

# FPGA-Based Design and Implementation of a Controller for a Dual-Axis Sun Tracking System

## Problem Statement

*Maximize power extraction from the panel by operating the cell arrays at their full potential* **Outcome**, which in its core will increase the efficiency of these panels.

## Outcome

*Prototype of a solar panel that adjusts the angle of the PV cells toward the best angle to maximize the amount of sunrays acquired keeping the efficiency at higher rates and the cost as minimum as possible.*

## Requirements

- Literature survey of existing solutions
- Evaluation of different solution options and adopting an approach
- Design and implementation of the system
- Testing correct functionality of the system and determining performance measures

## Advisor

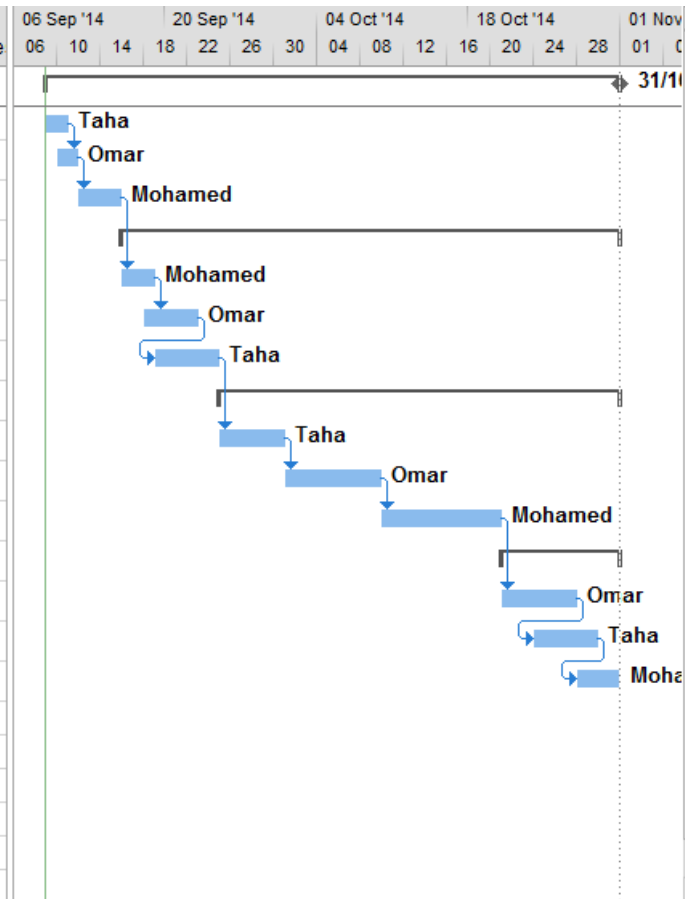
*Dr. Aiman El-Melh.*

## Team Members

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## Timetable

	Start	Task Name	Duration	Resource Name
1	<b>Tue 09/09/14</b>	<b>Looking for existing , innovative solutions</b>	<b>39 days</b>	
2	Tue 09/09/14	Using FPGA board as a Microcontroller	2 days	Taha
3	Wed 10/09/14	Using power provided by the solar panel to run the motors	2 days	Omar
4	Fri 12/09/14	Other Approaches	2 days	Mohamed
5	<b>Tue 16/09/14</b>	<b>Evaluation of solutions and choosing the best approach</b>	<b>34 days</b>	
6	Tue 16/09/14	Economical perspective	3 days	Mohamed
7	Thu 18/09/14	Energy Efficient	3 days	Omar
8	Fri 19/09/14	Compatibility and support	4 days	Taha
9	<b>Thu 25/09/14</b>	<b>Design and implementation of the system</b>	<b>27 days</b>	
10	Thu 25/09/14	Architecture design	4 days	Taha
11	Wed 01/10/14	Implementation	7 days	Omar
12	Fri 10/10/14	Coding	7 days	Mohamed
13	<b>Tue 21/10/14</b>	<b>Testing and Debug</b>	<b>9 days</b>	
14	Tue 21/10/14	Performance Analysis	5 days	Omar
15	Fri 24/10/14	Code Tracing	4 days	Taha
16	Tue 28/10/14	Troubleshooting	4 days	Mohamed



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