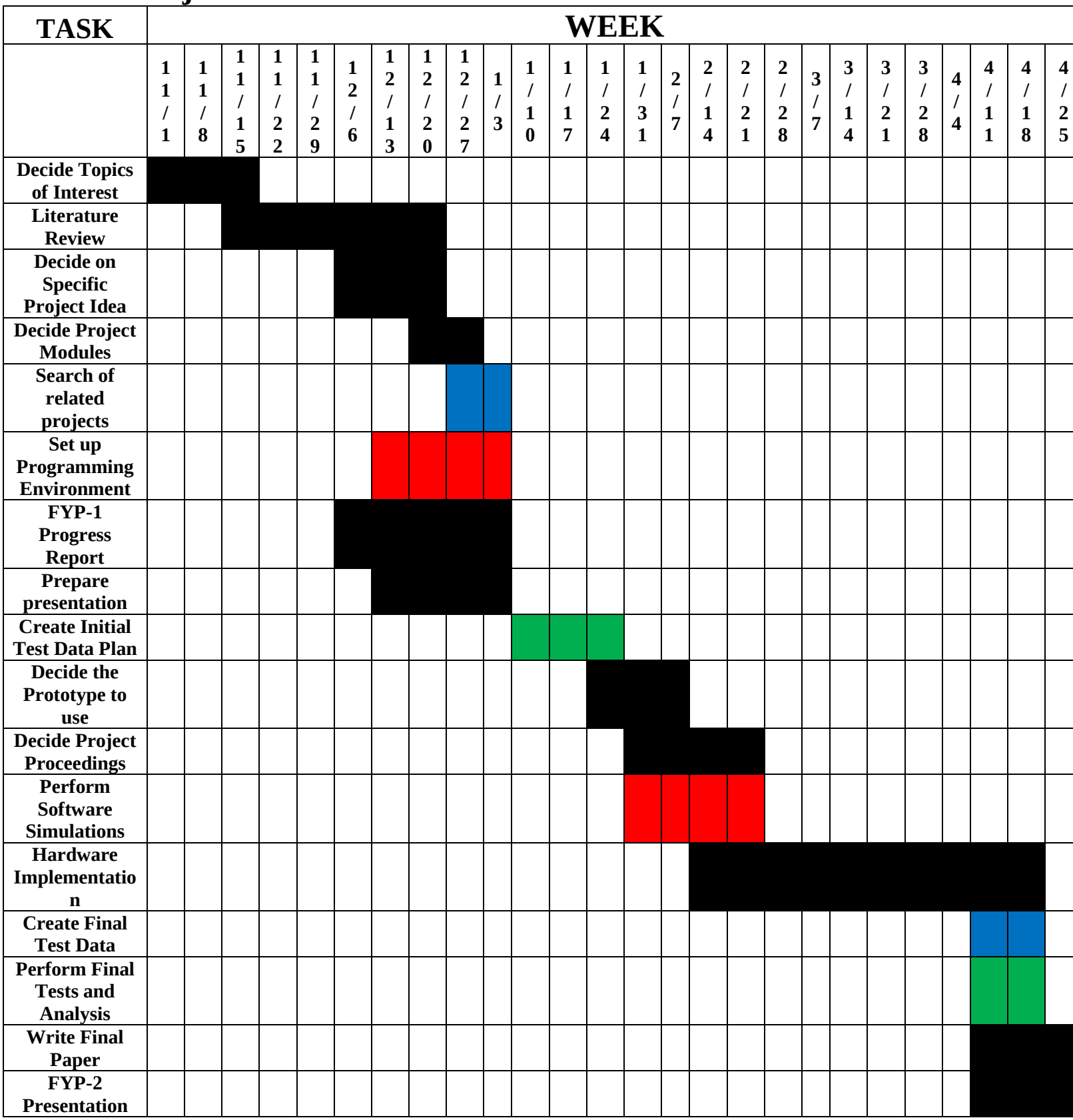

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Declaration

We hereby declare that all the project work presented is our own. We also declare that the report is written in our own words except the quoted material or some of the material with citation by the help of literature studies and experiments.

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Acknowledgement

First of all Thanks to Allah WHO blessed us with courage ability to hard work and caliber to complete the project within time.

Secondly we are thankful to our project advisor Muhammad Shoaib for guiding us throughout the project. His valuable advices and encouragement helped us a lot to finish our project without deviating from the original path. The meetings with him proved very fruitful in fulfilling our task.

Lastly we will like to thank our parents and all the teachers who guided us throughout the four years of engineering. And this guidance developed the determination courage and sincerity in us which are the key features for achieving any aim.

Dedicated To Our

Beloved Country

PAKISTAN And Our Nation

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ABREVIATIONS

TRIAC	Triode alternating current switch
GSM	Global system for mobile communication
TDMA	Time division multiple access
CEPT	Conference of European posts and telegraphs
SMS	Short service message
EGSM	Extended GSM
DCS	Digital cellular system
PCS	Personal communication service
MHz	Mega hertz
SIM	Subscriber identity module
RTC	Real time clock
SPI	Serial peripheral interface
GPRS	General Packet radio services
PIC	peripheral interface control
Rom	read only memory
Ram	random access memory
SSR	Solid state relay
CT	Current transformer
PT	Potential transformer
LCD	Liquid crystal display

Abstract

In our country Pakistan we are facing Electricity and Power Problems. Often there is Fluctuation of main supply that can damage our home appliances and other electrical Equipments. Also the overloading of transformers is normal problem and due to the Improper monitoring they can get damaged. This result in loss of supply of electricity and also loss of money spent on these transformers.

Our aim is to cover both of these problems and somehow we have presented a Solution. Our project entitled **"GSM monitoring and Tap changing of a Transformer"**can Monitor remote transformers including their Voltage Current and Power. It can also Act as a stabilizer for the load and changes taps of transformer according to main Supply and load demand.

Monitoring of transformer is done through GSM and is displayed on LCD. And we have used TRIAC for switching of Taps of transformer.

Our thesis further elaborates this solution step by step. This implementation has a high start up cost but the maintenance cost is very moderate and acceptable.

Our project also solves the problem of stealing of transformer which is a major issue Nowadays. We have installed an alarm to indicate the operator about the stealing of Transformer.

Although this project can bring revolution in power transmission and generation System of Pakistan but still there is a room of improvement like installment of infrared sensor with transformers for security cooling and heating of transformers better monitoring transformers with a technology better than GSM as sometimes GSM signals can cause problem in hilly areasMonitoring of each individual load and much more.

We have just presented a concept and taken a step towards improvement of monitoring of transformers and fulfilling load requirements. And afterwards we have practically implemented this concept to present a model. There can be much improvement in this as improvement is nature.