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ACS AUSTRALIAN COMPUTER SOCIETY

RECOGNITION OF PRIOR LEARNING APPLICATION - 2017

This document is required to be completed for all Recognition of Prior Learning (RPL) Application types and must be attached to the online application form under the RPL tab in PDF format.

In this document there are two sections that all applicants must complete
- The Key Areas of Knowledge – Section 1
- The Project Report Forms – Section 2

RPL applications are for those applicants who do **not** hold a recognised tertiary ICT qualification and who have a minimum of 6 years of closely related experience. Please refer to the Summary of Criteria for further information.

This document provides the opportunity for applicants to demonstrate knowledge learnt throughout their professional experience.

Applicant Name	BUSINESS ANALYST
Application ID (if known)	
Applicant Date of Birth	

SECTION 1 – KEY AREAS OF KNOWLEDGE

INFORMATION ABOUT THE AREAS OF KNOWLEDGE

Please read the following document to assist you in completing Section 1 of this document -The ACS Core Body of Knowledge for ICT Professionals (CBOK).

Applicants must detail the relationship between the selected Areas of Knowledge and their learning from their experience and qualifications. This section of the RPL application needs to be specific as to how and where the applicant has acquired the knowledge.

The ICT Key Areas of Knowledge:

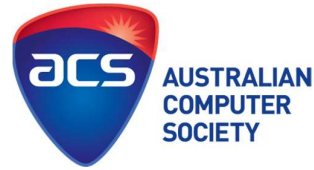Essential Core ICT Knowledge

Topic 1.   ICT Professional Knowledge
    Sub Topics are -
        a.   Ethics
        b.   Professional Expectations
        c.   Teamwork Concepts and Issues
        d.   Communication
        e.   Societal Issues

Topic 2.   ICT Problem Solving
    Sub Topics are -
        a.   Modelling Methods
        b.   Processes to understand problems
        c.   Methods and tools for handling abstraction

General ICT Knowledge

Topic 3. Technology Resources

Sub Topics are -
a. Hardware and Software Fundamentals
b. Data and Information Management
c. Data Communications and Networking

Topic 4. Technology Building

Sub Topics are -
a. Human Factors
b. Programming
c. Information Systems Development and Acquisition

Topic 5. ICT Management

Sub Topics are -
a. IT Governance and Organisational Issues
b. IT Project Management
c. ICT Service Management
d. Security Management

You are required to select one topic from the Essential Core ICT Knowledge (Topic 1 or Topic 2) and one topic from the General ICT Knowledge (Topic 3, Topic 4 or Topic 5). Please ensure you address at least 2 subtopics from each of the topics chosen. In the following expandable typing areas, explain **how you have acquired your in-depth knowledge** in these topic areas through your professional experience.

Important:
- **Identify the Area of Knowledge topic that you have chosen to explain by entering the name of the Area of Knowledge topic in the box.**
- **Explain, in the expandable typing area, how you have acquired the knowledge and illustrate the depth of that knowledge.**
- **You should NOT address all sub topics included in the Area of Knowledge in your explanation. Address at least TWO of the sub topics. Enter the sub topic name(s) in the box.**
- **Be clear and concise in your explanation.**
- **Limit each explanation to no more than one to one and a half pages.**

Essential Core ICT Area of Knowledge:
Topic 1. ICT Professional Knowledge (PK)

PK1. Teamwork Concepts and Issues
PK2. Communication

How have you acquired this knowledge in your working environment? Illustrate your depth of knowledge.

PK1. Teamwork Concepts and Issues

My presence as a Business Analyst /Project Lead, group working is basic requirement of the job and helps you a lot in learning perspective. I have taken part in many business projects and became group member of different group workers with diverse backgrounds which enhanced my professionalism.
I always work with team members and learn their expertise as well which give me the path towards success.
- I follow my role and always tell my goal to my group members.
- I merge my goal with all the group members and it automatically moves our goal towards a single direction.

- I do my correspondence with the group members who have almost same goals.
- I always have belief that group work provides excellent results.

I try to work as a group member of the group with all my group mates of the project even when I have a leading role in the business project. Although clients are the central point of the project but as a team member working with team members having diverse background is usually a difficult task and also coordination with different departments to dismantle things is a very tough task. People see different problems in a different manner and try to solve solutions according to their own understanding and give solutions according to their perspective which is very difficult to understand and as a group lead I behave positively with my all group members to ensure that to fight with a problem is a smaller thing and to provide its solution to the client is a profitable step. So your attitude should be very amazing and positive. It gives positive outcome because everyone just targets the problem and find out the best solution out of it.

PK2. Communication

Communication is a key factor which plays an important role in business field and every business deals flourish just after the professional communication. Business and professional communication skills provide better solution to all the problems raised between meetings.

Due to good communication I trained my group associates and then also trained to my clients as well. As a mediator between by organization and my client I was the person who had to do all things. I was responsible for all documentation for the project and to provide training to the end users to make it happen. I extracted all the data from the client to make sure that what are their needs exactly and what is their objective.

General ICT Area of Knowledge:

Topic 1. ICT Management (IM)

Sub Topics are -
a. IT Project Management
b. Security Management

How have you acquired this knowledge in your working environment? Illustrate your depth of knowledge.

IT Project Management

It is quite a time since I am working as Business Analyst. Venture administration is essential prerequisite to manage IT anticipates. In Project. I generally need to work with in course of events and by thinking about extent of work, nature of work and cost of task. I worked on business management of the project, industrial solutions of the project, market value of the project, and logistics approach of the project, Business communication, Procurement approach, risk and return approach. I learned technical and professional skills to enhance my professionalism from different technical bodies and company trainings.

Security Management

How have you acquired this knowledge in your working environment?

I have learnt security management during my studies and during the job tenure. I have dealt in numerous projects where implementation of security is top priority. I have managed all aspects of secrecy adequately and passably.

SECTION 2 - RPL PROJECT REPORTS

A project report is a coherent written description of a project or engagement that provides you with the opportunity to show how you perform as an ICT Professional. Each report is to relate to a significant project or work episode undertaken by you during your professional career.

The purpose of these reports is to enable you to demonstrate your command and implementation of the Areas of Knowledge described in Section 1 of this application.

Please note: You are required to provide two project reports.

Of the two reports, one must pertain to a project undertaken within the last three years, and the other for a project within the last five years.

Projects over two years long may be used for both reports under either of the following conditions:
- **The project has clearly-defined work efforts which took place in parallel, each with their own solution development and design activities and their own deliverables.**
- **The project had clearly-defined phases that were executed in succession, each with its own solution development and design activities and deliverables. Note that a second project phase that constructs and implements the solution developed by the first phase does not meet this requirement.**

Depending on the nature of your role in each project, the Project Report should cover an appropriate selection of factors. Appropriate factors will be determined based on the type of ICT project selected. Possible factors include:

- System Analysis and Design and Software Engineering methodologies used;
- Contribution to the processes involved in the design and implementation of enterprise-wide computing systems;
- Programming languages, design paradigms and implementation procedures adopted;
- Database and/or file design and management techniques employed;
- Network topologies, including size, distribution and security facilities installed;
- Project Management and quality assurance techniques followed;
- Internet application design, including database interactivity and security measures implemented;
- ICT managerial activities, demonstrating the nature and extent of responsibilities

Project Summary:			
	Project Name	**Start Date**	**End Date**
Project 1	**Housing Society Light Management System**	**mm/yy**	**mm/yy**
Project 2	**Artificial Intelligence Building Control Program**	**mm/yy**	**mm/yy**

Instructions

The following pages provide a template for your reports.

When writing your reports please provide your own thoughts – do not just copy project documentation.
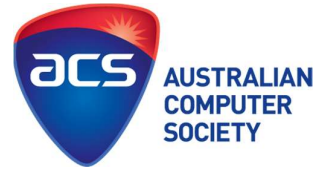
Please use the first person in your discussion, so it is clear to the assessor what you did versus what others did – say "I did X" rather than "X was done".

Diagrams from the project documentation may be helpful, but the text should be in your own words. Please ensure that diagrams are relevant, readable, and help the assessor to understand what you did as a member of the project team.

If sections of the Project Report template (see below) are not relevant to your participation in the project, then leave the section blank.

Focus on quality rather than quantity. **Each Project Report should be no more than four or five pages in length.**

SPECIAL NOTE:

By submitting this RPL Knowledge and Project Report form as a component of your ACS skills assessment application, you agree with the following statement:

The applicant confirms that the explanation of their knowledge and project reports submitted in this application truthfully and accurately describe the applicant and the applicant's personal involvement in the projects. The applicant is aware that plagiarism by the applicant will automatically invalidate this application, will jeopardise any future applications from the applicant and will be reported by the Australian Computer Society to the Australian Department of Immigration and Border Protection.

Project 1: Housing society light management system

1. **Project Summary**

   1.1. **Identification**

Client's Company Name	Legal Name of Entity	
Business Address	Street Address Suburb State Postcode Country	
Contact Numbers	Tel: Telephone (include country and area code)	
Web Address	Web address	
Email Address	General email address	
Nature of project		
Location of project		
Name of your employer		

   1.2. **Duration**

	From	To
Total project duration	mm/yy	mm/yy
Your involvement	mm/yy	mm/yy

   1.3. **Resources**

	Number
Your team size	
Total project team size	

   1.4. **Personal Involvement**

Please list the phases of the project in which you were personally involved

Start	Completion	Phase Description
mm/yy	mm/yy	Commencement – Requirement analysis & gathering of needs
mm/yy	mm/yy	Documentation Preparation, Design & Development of Database
mm/yy	mm/yy	Development of Input Data & Output Data
mm/yy	mm/yy	Development of Forms for Management
mm/yy	mm/yy	Software Testing, System Implementation, End User Training

1.5. Describe your role(s) and responsibilities, including the leadership aspects.

As an I.T Business Analyst I developed Housing Society Light Management System centrally controlled by a web-based application with all those factors which helps in controlling and managing light even when load shedding occurs. It consists of multitudinous factors like light consumption, failure of voltage, high rising of heat level in the society, adjustment of light and voltage, maintenance reminder in case of any problem in the light in any specific area of the route.

A true web-based application works in this all system and cannot be slow down even in the case of huge data inflow and outflow. This quality software can be accessed from any part of the country just required an internet connectivity and it's impeccable. This application software is usually used by the Housing Society authorities just to make their work more productive and fast.

Competencies and Expertise used in the project:
- Project Plan for Management
- Human Resource Management
- Technical frame work considering deep knowledge of I.T Development and Deployment.
- Web Based Software Development Lifecycle.
- GSM packet data transfer management and Global Positioning system.

I was leading this business project and extracting all the relevant information from the involved persons to make this project successful. Also tried to include information through direct observation and with the consultation from my different colleagues for this project.

These are the important commitments achieved from start till bottom to make the project successful:
- ✓ We had disparate meetings with operations and I.T department to understand the imperative of the business and to provide panacea to all kind of hidden and transparent problems.
- ✓ Provided all the solutions to make system foolproof for the sake of supremacy and control.
- ✓ Evaluated all health check of the project and did screening of all the techniques used in the project for the sake of improvement.
- ✓ Trained all the demure staff responsible to look after the application as an end user and specifically operations department which had to use this whole program.
- ✓ Worked on the Scheduling of user manuals so everyone should know that how to execute it.
- ✓ User Acceptance Test was taken and did compliance by the involved department.

2. Business Opportunity or Problem

2.1. *Describe the business opportunity or problem(s) this project addressed.*

Well, there were number of demerits in old manual light control system and because of these drawbacks residents could become target of these problems. So, the concerning department had following issues with the old system:

1). In old Housing Society light management system, system was showing its dependency over 157 technicians and 35 engineers who were taking care of the whole society regarding light. No one is able to extract data from the books because no data was available in the organized form. So, everyone was unable to take decision regarding problems for future analysis.

2). Society had no proper solution regarding light handling and sometimes unable to detect fused lights unless complaint is launched.

3). One of the biggest losses was of stealing fixed lights and lights from the stock. Replacement of copper wired light cables with local normal lights cables.

4). Old system was unable to access the ratio between usage of light and required light in the system.

5). Due to old system performance of the staff was very dissatisfactory and was not highly appreciated.

6). Department had no relevant data for energy analysis which could be used for future demand.

7). Department was taking almost 8 to 10 weeks to organize exact figures regarding problematic issues, expenditures and work burden on employees.

3. Solution

3.1. *Discuss your contribution to the solution, project or engagement.*

As discussed earlier, it was unable to manage huge number of lights in a big society without the help of individuals and in return a huge cost was incurred. So, the authorities thought about a web-based system which helped them in organizing all the data and information regarding light control.
Key requirements were taken through analysis of the business model because it was the most important step to understand what actually my client wanted in the project and what services were they looking for. So, the whole team worked over it and provided exact solution to the user.
1. Provided web-based application so, that every concerned person could use it according to the given access.
2. Created a BFW (Business Frame Work) through which everyone has the area on which he can access and understand the system.
3. Having said that it was a web-based application that needed internet connectivity and totally accessible by the client from anywhere, which also provided the information that which area was unable to consume light even access supply of light energy. Now it is easily manageable by the work staff.
4. To check working capacity of the system many tests conducted in the society and in last a specific model used which helped the system to give intimation regarding light voltage.

3.2. *Describe any design or problem solving methods you used on this project.*

This application was conducted in a manner that its business requirements should be achieved. We used devices (nodes) which were responsible to switch lights on and off without taking any command or pressing any button. It would also calculate the number of hours in which lights were being used and would allow the department to detect where lights were off even in the required time when all lights were on.

As discussing with the current status of the business application, the technician can easily have information about the defective lights of the society. It shows the position number and area of the light in the system where it is not working properly, and technician takes hardly 20 minutes to solve the problem. It entails the responsibility over technician because technician has the access even to check its voltage through this application without using voltage device and also application automatically tells him the voltage power by the ingress of software. System provides all the exact information about the number of hours light switched on and ration of light used at day and night. Graph also shows the figures about the consumption of light in the peak time as well. This software also gives indication that street lights of the society are switched on more than the required time and energy is being wasted. So, system takes permission to switch off those lights if there is no special event is being organized in the society on special permission.

We used an updated business method for the evaluation of the system we designed process to fulfil the business requirement. First of all, we tested all the programs which we developed for the system and then on second step we checked whether it would give proper details which we were expecting, or it would give ordinary details. System functionality was not compromised to get exact information from the system. On the third step we finalized the software that now it could give exact details which could also tell us the opportunity as well through which we could update system with the help of new information.

We accumulated all the data of each light and recorded it on temporary basis just for the sake of sharing with clients. After approval from the client we had go ahead to install all the required devices to connect it with the Housing Society Control office.

Web-based application control was checked at the final stage and given to the I.T professionals to run and make it operational for them.
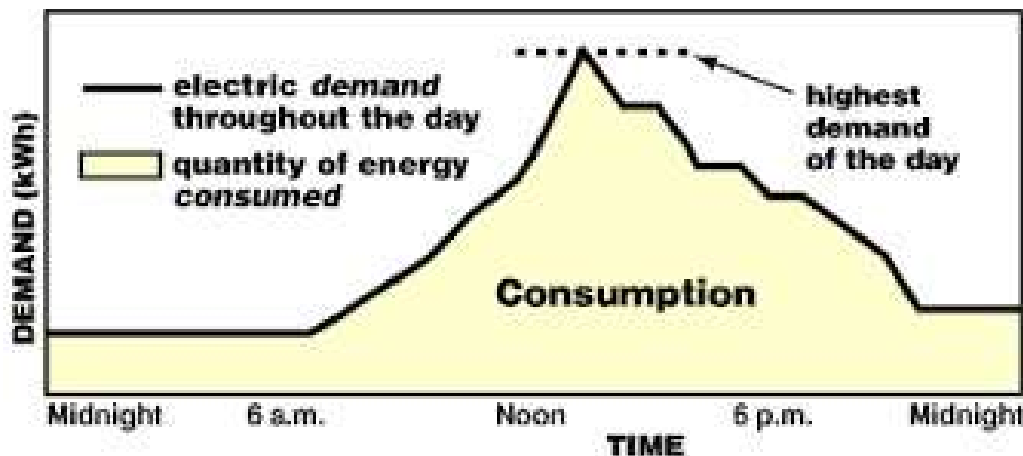
3.3. List the major deliverables of the project that you were responsible for or contributed to.

- We used Plc Bus an advanced technology to gain more light energy around 75 percent and we easily saved our funds against the traditional system through just controlling of lights which were switched on.
- We also saved energy by amending light system in rush hours.
- We used significant techniques by switching off those lights which were being utilized without any purpose.
- Through new technology system, no faults were occurred again and again and very easy to find out technical faults through a proper managed system.
- In this project light control system was networked around the all operating staff and they could easily control it due to networking.
- If voltage was not according to the required level, then it was not possible for the operator to detect what were the causes through which lights were not being "on". Now it automatically detects the voltage and also tells about the missing voltage.
- Used wireless technology in most cases instead of cables and wires. Easy to access and operate.
- Used Proper Remote Terminal Unit to fix everything in an aligned manner.
- It has numerous options for operating Housing Society lights.
- Used Pie charts for getting up to date reports through extraction of data by the system.
- This system can easily be used in government organizations, schools and airport colonies especially on airports and their runaways.
- Less time consuming.

4. Results

4.1. *Was your solution implemented? If so, describe the role, if any, you had in the implementation.*

- This whole project saved our 45 million rupees which would also save our energy as well.
- Power supply device was used to convert low voltage in to required voltage and linked it with the software to control all the system.
- We used specific storage system connected with GSM and used Programmable Logic Controller (P.L.C) for reliability of huge control.
- Apart from this we also put up a system which would inform us from bad weather condition and we would be able to use the technology to control different kind of mishaps.

4.2. *Assess the overall success or failure of the project.*

- ➢ We successfully completed and executed the whole project according to the mentioned time frame work and resolved all the issues in the required time.
- ➢ According to the project analysts we would be able to save around 25 million rupees but fortunately with the efforts of every team member we secured 45 million rupees which was an achievement of our project and our client was quite happy due to our excellent work.
- ➢ Restoring or updating cost would be around 2 percent if any difficulty is faced by the client.
- ➢ Only one centralized system is present but if it is used by any staff person who is directly involved with this software would have access to check status from backup.
- ➢ Energy is not consumed to that extent where we pay high price bills, now it is in the position where we can save it by the help of bulbs by keeping their intensity low.
- ➢ Total watts are calculated by the standard formula i.e. (Total output = Useful energy provided by the device / useful energy provided to the device *100).
- ➢ As low energy is consumed so it gives a positive signature to the environment which leads to low cost in terms of social responsibility.
- ➢ Non-stop energy is being given to the Wi-Fi units to make sure that there should be no gap in the system and all applications are working together in a continuous manner.
- ➢ Remote terminal unit is specific technology that is operated with microprocessor and its interface provides all features through which we can monitor and evaluate any kind of data. It used telemetry data that helps without any instructions and sends it to the centralized system where we can calculate exact figures.

4.3. Lessons Learned

In retrospect, what you might have done differently on this project?

We had very tight schedule of work and had no time to create any other things special. After completing our project, we found a very strong feeling that this project could be connected with multiple applications working in our systems and mobiles. Through there connection we could easily do several things and it could be very profitable software. Our team developers now come in a position that for the next society software they would definitely update it with new thinking patterns and technology. It would cost low and become friendly user interface as well.

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Project 2: Artificial Intelligence Building Control Program

5.   Project Summary

5.1. Identification

Client's Company Name	Legal Name of Entity	
Business Address	Street Address Suburb State Postcode Country	
Contact Numbers	Tel: Telephone (include country and area code)	
Web Address	Web address	
Email Address	General email address	
Nature of project		
Location of project		
Name of your employer		

5.2. Duration

	From	To
Total project duration		
Your involvement		

5.3. Resources

	Number
Your team size	
Total project team size	

5.4. Personal Involvement

Please list the phases of the project in which you were personally involved

Start	Completion	Phase Description
mm/yy	mm/yy	Commencement – Requirement analysis & gathering of needs
mm/yy	mm/yy	Documentation Preparation, Design & Development of Database
mm/yy	mm/yy	Development of Input Data & Output Data
mm/yy	mm/yy	Development of Forms for Management
mm/yy	mm/yy	Software Testing, System Implementation, End User Training

5.5. Describe your role(s) and responsibilities in the project.

Artificial intelligence Building Control Program collaborates with the working of building control which includes correspondence control, Building control and Business control to give a single database easily usable for team to take exact decisions in real time world.

A.I.B.C.P comprises of both software working and hardware support, software working was designed in an ascending order with the access of interface given to the assigned person using these protocols, as Process Field Bus which was used for communication and was known for automation technology, Device-net, S.O.A.P, Xml, Lonworks, Bacnet, lonworks and modbus technology implemented to communicate among intelligent devices, sensors and instruments.

The A.I.B.C.P installed in a commercial Building consists of following main systems.
- ❖ Automatic Building System
- ❖ Observe & Check System
- ❖ Parking Control System
- ❖ Alarm Automation System
- ❖ Office Automatic Check System
- ❖ Informative Display Electronic System
- ❖ Intelligent Imaging System

The system was designed and implemented in a particular manner through which team experienced different issues regarding building control program. Standard Operating Principles were implemented to make it perfect for the end user.

The program was created by the software developers who used their expertise in the project and implemented in place of traditional technology. Project was designed in a way that building specialists followed the S.O.P which encountered different building administration issues. Risk check was handled; strategy was made for the proportion of resources. Extra amount was cut to make this project cost effective and profitable for the end user.

Trial testing uniformity of the project was checked at the final stage.
I was performing following tasks in the project from top till bottom:
- Produced feasibility report of the project by considering all possible problems.

- In order all the business documents of the A.I.B.C.P.

- As per the requirement of the business, I observed and checked the development of the system step wise.

- Any important requirements added by the stakeholders in A.I.B.C.P were added in the system to make it multidimensional.

- Worked in contact between the information department through which I was extracting and collecting information for the sake of software program and being intuitive with the software team to make it happen.

6. Business Opportunity or Problem

6.1. Describe the business opportunity or problem(s) this project addressed.

> - ✓ Data was extracted and combined in one system so there were 100 percent chances to take 100 percent decisions based on true facts and figures.
> - ✓ Combining and maintaining the H.V.A.C, security, high resolution video, energy and applications of life security produces a sole workstation which provides complete control and better performance.
> - ✓ Friendly user system made operating cost low and minimized the mistakes. It gives power to staff members to take real time action in any case.
> - ✓ Ongoing perspective into the system activities and profound pattern investigations give information driven understanding to advance your vitality administration techniques and limit your running cost.
> - ✓ The great mix of open frameworks conventions and an adaptable stage implies the A.I.B.C.P can help bolster development and extension of the framework later.
> - ✓ This system software minimized the risk through a single interface, It increased the security of the building, working staff, employees and other members and especially business. It quickly responds and makes any mishap controllable.
> - ✓ It gives all kind of data sharing as per instruction and has better reliable figures than any other software. It provides complete details without any data missing which makes decision making easy in terms of business.
>
> A.I.B.C.P was affiliated with the control system and data analysis with defined factors as above. Data was combined as per different formulas to check the overall cost and took decision to minimize it. It gathered all data including energy figures to make its cost low because of largely consuming material. By energy values data was largely interlinked with the system for data analysis and reported to also include it in software overall development to make it more viable.

7. Solution

7.1. Discuss your contribution to the solution, project or engagement.

> - Checked all the needs of A.I.B.C.P business to make sure that it could be beneficial for the system. Took all the first-hand requirements for the designing and planning of the project. To describe the essence and viability of the project.
> - Throughout the project multi-dimensional data factor was not interlinked in the system even at the last stage which was identified and highlighted by the stakeholders team and then interlinked by me and it was a very difficult task at the final stage to make it complete because of coding and decoding.
> - System Control team finally found a sensitive gap in the given requirement by the business people and then extracted information from the business team to make it clear.
> - Eight months' time frame was given by the higher management for the designing, planning and execution of the software. The requirement was taken in a very professional manner that is why every factor was given higher importance to make this project successful. Project took almost 6 months for its finalization and implementation just because of professional attitude.

7.2. *Describe any design or problem solving methods you used on this project.*

> - D.M.A.I.C approach was implemented.
> - Problem was identified by the help of V.O.B / V.O.F throughout the description step.
> - Except standard SOP's many additional variables were used to make the case successful in front of the business team and showed its additional features to every stake holder for its finalization.
> - Information was formed from every single correlated sub-division of which I did analysis and by checking all the procedure it was identified and solved all the objections which were being raised by the building residents related to energy.
> - Proposed steps to improve stage and given the solution finally according to the business user.

7.3. *List the major deliverables of the project that you were responsible for or contributed to.*

My contribution is highlighted from top to bottom due to my meetings on all stages with the stake holder for the extraction of knowledge and organize it in a manner to make it applicable for the planning team.

- As the whole data was converted in a computerized system, it was very easy to extract any kind of information through the stored data.
- Information with complete details was provided based on computerized system and decisions were easy to take.
- Everything was in order identified and maintained.
- Most productive factor of the project was the usage of maintenance staff
- Timely highlighting of problems in this project maintained the satisfaction level of the client. It leaded business environment towards prosperity.
- Performance of all combined features was analyzed at every stage of the project to make it successful.
- Data security was one of the major demands of the management and project team made it successful for its clients.

8. Results

8.1. *Was your solution implemented? If so, describe the role, if any, you had in the implementation.*

> - Leaded all professionals towards the manual documentation.
> - Organized a full time sitting to train all engineers who had to look after and run this A.I.B.C.P, they hardly invested 21 days and ran the whole program.

8.2. *Assess the overall success or failure of the project.*
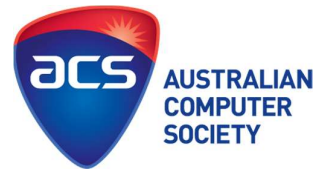
Well, it's a successful project because through a single interface everyone can control the security of the building and temperature of the building. A person who is given the access can easily read the temperature of the ground if its temperature is not according to the required level. Any employee of the team can check any problem in the building regarding safety and security and detect at which location it happened and why it happened.

At the end of the implementation of the project and the whole installation authorities require some technicians to maintain everything in the project. For instance, building had 150 fire stopper devices and technician had to check every device to check its level but now system will recognize level of every device and detect if there would any problem in the device and its remedy would be mentioned.

The building control system of A.I.B.C.P would recommend the building authorities when would they have to make lights on or when they must make lights off just to save money or make light voltage low to make lights dim. This would save around 5 hundred thousand which is a business package for every client.

Around 2 million rupees have been saved from this project just based on light system and it makes it very profitable and successful in terms of business.

8.3. Lessons Learned

In retrospect, what you might have done differently on this project?

Team got just three weeks for getting training and learning things from our professional we also trained technicians how to run the project and how to extract information from the software as well. We connected thing with the single interface and gave access to the assigned person to check all details as per the job designation.