**Janani Sankaranarayanan**

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**PROFESSIONAL PROFILE:**

* **8+ years** of software engineering experience in **Microsoft .Net Platform**(C# and .NET Framework).
* Proficient in application design, development and implementation using **C#, .NET 3.5/4.0/4.5, ASP.NET, ADO.NET, HTML, CSS, JavaScript, JQuery, WPF, Win Forms, WCF and MS SQL Server**.
* Experience in version control tools like **rational clear case, UCM** and **Tortoise SVN**.
* Experience in **Agile** methodology and **Test Driven Development**.
* Hands on experience working with **legacy systems**.
* Has good experience in projects with cross functional teams.

**EDUCATION:**

* Bachelor of Engineering (Computer Science), Anna University, 2006.

**CERTIFICATION:**

* Certified Microsoft .Net Framework – Application Development Foundation, 2007.

**SKILLS:**

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| .NET Technology | .Net Framework 3.5,4.0/4.5, C#.NET, ADO.NET, ASP.NET, WCF, WPF, LINQ, WINFORMS |
| Other Technology | UML, C++ Common Language Interface |
| Web Technology | ASP.NET 4.0/4.5, HTML5, CSS3 |
| Scripting | JavaScript, jQuery |
| Databases | MS SQL Server 2005, 2008, 2012 |
| Testing | NUnit, MSTest |
| Versioning | Rational Clear Case, UCM, Tortoise SVN |

**PROFESSIONAL EXPERICENCE:**

* Sr. Software Engineer, SwitchLane Inc., August 2013 – Current
* System Engineer II, HP PPS R&D Hub Feb 2011 – May 2013
* Lead Engineer, HCL Technologies Limited July 2006 - January 2011

**PROJECT EXPERICENCE:**

**Client : SwitchLane Inc**

**Duration : August 2013 – Current**

**Role : Sr. .Net Developer**

**Team Size : 4**

**Project #1 : Cash Flow Management June 2014 – Current**

**Description:**

CFM gives the Building and remodeling contractors all the information they need to control their job costs and Cash flow. This application has several modules like user registration, job management, account management, monthly payments and reports.

**Technologies/Platforms:** ­.NET Framework 4.5, C#.Net, ASP.Net 4.5, Windows XP, Visual Studio 2013, Entity Framework5, CSS, JQuery, SSRS, WCF,MS SQL Server 2012.

**Responsibilities:**

* + Requirement Gathering and analysis
  + Design and Development.
  + Unit testing and integration testing.
  + Bug fixing.

**Modules Implemented:**

**User Account Management:**

* Account Management module supports User Registration, Login, Reset Password, Forgot Password, Credit Card and Paypal Integration.

***Job Management:***

* This module enables to create new job providing job functions and projected costs. It involves lot of formulas helps the builder to calculate actual overhead and profit.

***Reports:***

* There are several SSRS reports

**Job Cost Reports –** User can preview the report and print this report containing the job functions, their projected cost, and amount withdrawn for the function with date, actual cost and contract balance for each function. It also shows the total projected cost, actual cost, projected overhead and profit and actual overhead and profit. This report will help user to estimate projected cost for similar task by checking this report in future.

**Cash Flow Reports–** This report shows the sum of actual deposit and withdrawal happened for all months for each active job providing the projection for remaining months.

***Project #2 : Baltimore City Schools June 2013 – June 2014***

**Description:** Few schools in Baltimore lease their premises during weekends and school vacation days. Baltimore city Schools is used for maintaining the leasing activity. This application has several modules such as permits management, invoice management, reports, system configuration modules and online portal.

**Technologies/Platforms:** ­.NET Framework 4.0, C#.NET, ASP.Net 4.0, Windows XP, Visual Studio 2010, SSRS, SQL Server 2008

**Responsibilities:**

* + Requirement Gathering and analysis
  + Design and Development.
  + Unit testing and integration testing.
  + Bug fixing.

**Modules Implemented:**

***Workshop Registration:*** User can choose venue, date and time of event and provides information about event for registration with status pending. Admin checks and changes the status to approved generates permit with agreement number and mails it to the requested user.

***Invoice Management:***

Here UI populates the general information such as event name, organization name, contact name along with grid which gets input such as no of days for building utilization, number of vehicles for parking and additional staff information. On each input the total cost gets updated creating invoice for the event.

***Online Payment:***

Online payment portal lets the user to pay the amount due using Pay Pal account or credit card .On successful payment a mail will be sent to the user confirming the payment else it will be redirected back with error.

***System Configuration:***

All the default fees are stored in database. This UI displays the default fee for all the amenities. It also provides option to edit and save the default fees which will be used by financial calculator for calculating invoice.

***Manage Accounts:***

This module allows to add new organization for the leasing activity specifying the organization name, contact person and edit the existing organization information. By selecting an organization user can see all of its related agreements, attachments, contacts, statements and payments information.

***Manage Contacts:***

Displays all the contacts with first name, last name and organization name and allows to add new users.

***Reports:***

All reports can be exported as excel, csv, xml, pdf, mhtml, tiff and word formats.

***Activity Reports:***

User selects start date and end date. It displays all the workshops happened between the selected dates in the report along with the workshop date, permit, organization name, school name, event type, attendance, area room, agreement status, Police and Custodian.

***Balance Reports:***

User selects start date and end date. Report displays all the organization along with the school name, permit, amount due, amount paid, due date and days past due.

***Deposit Reports:***

User selects start date and end date. Report displays all the organization along with the date of deposit, amount deposited, check number and date of deposit.

**Client : HP PPS R&D Hub, San Jose, CA**

**Duration : Feb 2011 – May 2013.**

**Role : System Engineer II**

**Team Size : 8**

***Project Description: PENLITE***

**Pen lite** is the next generation pen test tool which tests the connection and electrical functionality of Pen (Print head).Each type of printer uses different pen, hence Penlite supports the testing of pen belonging to various printer families. Pen lite uses Rover3 card which communicates over USB enabling functionality to test multiple pens of same family. Each pen is composed of Dies, Slot, Primitives and Resistor. It performs passive tests (Expected open, expected shorts) and Active tests (Rscan).For Passive tests, usually each pin in the pen is tested regarding its position and connection to other pin. Active tests ensure the functioning of resistor by passing current and measuring resistance.

**Technologies/Platforms:** ­.NET Framework 4.0, C#, Windows XP, Visual Studio 2010, C++ Common Language Interface, XML, WPF, LINQ, MS SQL Server 2008

**Responsibilities:**

* + Requirement Gathering and analysis
  + Design and Development.
  + Unit testing and integration testing.
  + Bug fixing.
  + Participated in requirements, design and code reviews
  + Used test driven development for the whole project.
  + Training new resources joining the team.

**Modules Implemented:**

***Wrapper for Driver Manager:***

* Legacy system lighthouse software is in C++ which communicates with the PLC driver using class Driver Manager.
* In order to use by Pen lite software which is in C#, C++/CLI wrapper is written over Driver Manager Class. Using wrapper Penlite was able to perform active and passive tests using legacy hardware.
* This enabled cost reduction by having to maintain only new Penlite Software even though the legacy hardware was in existence.

***Hardware Communication Layer:***

* Rover3 card is used by Pen lite hardware which gives advantage of extensibility where we can connect multiple pen of same type.
* Rover3 cards uses USB data channel where single or array of data can be written to and read from memory regions.
* Implemented hardware communication layer for Rover3 card over USB data channel which enables to reading or writing single or array of data from or to memory regions.
* Penlite will use this hardware layer to send input and receive output for tests.

***Simulator:***

* Since Penlite is new hardware availability of hardware between software and hardware team was major concern. To overcome this problem not to stop software team from proceeding its development and testing team from finding bugs, simulator was required.
* Developed simulator which will act as if connected to real hardware enabling user to do all tests on pen. Pass or fail results will be shown based on input in the configuration file.

***Implementation of Test Framework:***

* Implemented framework for performing active and passive tests.
* Developed UI in WPF which allows user to select the individual component (eg: Particular Die/Slot/Resistor) for test and to display the results.

***Designed Schema for Pen Family configuration file:***

* Each Pen family has different architecture and tests. Studied architecture information of pen families. Designed generic schema describing the architecture of pen family.

***Logger:***

* For debugging purpose logging information is required at different levels.
* Implemented logger where messages can be logged to window, event log, console or any other text file based on configuration file input.

**Client : KLA-Tencor, Milpitas, CA**

**Employer : HCL Technologies Limited**

**Duration : July 2006-January 2011**

**Role : Lead Engineer**

**Team Size : 20**

***Project Description: E-Beam Common Platform***

**Electron Beam Common Platform (ECP)** serves as a machine control software for SEM review tools (eBeam series of yield management tools) which rapidly identify the smallest yield defects which are beyond the optical microscope limits during inspection, using a scanning electron microscope capturing the detailed defect image enough for classifying the source of the defect. Electron Beam common platform is responsible for controlling the hardware comprising optical, scanning electron microscope ,stage and many more which makes it high precision imaging tool. Electron Beam common platform has many automated calibrations for fine tuning the hardware, automated diagnostics for trouble shooting the hardware and also incorporates strategies for improving throughput and stability

**Technologies/Platforms:** .NET Framework 3.5, C#, C++ Common Language Interface, Windows XP, Visual Studio 2008, WPF, WINFORMS.

**Responsibilities:**

* + Requirement Gathering and analysis by interacting with client.
  + Design and Development.
  + Unit testing and integration testing.
  + Bug fixing.
  + Participated in requirements, design and code reviews.
  + Involved in training and guiding NCG's.
  + Acted as Project Quality Analyst.

**Modules Implemented:**

***Manual and Auto Deskew:***

* The defect location on wafer obtained from inspection is used by review tools for redetection of the defect. KLA-Tencor Inspector and Review tools have different coordinate system which introduces coordinate errors resulting in wrong defect image capture.
* Implemented solution by computing the transform between the two different coordinate system, reducing the error and increasing the reliability in both manual and automatic ways.
* Involved in bug fixing for stand-alone utility used for testing this feature.
* Worked in client site for integrating the feature and showed demo to product manager.

***ADL Algo up-gradation:***

* ADL (Automatic Defect Location) algorithm is used for redetection.
* Worked along with the algorithm team member for understanding new algorithm working.
* Upgraded from old algorithm to new algorithm and handled the changes with respect to new algorithm.
* Appreciated by Client for completing this complex task.

***Beam Set up GUI:***

* System engineers manually create new or modify existing beams from base beam parameters by looking up the dependent parameters.
* Developed a GUI which takes input from system engineers for base beam parameters and performs the calculations of all the beam parameters using LUT logic in the background.
* Involved in requirement gathering, design, implementation, unit and integration testing.
* Received client appreciation for good work.

***Deflection Calibration:***

* Deflection parameters of the beam are responsible for capturing the sharp image. These parameters require fine tuning periodically for each beam.
* Developed calibration which will fine tune the deflection parameter for selected beam resulting in focused image without any distortion.
* Interacted with systems team for collecting the requirements as this is one of the complex calibrations.
* Written Iron python script for executing the calibration by system engineer used for data analysis.
* Received client appreciation for coming up with detailed requirements.

***Math Library:***

* Review tool has multi-core processor and our software involves lot of mathematical computation.
* Learnt Intel’s Integrated Performance Primitives (IPP which are multi-core ready and offers optimized functions covering frequently – used fundamental algorithm and delivers performance beyond what optimized compilers alone can deliver) and developed a library exposing mathematical functionalities required for the project.
* Math library is value addition to the project, increasing the performance and it is consumed by all modules in the project.

***DAB Diagnostics:***

* Deflection Amplifier Board (DAB) is responsible for focusing beam on the desired location on the wafer. The hardware needs to be in good state for proper functionality.
* Implemented diagnostics tests which communicate with hardware and performs test (Communication, Power Supply, Temperature, Plate Voltage Set/Measure and Image Shift Test) whose results will conclude the status of the hardware.

***Histogram Display:***

* SEM Review tools are high precision imaging tools, user are interested in the image information such as color distribution.
* Learnt Chartfx third party component and developed the histogram display window component.
* Implemented the statistics computation logic and it is displayed along with the histogram.

***Hardware Version Configuration Utility:***

* SEM Review tools have multiple hardware configurations and software remains the same.
* Developed a utility which reads the configuration information from the file and allows the software to handle according. It has GUI displaying version information for all the hardware and all modules in the project access this component for fetching the version information.

***Deskew Tool Group Utility:***

* User has to open, search for the tool and edit or delete information from the configuration file used for Deskew operation.
* Developed a GUI which allows the user to edit or delete information choosing the tool.