Project Title Development of a Power BI Dashboard Site Integrated with ERP Data via SQL

Objective: Help develop a Power BI dashboard that pulls data from our Enterprise Resource Planning (ERP) system via SQL and presents key business metrics in a user-friendly, interactive format. The intern will be responsible for designing, developing, and deploying the Power BI dashboards while ensuring real-time data synchronisation with our ERP system.

1. **Understand Business Requirements**
    - Conduct initial meetings with key stakeholders (operations, sales, finance, etc.) to gather and document business requirements.
    - Define key performance indicators (KPIs) and metrics to be visualised (e.g., sales performance, inventory status, financial trends). Reference current Excel outputs for guidance.
    - Identify different user roles (directors, managers, employees) and their specific dashboard needs.
    - Identify Power BI subscription requirements based on the organisation's needs.
2. **Database Integration**
    - Collaborate with IT to gain access to the ERP system's SQL database (EMAX).
    - Understand the database schema and relationships between tables in the ERP system.
    - Use SQL Profiler to write efficient SQL queries to extract necessary data (e.g., sales, inventory, financial transactions).
    - Ensure data accuracy, consistency, and alignment with business needs.
3. **Power BI Dashboard Development**
    - Design and develop user-friendly, interactive dashboards in Power BI, aligning with business requirements.
    - Visualisations should include charts, graphs, tables, and KPIs with drill-down capabilities and filters.
    - Ensure the dashboards are responsive to various screen sizes (e.g., desktop, tablet, mobile).
    - Integrate SQL queries into Power BI using Direct Query or Import mode based on performance requirements.
    - Enable data refresh schedules to ensure real-time or near real-time updates.
4. **Security and Access Control**
    - Implement role-based access control in Power BI to ensure users can only access relevant data.
    - Ensure secure data transmission between the ERP system, SQL database, and Power BI.
    - Set up user authentication, potentially using Microsoft Azure AD (to be confirmed).
5. **Testing and Validation**
    - Test the dashboards using sample data to ensure they meet business requirements.
    - Validate data accuracy by comparing dashboard results with the source data.
    - Conduct performance testing to ensure dashboards load quickly and can handle large datasets.
6. **Documentation**
    - Document the development process, including SQL queries, Power BI setup, and deployment instructions.
    - Create user guides to assist stakeholders in interacting with the dashboards.
    - Ensure the solution is scalable and easy to maintain for future growth.
7. **Training & Handover**
    - Provide a demo and training session to end-users on how to navigate and interpret the dashboards.
    - Handover all documentation, project files, and access credentials to the IT department.

Technical Requirements

- **ERP System**: EMAX ERP system with a SQL-based database.
- **Database**: SQL Server.
- **Power BI**: Familiarity with Power BI Desktop and Power BI Service.
- **Integration**: SQL, Power BI Direct Query or Import.
- **Authentication**: Microsoft Azure AD (confirmation required).
- **Data Sources**: Primarily SQL databases, potentially supplemented by other data sources (Excel, CSV, etc.).

Skills & Qualifications

- Basic understanding of relational databases and SQL.
- Experience with Power BI or similar business intelligence tools.
- Strong problem-solving and analytical skills.
- Ability to work independently and collaboratively in a team.
- Strong communication skills for interacting with stakeholders and gathering requirements.

Deliverables

- **Power BI Dashboards**: Fully functional, interactive dashboards showcasing agreed-upon business metrics.
- **SQL Queries**: Well-documented SQL queries for extracting relevant data.
- **Security Setup**: Role-based access control implemented in Power BI.
- **Documentation**: Complete project documentation, including SQL scripts, Power BI setup instructions, and user guides.
- **Training**: Training sessions and materials for end-users.

Key Milestones

- **Week 1-2**: Initial meeting with stakeholders. Requirements gathering and system access setup.
- **Week 3-4**: Explore database schema. Develop SQL queries and start initial dashboard design.
- **Week 5-6**: Continue dashboard development and Power BI integration. Implement SQL queries and initial visualisations.
- **Week 7**: Configure security settings and role-based access control.
- **Week 8**: Conduct user testing and validate data accuracy.
- **Week 9**:Prepare project documentation, including SQL scripts and user guides.
- **Week 10**: Final testing of dashboards for performance and data integrity.
- **Week 11**: Stakeholder review and final adjustments based on feedback.
- **Week 12**: Handover project files, documentation, and provide training to end-users.

Success Criteria

- **Real-time Data Access**: Power BI dashboards should pull real-time or near real-time data from the ERP system.
- **User-Friendly Dashboards**: Dashboards must be intuitive, easy to navigate, and provide actionable insights.
- **Security**: Role-based access control and secure data transmission are implemented effectively.
- **Documentation and Training**: The intern successfully documents the development process and provides training to end-users.

Location

Ryton Industrial Estate
Newburn Bridge Road
Blaydon on Tyne
NE21 4SQ

Start Date

Summer 2025 start date flexible

How to apply

Send cover letter and CV to Sarah Robson via email to Sarah@impressgroup.info