الاستهلال

قال تعالى : " وَابْتَغِ فِيمَا آتَاكَ اللَّهُ الدَّارَ الْآخِرَةَ وَلَا تَنْسَ نَصِيبَكَ مِنَ الدُّنْيَا وَأَحْسِنْ كَمَا أَحْسَنَ اللَّهُ إِلَيْكَ وَلَا تَبْغِ الْفَسَادَ فِي الْأَرْضِ إِنَّ اللَّهَ لَا يُحِبُّ الْمُفْسِدِينَ"

صدق الله العظيم

سورة القصص الآية(77)

Dedication

To our beloved Parents

To All the people in our life who touch our hearts

we dedicate this research.

Acknowledgment

First and foremost, we must acknowledge our limitless thanks to Allah, the Ever-Magnificent; the Ever-Thankful, for His help and bless. We are totally sure that this work would have never become truth, without His guidance.

We owe a deep debt of gratitude to our supervisor Dr. Yasir El-abaid who worked hard with us from the beginning till the completion of the present research and has been always generous during all phases of the research .

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We would like to take this opportunity to say warm thanks to all our beloved friends, who have been so supportive along the way of doing our thesis. We also would like to express our wholehearted thanks to our families for their generous support , they provided us throughout our entire life and particularly through the process of pursuing the bachelor degree. Because of their unconditional love and prayers, We have the chance to complete this thesis.

Last but not least, deepest thanks go to all people who took part in making this thesis real.

Abstract

The thesis is on Remote Management of Buildings. It covers the area of monitoring and controlling appliances in buildings as per users configuration and control . As the automation is performed on Raspberry Pi device along with Arduino board, it combines the overall benefits from both devices and thus useful in implementing our tasks. It primarily focus on safety and then other facilities extended along with it. Services like knowing temperature reading, lights On/Off condition, fan On/Off and other services are featured in this Buildings. The Alarm system is also major part in Buildings which secure it and update user with right information in right time to avoid accident and loss. The controlling section is a great importance in Buildings. User will have automatic settings to control the appliances. Further, this service is good and one of the reliable way to encapsulate a Building from internal and external danger. People in job or outside home can work freely and smartly having control to their home. They can just sit and launch the application and see what is going on in their home in just a second and feel that their home is with them all time. Remote Management of Buildings is truly one of the needs in today's world. People rely and feel safe and warmth in their home with their family. Remote Management brings more closer and more safer to them .

المستخلص

الأطروحة هي في التحكم عن بعد من في المباني. ويغطي مجال رصد ومراقبة الأجهزة في المباني وفقا لتكوين المستخدمين والسيطرة. كما يتم تنفيذ الأتمتة على الجهاز الراسبيري باي جنبا إلى جنب مع اردوينو متنها، فهو يجمع بين الفوائد العامة من كلا الجهازين، وبالتالي من المفيد في تنفيذ مهامنا. أن تركز في المقام الأول على سلامة ومرافق أخرى ثم امتد معها. خدمات مثل معرفة درجة حرارة القراءة، أضواء تشغيل / إيقاف حالة، مروحة تشغيل / إيقاف واردة الخدمات الأخرى في هذه المباني. نظام إنذار هو أيضا دورا رئيسيا في المباني وتأمين واستيفاء المستخدم مع المعلومات الصحيحة في الوقت المناسب لتجنب الحوادث والخسائر. قسم السيطرة هو أهمية كبيرة في المباني. سوف يكون لدى المستخدم الإعدادات التلقائية للسيطرة على الأجهزة المنزلية. وعلاوة على ذلك، فإن هذه الخدمة جيدة واحدة من طريقة يمكن الاعتماد عليها لتغليف المبنى من خطر داخلي وخارجي. يمكن للناس في العمل أو خارج المنزل بالعمل بحرية وبذكاء له سيطرة على منازلهم. أنها يمكن أن مجرد الجلوس وتشغيل التطبيق ومعرفة ما يجري في منزلهم فقط في الثانية ويشعرون بأن وطنهم هو معهم كل الوقت. الإدارة عن بعد من المباني هي حقا واحدة من الاحتياجات في عالم اليوم. الناس يعتمدون ويشعر بالأمان والدفء في منازلهم مع أسرهم. الإدارة عن بعد يجلب أكثر أوثق وأكثر أمانا لهم.

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LIST OF ABBREVIATION

2G	**Second Generation**
3G	**Third Generation**
AC	**Air Conditioner**
CSI	**Camera Serial Interface**
DSI	**Display Serial Interface**
GPIO	**General Purpose Input / Output**
GUI	**Graphical User Interface**
IDE	**Integrated Development Environment**
IOT	**Internet of Things**
IR	**Infra-Red**
LDR	**Light Dependent Resistance**
LED	**Light Emitting Diode**
OS	**Operating System**
PIR	**Passive Infra-Red**
SPI	**Serial Peripheral Interface**
SSH	**Secured Shell**
UART	**Universal Asynchronous Receiver/Transmitter**