Specialty Occupation Description

The offered position is a role of high responsibility in providing internal used company web portal which will integrate all internal or cooperative project, services and various group management functionality over company employees to BrownGreer’s BG. Suite Project. Also, the beneficiary has to design, mentor, support, maintenance and develop new sub-project over legacy serious-project MDL. This position holds high significance in the project because MDL is a litigation management system that provide exchanging Fact Sheets and supporting documents through a secure online portal system, automatically download and store court filings, exporting data and documents from Fact Sheets to Claim Forms, storing documents in a secure, online repository. This position needs professional and experienced web application developer who can build high proficiency and stable website with high security.

Mingdi Gao is mostly required to provide both functional and technical services to the web developing departments associated with the project.

* Functional Responsibilities
* Gather requirement and consolidate the outcomes.
* Analyze the architecture and list out the challenges and possibilities.
* Communicate and update the supervisors and higher tier management of other departments associated with the project about the progress and the timeline of the tasks.
* Interact and collect necessary information about their needs related to the project
* Report issues and maintenance project after it is published to production environment
* Technical Responsibilities
* Design and develop analytical and interactive reports for various financial and audit departments of BrownGreer.
* Extract, Load and Transform data from different data source into target database systems.
* Implement data level and row level security in the applications.
* Develop new front-end web application using ASP.net MVC.
* Conduction high end testing and validation using canned and structured test cases before deploying the objects into production.
* Conduct administrative actions for deployment, migration, troubleshooting, access provisioning and system maintenance.
* Develop Two-Factor authentication utilizing Google authenticator developer toolkit.
* Utilizing ASP.Net WebAPI to develop a WebAPI project as service layer.
* Utilizing Json Web Token to implement the authentication between WebAPI project and third party, including MVC front-end
* Utilizing HS-256 algorithm to encrypt payload and generate JWT token, issue the token to client users.
* Utilizing Entity Framework as ORM, build data access layer using Entity Framework and repository pattern.
* Utilizing SqlServer 2012 as database.
* Extensively utilizing Stored Procedure to query, filter, insert and delete data from database.
* Utilizing User-Define function in MDL for frequently used SQL logic and operations.
* Utilizing re-usable ASCX component in Webform for new UI design
* Utilizing ASP.Net Webform for new web page development in MDL project, dynamically generate web pages according to user’s role and database.

**PROJECT INFORMATION:**

***End Client Name: BrownGreer PLC***

As BrownGreer PLC is an industry leader in providing settlement administration and litigation management to law firm, corporations, and government agencies. Departments at BrownGreer PLC are relentlessly working in developing technologies in various streams and improving the quality of their systems that its clients depend on. To track the documents managing progress, it needs a internal file managing process which can collect, consolidate, generate and display their data and form in intelligent and user-friendly picture to help the departments arrange the settlement progress base on plaintiff’s records, Fact Sheets, defendants’ settlement amount and court’s files.

BrownGreer PLC is an industry leader in providing settlement administration and litigation management services to law firms, corporations, and government agencies. They are attorneys, analysts, software programmers, communication center specialists, and claims reviewers devoted to providing innovation solutions that surpass their clients’ expectations and deliver measurable results. BrownGreer PLC has successfully provided a full suite of settlement administration and litigation management service to various settlement programs like InSinkErator:F-201 Water Filter Settlement Program and NFL Concussoin Settlement.

https://www.browngreer.com/mdl-centrality.html

**Brief narrative about the MDL project**:

The Software Developer position involves important and critical decision making and must be understood in its context.  The software being developed and enhanced is a critical software to BrownGreer PLC.

The purpose of MDL Centrality is to provide a solution for claim administration and settlement administration. With MDL Centrality, the users can exchange fact sheets and support document through a secure online portal, download and store court filings, eliminating the need to spend time and money uploading and distributing documents manually, export data and documents from Fact sheets to Claim Forms, store documents in a secure, online repository, eliminating the need to pay for and maintain a separate document storage solution.

**Brief narrative about the BG.Suite project**:

Mingdi Gao will start this project from scratch. He will be involved in new architecture designing, new responsive UI designing, new WebAPI designing and new secure management technologies like Json Web Token and Google Authenticator as Two-factor authentication. To prototype this product, he will gather requirements, design and developer modules from scratch, trial-run the product including testing, validating and bug fixing. Using ASP.NET MVC, jQuery, Bootstrap4, WebAPI, Two-Factor verification, JWT, EntityFramework, repository pattern and SqlServer 2012, Mingdi Gao will provide valuable services as a software developer for this IT project.

**About the Job’s required skills/Technology:**

The key agenda of the project is to collect raw data and requirements from diverse sources, then transform the data into information, turn user’s business requirement into logical requirements and design a suitable system and data flow for developers to follow. MDL system needs to support dynamic page layout for satisfying requirement from multiple roles and user access. Also, MDL provides online PDF generating, analyzing, downloading, signing and other functionalities and features to serve as an online file management system.

Data is fetching through stored procedures which has multiple data protection and security methodology. All stored procedures are designed to check user’s validity before executing any logic. The returned data is serialized into JSON data format and send to front-end project for deserialization. Mingdi Gao design the security mechanize for BG.Suite project. The first layer security methodology is user authentication system which is based on Json Web Token technology that leverage HS-256 encryption algorithm. Mingdi Gao also design and develop another data security layer which is Two-Factor Authentication. Mingdi is responsible for designing from scratch including table design, distribution system design, data flow, notification type and use Google Authenticator as mobile factor APP.

**Project Details:**

The BrownGreer PLC MDL project provide a full suite of settlement administration and litigation management services. Leveraging BG’s unique combination of extensive legal experience and practical understanding of the need for organized and centralized processes. Mingdi Gao design and implement solutions with a focus on quality and efficiency.

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* *To deliver these services, MDL uses the following applications,*
* *SqlServer SSRS Intelligence Enterprise Edition*
* *SqlServer DBMS Integretor*
* *PowerBI intelligence data visualizable*
* *As of now, more than hundreds of plaintiffs utilize MDL projects for settlement management and more than 10 settlements was solve through MDL.*
* *BG.MDL support s and provide management solutions to different settlement cases like F-201 Water Filter Settlement Program, Abilify Settlement, Deepwater Horizon Economic and Property Damage Settlement, Nationwide Vioxx Consumer Settlement and NFL Concussion Settlement.*
* *These settlement interest stakeholders, including plaintiffs and defendants, rely on MDL projects for collecting and analyzing plaintiff’s condition and eligibility for refund compensation.*
* *Data is extracted, modulated, aggregated and transformed into complicated analytical views to describe claim Fact Sheet reports pertaining information regarding Transaction Registers, Income Statements, Trial Balances, Inter/ Intra company and trading partner relationships, Cash Flow Statement, Balance Sheets, Profit and Loss statements, Stock holder’s equity, risk assessment reports, Sales Account Reports, Uniform Organization Structure reports.*
* *Users can run these reports and export in excel, PDF, DOCX and power point format for conducting extensive analysis.*

**Below are the steps to accomplish this Project requirement.**

**Requirement Analysis –**

Project/ Task is envisioned, and court’s expectations are analyzed as per priorities. Possibilities and challenges are streamlined, and proper design is planned after plaintiff user’s and developer’s agreement and approvals. Team must perform proper assessment of the data sources and analyze the compatibility with the applications that they use for the project. Compare the requirement with previously achieved targets and reminiscent timeline is decided. Gathered requirement is documented in the tickets and service requests and estimated time of completion with sufficient buffer period is declared in the planning tools. Mingdi Gao is crucial in the following stage and performs the core decisive actions in this stage.

**Application Architecture Design –**

Mingdi Gao is responsible for discussing with Brown Greer PLC internal attorney and gather case information and expectations from courts and other stakeholders. Then designing the application architecture and provide suggestion for possible technology stack and relative pros and cons.

* Requirement gathering and analyzing: Using materials and reports from court and law firms to design application User Interface, data security methodologies, database table format, file managing system like online electronic signature and questionnaire, PDF file generating, etc.
* Technology choosing and data flow designing– Discuss with team lead and IT directors about pros and cons of various technology and tool. Help choose the most suitable technical framework, which is ASP.NET WebForm, WCF, Asp.Net WebAPI, Two-Factor authentication, Json Web Token as token-based authentication and so on in this project
* Table design and data flow design – This is the most important stage in application architecture design part. Since the project will dynamically generate claim forms based on plaintiff’s questionnaire, a correct role-table and user-access design would be critical to this project. Mingdi Gao will groom with project manager and developer to discuss about the best practice.

Mingdi Gao has extensive expertise in the above discussed concepts and methodologies and thus performs the actions and delivers the content for further development.

**Report generating methodologies –**

After the data is loaded into the target tables, this data needs further utilizing and needs to judge the eligibility of a registered plaintiff and generating relative report or provide relative claim form and next step questionnaires. Using SqlServer Stored procedures, MDL will perform the business logic with all coming data request and return appropriate data or log the error info in a clear way. To dynamically generate report and provide feature like online PDF signing/filling, MDL project need a secure and efficient way to generate PDF file and provide feature like electric signature, filling, etc.

Mingdi Gao provide his professional knowledge at online file handling topic. He designed and developed the front web page PDF modal section in a special and optimized way which will store static content and default input part separately into XML file and Database optimized tables. This design provide great flexibility for data storage, transformation and statistics processing mean while the web page PDF generating can be dynamically config by company DBA’s.

**Data and Application Security –**

As a file management system, data and file security play a crucial important role in this application. BrownGreer utilizing multiple security methodology.

* Data base security. All the data query and data manipulating operation are implemented using Stored Procedure. The first step of each Stored Procedure logic is to check the user’s validity of incoming request. Meanwhile databases are deployed in DB server whose firewall only allow requirement coming from specific IP groups.
* Application is implemented in multiple authentication methodology. The front-end application utilizes form-based authentication as first layer of security method. WebAPI will issue token based on JWT HS256 encryption algorithm to designated client application.
* Registered users can choose to enable two-factor authentication in user account setting section to further secure their BG MDL project account. User’s validity ID are held in Session memory for authenticating.

Mingdi Gao involved and make contribution to security methodology and implement the Two-Factor authentication method using Google authenticator as the ‘Second Factor’. Also, the beneficiary design and develop the barcode generating modules and provide users the choice of scanning barcode using smart phone camera or send Google authenticator registration code through message/Emails.