inspiring success

ACS RECOGNITION OF PRIOR LEARNING (RPL) FORM - 2017

This document is required to be completed for all **Recognition of Prior Learning (RPL)** applications and uploaded as a PDF to the application form.

IMPORTANT NOTICE:

Misleading and false information is viewed as a major breach of ethical behaviour and will seriously jeopardise your migration prospects.

It is your responsibility to indicate when you have drawn on the work of others. Other people's original ideas and methods should be clearly distinguished, and other people's words, illustrations and diagrams should be clearly indicated regardless of whether they are copied exactly, paraphrased, or adapted.

Failure to acknowledge your source by clear citation and referencing constitutes plagiarism. All plagiarism will be assessed as not suitable and reported to the Department of Immigration and Border Protection.

The ACS reserves the right to use software applications to screen your submitted work for matches either to published sources or to other submitted applications. In some cases, you may be asked to submit project reports and other written work submitted with the application for screening by plagiarism detection services.

If at any stage in the assessment process plagiarism is detected, the information may be provided to other Australian Government agencies. The assessment will be terminated and the outcome recorded as unsuitable. A refund of the application fee cannot be provided for cases assessed as containing false information or plagiarism.

Please complete the following 2 sections:
1. **The Key Areas of Knowledge – Section 1**
2. **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.

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

Applicant Name	
Applicant Email Address	
Applicant Date of Birth	DD/MM/YY

SECTION 1 – KEY AREAS OF KNOWLEDGE

Section 1 is based and will be assessed on the following document. Please ensure you read and understand - The ACS Core Body of Knowledge for ICT Professionals (CBOK).

You must clearly explain how your experience and qualifications meet the selected Areas of Knowledge and specifically how and where you acquired the knowledge.

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.

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

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 illustrated 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.**

In the following expandable typing areas, explain **how you have acquired your in-depth knowledge** in these topic areas through your professional experience.

Essential Core ICT Area of Knowledge:
  Topic 1.   ICT Professional Knowledge
   Sub Topics are -
    a.   Ethics
    b.   Teamwork Concepts and Issues
    c.   Communication

Sub topic 1:
==Communication skills:==
 	
      Communication skills are as necessary as technical skills in software engineering. The majority of software engineers work in teams, and to accomplish their tasks, it is essential for them to communicate with each other and also with clients through detailed discussion on software requirements. This issue is often neglected and overlooked, but it is equally essential to the success of teams, projects, and individuals in software.
 	
      I have always given communication and social skills high importance, and I still try to learn and improve my communication skills. These skills have been a catalyst to the success in my career as a software engineer. As a junior software developer, I was responsible for providing training and demo to the end users of the software. I also had to make presentations to managerial level. It was that time when I realized that communication skills also have a vital importance in software engineering and I started to learn about improving my social skills and how to interact with my team members from the internet and books about communication. I began to understand that to get my job done I need to have excellent communication skills. I always preferred face to face communication rather than chatting or emailing because in face to face communication I had a better understanding of the person I was interacting with. I always tried to maintain good interaction with my colleagues and managers and users whom I provided training about the software. Working with different teams in different projects I got to interact with many different people, and that helped me a lot in learning more about communication skills. I welcomed feedback from my project fellows and my managers and always tried to be open to criticism and took it as an opportunity to improve myself and I still take their advice about how I can improve my performance.
 	
      Being a team leader, my primary task was to mentor junior software engineers and collaborate with colleagues, and I also interacted with software quality assurance team. At this post, I started to learn how to communicate as a leader, and I made sure I had an honest communication with every member of my team. I conducted regular meetings with my team to talk about outcomes of our project and listened to the opinions of each member. While communicating with junior team members, I chose to show encouragement instead of criticism which gave them the motivation to make extra effort to achieve our goals.

Sub topic 2:

Ethics:

Ethics is an essential part of work regardless of profession. Ethics play a crucial role in the life of Software Engineer because they have to interact with clients and also with team members and managers. I have always tried my best to follow the ethical and professional standards throughout my career. I still kept a professional relationship with my colleagues and respected my supervisors.

In the early part of my career, I was a junior software developer where part of my job was to report regular project progress to managers, and I performed this task in very formal manner. One of my duties was to provide training to the operators of the software my team developed. I respectably interacted with operators and tried to answer their queries politely. In the development process, I maintained a decent relationship with my team members and decided to contribute to the development to the best of my ability. I focused on learning more about software developing from colleagues and managers. Whenever I had Issues with my work, I approached my supervisors in a gracious way and asked them about solutions. By showing respect to my colleagues and managers I also gained their esteem and confidence.

To improve my social and ethical skills, I started to search on the internet about ethics in professional life and read the moral codes of software engineering through which I got a better understanding as for how I could improve myself morally. I started to realize more about the importance of moral behavior in software engineering. Later on, in my career as a senior software engineer, I worked in projects as a team leader where I was responsible for monitoring and supervising the project. I always tried to be supportive and fair towards my team members and gave them advice whenever they got puzzled in their work. I still showed honesty to my colleagues. I also took part in requirement gathering, and I always maintained a respectful relationship with the clients and stakeholders.

Maintaining a professional behavior with my project teams and interacting positively with clients played a significant role in the success of my projects. I showed continued professionalism in my work which earned me respect and trust of people I worked with.

General ICT Area of Knowledge: ICT Management
Sub Topics are -
e. IT Project Management
f. Security Management

Sub topic 1:

Security Management:

Today, software engineering is evolving at a fast pace and keeping up with the pace of the modern technologies software organization have to deal with the security issues. The management of security is an essential part of developing software and running a successful business.

Being a software engineer, I have come across numerous security issues throughout my career. I have always tried to be careful in developing software and focused on building secure systems. I always follow the rules and regulations to maintain security in the product I develop and write the code according to the industrial standards. I always make sure to prevent any flaws in my code that can cause security problems.

I have always kept it my priority to develop the software to the best interest of the clients and gave importance to the safety and security of the products. During the requirement gathering and analysis process, I have held meetings with clients and discussed their security requirements. I interacted with security specialists in my team and spoke with them in detail about software safety issues and how we can overcome them. From design to the development phase, my team analyzed the security complications that could occur in our software and tried to find the solutions.

As a senior software developer, I took the responsibility of monitoring what measures were being taken by my team members to protect data security. In the code reviewing process, I made sure

that my team took the necessary steps to make the product efficient and secure. I checked the flaws that could lead to harm the software and informed the security teams about them and guided them to resolve those issues. My project team always tried to develop systems that can resist malicious attacks.

I took part in the development of many projects that involved gathering sensitive information of the users and involved online payments. We made sure to implement advanced login and verification techniques in those projects so that users' data remains secure. We developed our projects in such a way that authorized people could only access the data. We ensured that our system resisted external attacks from damaging data and programs.

I learned about new technologies and new techniques that could help us in making our systems more secure. I also instructed my clients about the strategies we used in developing their products and how they could control and use their system safely and securely.

Sub topic 2:

Team Management:

During my career as a software engineer, I have been working auspiciously on many projects over the last five years. Proper management helps in the success of projects and aids in achieving business goals of our organization. I have learned and implemented the fundamentals of project management as well as concept exploration & definition, analysis, development, design, etc. in my projects. I learned the practical implementation of my theoretical knowledge. I learned the practical application of IT project management skills during the execution of different projects. I performed well individually and as a part of a team during all the stages of project management such as; analysis, design, development, and implementation of various projects wrapping the entire project lifecycle from concept development to yielding.

As a Senior Software developer, I have coordinated in several projects. I was responsible for setting up teams and providing tasks to the members according to their skills and knowledge. I always picked up a team of people who had common technology interests. By talking to each person individually, I got to recognize their abilities and provided tasks accordingly. I avoided giving nontechnical functions to programmers in my team. I handed out specialized tasks to people who had expertise in a particular task. I mentored junior members of the team and provided them guidance to solve their issues. I monitored all the functionality of the projects and tried to provide expertise and recommendations to colleagues to achieve our goals. I made sure everyone on the team was inputting their equal effort to complete their tasks.

I always tried to facilitate growth and told my employees to focus on one thing at a time. This technique helped in boosting the work rate of the employees. I made sure everyone was working as a team and kept a steady momentum to complete our projects. I tried to listen to every member of the team individually, and one on one conversation with them helped me to understand the interests of my employees. I encouraged them to research new technologies so that we can keep up with the latest tools and techniques to develop our software. I worked with software quality assurance teams to get to know if we were following the industrial standards and I also suggested improvements to them.

SECTION 2 - RPL PROJECT REPORTS

A project report is a clear 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 ICT career.
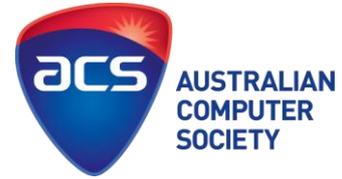
The purpose of these reports is to enable you to demonstrate your command and implementation of the Areas of Knowledge described in Section 1 of this application.

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

Of the two reports, one must apply 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	**Geospatial Design Support System**	**05/2016**	**Till Date**
Project 2	**RampView**	**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.
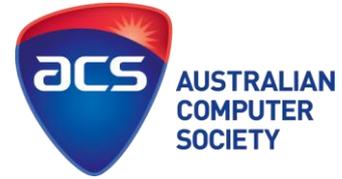
If sections of the Project Report template (see below) are not relevant to your participation in the project, then leave the section blank.

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.

ACS AUSTRALIAN COMPUTER SOCIETY

Project 1: Geospatial Design Support System

1.   Project Summary

1.1.   Identification

Client's Company Name	NBN Co
Business Address	Street Address Suburb State Postcode Country
Contact Numbers	Tel:
Web Address	https://www.nbnco.com.au/
Email Address	info@nbnco.com.au
Nature of project	Telecommunication
Location of project	Melbourne, Australia
Name of your employer	Infosys Technologies Ltd

1.2.   Duration

	From	To
Total project duration	06/2015	Till date
Your involvement	05/2016	Till date

1.3.   Resources

	Number
Your team size	12
Total project team size	20

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	Analysing the existing GDSS system with new business requirements
mm/yy	mm/yy	Prepared High Level Design Document and detailed Technical Low Level Design document by evaluating all the impacted application points
mm/yy	mm/yy	Developed the modules using REST Web services, Angular UI & subscriber - publisher messaging mechanism
mm/yy	mm/yy	Performed cross-browser functional testing for the developed functionalities and Debugged and fixed the Integration and Coding defects, Robot Automation and Unit testing.

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

During the tenure of this project, I have carried out below tasks;
- Analysed and understand the requirements of the system
- Prepared Software Requirement Specification, High Level Design Document, and detailed Technical Low Level Design document by evaluating all the impacted application points
- Involved in Code Integration, unit testing, Automation testing, and Build deployment for every release.
- Developed the web application using Python and Flask
- Developed UI using Angular and Bootstrap
- Worked on Geographic Information System for manipulating the spatial data
- Worked on enhancements which required changes in PostgreSQL queries
- Created Unit Test and Integration Test in Python
- Participated in code and design reviews and also used check style tool for code quality improvements
- Coordinated with multiple vendors from geographically distributed teams for a successful development, testing, and deployment of a single project
- Prepared project manual for the use of the client and also involved in other documents of the project as per the requirement
- Coordinated with the project team and management
- Followed the company policies and standards

2. Business Opportunity or Problem

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

NBN's requirement to interact with various telecom partners to acquire, process, and transform their existing network infrastructure data in GDSS. These partner organizations had their own ways of maintaining their data and hence, the need to transform/ handle them in unison.

3. Solution

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

My contribution in developing this system was dominant from the start till the end of the project. Being a software engineer I started with examining the system that was going to be implemented and prepared the project documentation initially. I made sure that all the implementation and design of the system was as per the requirement of the client. Therefore, I first gathered all the relevant details about the existing network. I developed the modules based on the requirements and ensured the code uses cross-browser functional testing for the developed functionalities with Robot Automation testing and Integration testing. I continuously monitored the system for the bugs, error correction, and debugging. During the implementation, I also made sure that I followed the quality management procedures of the project.

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

I applied the Agile Scrum concepts that helped in coping with changing business requirements and ensuring a faster 'Time to market'. This had also resulted in a self-governing team that is quick to respond to problems; leading to higher client satisfaction. During the project, I adopted the following design methodology;

- Manipulated the Spatial Data, analysed it and visualized the software
- Created User Manuals
- Preparation of high level documents
- Performed software integrations
- Developed the modules and functionalities

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

Below are the major deliverables for which I was responsible in this project

- Design and complete development of the system
- Automated testing framework that has reduced the effort/ time spent on manual testing
- Geo-Spatial representation of the various network data and designs that are submitted by network designers

4. Results

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

Yes, my solution was implemented successfully. I was involved at all stages of the system development starting from the system analysis, design, testing, implementation, and debugging. I was the part of the Design team that formulated the architecture/framework for the automated test module. I was involved in the technical implementation of an Open Layers based application. This assisted the designers to view/update their designs and to gauge the quality of the submitted designs. I played a dominant role throughout this project by coordinating with the client and team.

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

The project resulted in a faster rollout of the NBN broadband connections to Australian public; thereby resulting in higher customer satisfaction. It reduced the time spent on manual/ repetitive tasks for network designers and this resulted in higher savings for NBN Co. and Australian tax payers in general. All the deliverables were executed on time. There was no time lagging found in the project. All the relevant documents were prepared at the final execution of the project. I prepared a detailed system manual for the client. The client feedback was very satisfactory and received appreciation for a good job done within the provided time frame.

4.3. Lessons Learned

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

The project was initially planned and executed in the traditional SDLC Waterfall model and Agile was introduced later. Having witnessed the benefits of Agile methodology now, it would have been highly beneficial if we had begun with Agile Scrum. This project provided me a learning opportunity and I was able implement my knowledge and further improved it and enhance it through learning from errors and their resolutions.

Project 2: RampView

5. Project Summary

5.1. Identification

Client's Company Name	Atlas Air
Business Address	2000 Westchester Ave, Purchase, NY 10577, USA
Contact Numbers	Tel: +1 914-701-8000
Web Address	http://www.atlasair.com/holdings/index.asp
Email Address	General email address
Nature of project	Airline
Location of project	
Name of your employer	UST Global

5.2. Duration

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

5.3. Resources

	Number
Your team size	4
Total project team size	8

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	Evaluating the requirements and preparing Technical Design Document.
mm/yy	mm/yy	Developed the modules using REST Web services, Java and XML
mm/yy	mm/yy	Performed functional testing, debugged and fixing the defects
mm/yy	mm/yy	Developed an automated system for continuous integration of creating build and deploy that to server using Jenkins, Docker and AWS.

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

During the tenure of this project, I have carried out below tasks;
- Prepared Technical Design Document by analyzing the requirements
- Prepared and wrote the codable programs
- Performed functional testing for the functionalities, Debugged, and fixed the Integration and Coding defects
- Created continuous integration and automated system for creating build and deployment
- Manage and perform implementation of technical solutions, applications, and systems
- Coordinated with the design team and developed custom reusable UI controls when required
- Prepared the project high level documents as per the need and project requirement
- Developed the user manuals

6. Business Opportunity or Problem

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

The project was about the implementation of Ramp view mobile application for Atlas Air, which helped in monitoring and supervision of ground operations for their vendors or registered employees. The application will capture data from planeside and deliver an actual view into operations by transmitting this data from the application to Atlas backend systems. In the app user has the option to view the list of flights based on IATA code and list task based on flights. User can view, edit and update the task status in offline and online mode.
- Rest Web service
- SyncAdapter
- Offline Management
- Sqlite Database

7. Solution

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

Being a Software Engineer, I too this project as a challenge and completed all the complex stages of the project. I hold meeting with the client to understand their requirement and discussed with the regarding the development of this application. I designed and implemented the Database Schema and developed the application based on the requirements. I developed an automated system for continuous integration of creating build and deployment. I used MVP architecture for developing the application, it makes the code maintainable and easy to write Junit test. I completed the documentation of the project. I developed the testing modules to check the working of the application at each step and tried to remove the errors and bugs.

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

I have adopted the following design methodology for the developing this application
- I carried out detailed planning and assessment at the initial stage of the project
- Prepared the flow chart and the features of the app
- Defined the test cases
- Carried out the programming and coding
- Performed the functional testing

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

The key deliverables for the application is that it will works in both online and offline modes. Also Engrossed in Automated system for continuous integration for creating builds and deployment process. During the project, my major deliverables included the following;

- Evaluation of the project requirements
- Documents preparation
- Module Development
- Functional Testing
- Developed an automated system

8. Results

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

My solutions were implemented successfully that resulted in an efficient application development. Developed the framework for the application that works in offline and online modes. Besides created the automated system for continuous integration of creating build and deploy to the server using Jenkins, Docker and AWS.

8.2. Assess the overall success or failure of the project.

The project was completed on time with all the deliverables achieved as planned. All the tasks were carried out as per the project plan. All the bugs and issues were handled efficiently during the testing phase of the project. The project resulted great user interface and on time success delivery. Great customer satisfaction with zero UAT defects was achieved.

8.3. Lessons Learned

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

This project helped me in upgrading my skills and knowledge by working on the application in offline modes, developing the continuous integration of build, and integration with minimal manual efforts. I met with various challenges which I resolved by implementing my technical knowledge. I was involved in all stages and learned from different challenges that I have faced in this project