SMART HOME LIGHTING SYSTEM MANGER

Computation project proposal
Under supervision /DR. Noha Hussein

Omar Moustafa Salah	192400779	Judy Ehab Abdelmajied	192400739
Khaled Karam Mahmoud	192400688	Omar Ahmed Mohamed	192400562
Mohamed Badway Mohamed	192400676	Oliver Emad Adly	192400716
Adam Tamer Mohamed	192400677	Haidy Ahmed Mohamed	192400740
Mai Ahmed Mohamed	192400685	Martina Anwar Azmy	192400721
Zyad Waleed Amin	192400694	Rodina Mahmoud Sayed	192400743
Salma Waeel Salah	192400702	Abdelrhman Waleed Hassan	192400701
Heba Ahmed Mohamed	192400714	Hazem Mohamed Hamdy	192400671

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Abstract:

Our problem was providing a much more advanced controlling system over the circuit allowing for more options to control with, after performing an analytical study for our project including time frame, team members, available time for each member and members' background knowledge. our project represents a smart home system with feedback-based capabilities for automated control over a specific parameter including sun light presence and motion in specific area.

Introduction:

In a world where digital data is the greatest weapon every home should have a smart automatic system providing the needed level of administration and control over its electric system. Such a system would allow better use patterns and consumption rates, understanding the uses patterns and knowing the stress time would provide a solid valuable data for the power plant and power distribution station, lead time, inventory managing, low stock alert, profit per product and profit percentage.

In an era defined by information overload and rapid communication, Rapid Application Development (RAD) which is one the features that is provided by VB.NET is highly appreciated specially in a tight schedule like ours. Also, visual basic being object-oriented programming (OOP) (a computer programming model that organizes software design around data, or objects, rather than functions and logic) makes it easier to program and design saving extra time for more development around the graphical user interface (GUI) and the database.

Visual basic.NET has its significant key characteristics that make it fits the best in our project due to the tight schedule and members experience like

1. Being designed to be relatively easy to learn, especially for beginners.
2. Emphasizes a visual development environment where users can drag and drop interface elements.

System features:

Providing full control on each led separated

Customizable designs depend on the home design.

Providing statistical views and analysis for consumption.

Each led has auto and manual mode

controlling brightness

calculating power / current in Real time

Methodology:

Front end/ UI

Extensions and frameworks like “Guna” will be used to maintain an efficient and utilized system interface that fit in nowadays requirements for stylish and modern software.

Back end and functionality

Our system will be mainly programmed using visual basic.NET as well as using other tools if needed like SQL to manage data efficiently.

Timeframe

Our maximum timeframe is estimated to be a week, our target is 3 days, and we are expecting to finish by May 8th

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