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| Infrastructure Management Processes | Quality Management System |
| Classified: Internal use | |

Career Roadmap

**# HRM-HR043-EmployeeAlias**

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| Present Position: | Junior level in .Net |
| Goal: | Middle level in .Net |
| Date of issue: | 11/11/2020 |
| Planned date of goal achievement: | 11/03/2021 |
| Date of next review: | Once every three months |

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| **Skill (gap)** | **Comment** | **Action, Responsible, Success Criterion** | **Priority** | **Date** | **Status** |
| **Good** knowledge of Source Code Quality | Employs consistent ordering for class/module members.  Able to setup simple folder structure for organizing source code files; related source files reside in the same folder.  Code smells are absent or very rare and have low severity. | * Read book Clean code by Steve McConnell * Prove of skills on current project * Participate in internal training Clean Code .Net by Artem Kalikin | 10 | 2021-02 | ACTIVE |
| **Good** knowledge of Object-Oriented Design | Solid understanding of the basic principles (inheritance, encapsulation, polymorphism) and the S.O.L.I.D. principles. 2 experience points for their proper use in class- and module- level design.  Good knowledge of at least several design patterns. 1 experience point for their proper application in class- and module- level design.  Recognizes code smells and can successfully refactor code at the class and module level.  Effectively reuses code where appropriate.  1 experience point for reading UML class, sequence and collaboration diagrams. | * Read Gang of four Design Pattern (Main focus on: Adapter, repository, factory, facade, state, command, chain of responsibility) * Domain driven design of Eric Evans * Practice in reading/creating UML class, sequence diagrams (On current project or demo project) * Participate in internal training Object Oriented Design by Aleksandr Sugak | 8 | 2021-02 | ACTIVE |
| **Good** knowledge of Libraries and Frameworks | 2 experience points for using the mainstream platform, libraries and framework(s) relevant to the technical specialization.  Theoretical knowledge of available alternative options.  Hands-on knowledge of the common APIs. | Demo app to handle doctor appointments using following technologies:   * Entity Framework Core  xUnit * Moq * Automapper * nLock * Angular 2+ | 1 | 2020-12 |  |
| **Good** knowledge of Development Tools | Substantial knowledge of the editor, compiler & compiler settings, linker & linker settings (if applicable), debugging tools. 2 experience points for using these IDE features.  Can configure the IDE to enable the most productive environment.  1 experience point for using code analysis, refactoring, and unit testing tools.  1 experience point for using one of the mainstream source control systems. | Prove of usage of following tools:   * Visual Studio * VS Code * WebStorm * Style Cop * Tslinter * Management studio   Practice:   * Discover long running script generated by EF * Explore performance of SQL script by SQL Server Profiler * Apply performance optimization on the long running script | 9 | 2021-02 |  |
| **Good** knowledge of Unit Testing | Has good understanding of the notions of isolation and testable code.  2 experience points for developing unit tests.  Designs their own code to be testable.  Fully understands and follows the "Each test should be as simple as possible and has one and only one responsibility" principle.  Writes a sufficient amount of tests to ensure proper coverage of the production code. | Practice:   * Cover demo app back-end with unit and integration tests * Cover Angular front-end component and service with unit and e2e tests using Karma, Jasmine and Protractor * Reach 80% of coverage using VS Analyze Code Coverage tool | 2 | 2020-12 |  |
| **Good** knowledge of Databases (Design and Development) | Has general understanding of how a DBMS works, and at least theoretical knowledge of the normalization and ACID concepts.  2 experience points for writing moderate complexity queries.  1 experience point for designing individual database tables and simple database schemas.  In addition to general theoretical knowledge has in-deep knowledge about at least one non-relational data storages, typical and advanced application scenarios.  Has 1 experience point for using at least one non-relational data storage. | * Understanding of ACID principals * Understand basic principles concepts primary/foreign keys, constrains, indexes, transactions Learn basically non-relational storage concepts and provide deep scenarios when NoSQL storage should be use * Code-first and Database-first approaches   Practice:  Use Database-first approach to design the same demo app model as for demo app | 3 | 2020-12 | ACTIVE  zzz |
| **Good** knowledge of Platform Internals | Employs proper memory and resource management techniques in their everyday work.  2 experience points for working with resource management techniques, multi-threaded code, and asynchronous programming.   Solid understanding of proper design of multi-threaded code and required safety rules. | Use TPL with async methods as well as proper object disposing for the appropriate memory usage for the doctor appointments demo app | 4 | 2021-01 |  |
| **Good** knowledge of Operating System Fundamentals | Knows typical application structure and its runtime environment (MS: DLLs, registry, environment variables), ways of working with OS resources (files/memory/etc.) by using handles, the underlying principles of user interaction (event loop, messages, etc.), process and thread management (thread synchronization primitives / scheduling priority), I/O (file access/sharing/concurrency control), memory management (allocation/deallocation/virtualization). | Demo app with input/output via file system, usage app data and settings on Dot Net projects  List of used operational systems:   * Windows 7/8/10 * Linux Mint/Ubuntu | 5 | 2021-01 | ACTIVE  zzz |
| **Good** knowledge of Networks Fundamentals | In additional to the Basic level skills knows the concept of sockets and network services, IPv4/v6, name resolution (DNS). Knows basic concepts of network security and authorization techniques (NTLM, Kerberos, Digest, Basic) as well as the standard approaches to building network/distributed applications.   *1 experience point* for development of network-enabled applications based on a standard framework within the primary area of competence. | * Study network protocols, * Concept of socket network services * Get familiar with security and auth technics.x TCP, UDP | 6 | 2021-01 | ACTIVE |
| **Good** knowledge of Security Fundamentals | Knows typical security models (ACL / Capability / Role-based / etc.).  Knows basic ideas of cryptography (symmetric and public key). Knows typical vulnerabilities and ways of counteracting. Knows the standard ways of providing secure communications (VPN, SSL, etc.).  *1 experience point* for development of safe data storage/transfer or securing user interaction by using existing frameworks. | * Study standard ways of providing secure communications (VPN, SSL, etc.). * Has experience in OAUTH 2 protocol concept, Open id connect,  roll based Authorization for identity server. * Get familiar with JWT token concept. * Participate in internal training Security Fundamentals from Dmytro Tereshchenko   Practice:   * Add Identity on ASP.NET for user registration and Identity server for authorization and claim based authorization in demo project | 7 | 2021-02 |  |
| **Good** knowledge of Software Testing Fundamentals as Non-Core Competency | In addition to test-case based black-box testing, 2 experience points for manual white-box testing. | Scored 2 points by applying test-case based black-box testing, white-box testing | 11 | 2021-02 | ?????? |
| **Good** knowledge of User Interaction Design | Knows relevant UI guidelines. *2 experience points* for using them in their everyday work. | Design and implementation UI for TecAlliance project based on provided mockups, customization in build-in components | 12 | 2021-02 | ?????? |
| **Good** knowledge of Documentation | Can create simple specs with predictably good quality. | * Participate or get familiar with Documentation Devs by Vladimir Shumilov internal training.   Practical Task for several features on current project:   * Create Use Case UML Diagram with at least 2 Actors to be involved (User/Admin ) * Feature description document OR Help file / User manual for this feature: at least ‘one-page of the content’ document * Feature 1: Adding products to ecommerce list * Feature 2: Create ecommerce basket * Feature 3:  Create discount for active buyers | 13 | 2021-02 | ACTIVE |
| **Good** knowledge of Written Communication | 2 experience points for writing consistently good, well-structured e-mails and memos, and following IM etiquette on most occasions.  Can explain complex matters so that they are easily understood by the intended audience. | * Ask feedback from PM * Training result, participate in learning group by Elena * Write e-mails to customer | 14 | 2021-03 |  |
| **Good** knowledge of Verbal Communication | 2 experience points for being consistently good at discussing various topics with their peers and the management, having well-structured speech, and actively participating in team meetings. | * Ask feedback from PM Prove of * English level on a daily meeting | 15 | 2021-03 |  |
| **Checkpoint 1** |  | | |  |  |
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| **Checkpoint N – Overall result** |  | | |  |  |