

DDaT pay framework benchmarking for G7 Software Engineers

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Programming and Build.

Uses agreed security standards and specifications to design, create, test and document new or amended software. This relates to code security, procedures such as passwords and writing security into code eg encryption.

Grade 7 Description: Expert

Advises on the right way to apply standards and methods, ensuring compliance, and maintains technical responsibility for all the stages and iterations of a software development project. Provides technical advice to stakeholders and sets the team-based standards for programming tools and techniques. Leads code reviews and gives constructive feedback to others.

Developing (4)

- You can design, code, test, and document programs of medium-to-high complexity using agreed specifications and standards.
- You can lead code reviews, evaluate testing techniques, and promote best practices within the team.
- You have a good understanding of design patterns and can ensure effective code readability.

Proficient 2 – (5)

- You can design, code, test, and document programs of medium-to-high complexity according to agreed specifications and standards.
- You can lead code reviews, evaluate testing techniques, and promote best practices within the team.
- You have a **strong understanding** of design patterns, the **Clean Code¹ approach**, and ensure effective code readability.
- **You take full ownership of the team's codebase, ensuring standards, appropriate testing, and technical documentation practices.**

Proficient - 1 (6)

- You can design, code, test, and document programs of medium-to-high complexity according to agreed specifications and standards.
- You can lead code reviews, evaluate testing techniques, and promote best practices within the team.
- You have a strong understanding of design patterns, the Clean Code¹ approach, and ensure effective code readability.
- You can take full ownership of the team's codebase, ensuring standards, appropriate testing, **quality assurance, compliance**, and technical documentation practices.
- **You work with the team to identify and implement best software programming and build practices, including managing technical debt, developing boilerplates, and promoting knowledge sharing within the team.**

Accomplished (7)

- You can design, code, test, and document programs of medium-to-high complexity according to agreed specifications and standards.
- You can lead code reviews, evaluate testing techniques, and promote best practices within the team.
- You have strong understanding of design patterns, the Clean Code¹ approach, and ensure effective code readability.
- You can take full ownership of the team's codebase, ensuring standards, appropriate testing, quality assurance, compliance, and technical documentation practices.
- You work with the team to identify and implement best software programming and build practices, including managing technical debt, developing boilerplates, and promoting knowledge sharing **in ONS software engineering community.**
- **You provide technical advice to stakeholders, set team-based standards for programming tools and techniques, and develop/enhance scaffolding solutions/PoC to promote knowledge sharing and adoption of good practice (ensuring the tools/techniques are sustainable from a cost of development aspect).**

Function and Non-Functional testing.

Able to analyse changes to, or the development of, products and services and test design. Able to run and manage appropriate tests to ensure that requirements have been fully met. Understands and is able to identify the most effective techniques, data sets and tools to use. Able to communicate defects or trends clearly to

¹ Code is clean if it can be understood easily by everyone on the team and can be read and enhanced by a developer other than its original author.

software developers, outlining how defects are identified and the possible causes. Able to design, or provide assurance for, appropriate risk-based end-to-end system integration test models.

Grade 7 Description: Practitioner

Able to design, implement and execute a wide range of functional and non-functional testing techniques. Able to effectively communicate test results to both technical and non-technical stakeholders. Able to make decisions on running types of, and environments for testing. Able to raise defects with the business and help prioritise them based on defect severity. Able to think outside the box, ask the right questions and critically evaluate findings. Leads investigative work into problems and opportunities with existing processes, driving the collection of information and creation of recommendations for improvements. Can absorb large amounts of conflicting information and use it to determine solutions.

Developing (4)

- You have a diverse skill set in testing techniques and can effectively communicate test results to both technical and non-technical stakeholders. Additionally, you can train others in different testing tools and techniques.
- You are experienced in identifying and recording defect, you can ensure that defects are appropriately documented for resolution by yourself or a team member. Furthermore, you can provide unit testing and code assurance through system and integration tests.

Proficient 2 – (5)

- You have a diverse skill set in testing techniques and can effectively communicate test results to both technical and non-technical stakeholders. Additionally, you can train others in different testing tools and techniques. **You can also design and execute a wide range of non-functional testing techniques and communicate non-functional test results to stakeholders.**
- You are experienced in identifying and recording defect, you can ensure that defects are appropriately documented for resolution by yourself or a team member. Furthermore, you can provide unit testing and code assurance through system and integration tests. **You can also perform smoke testing for builds and utilise CI/CD to run smoke tests.**
- **You can think creatively to identify different use case scenarios to be tested. You can define these test cases using Gherkin syntax or any other TDL (Test Description Language) approach.**

Proficient - 1 (6)

- You have a diverse skill set in testing techniques and can effectively communicate test results to both technical and non-technical stakeholders. Additionally, you can train others in different testing tools and techniques. You can design and execute a wide range of non-functional testing techniques **and can write test functional/non-functional test templates.**
- You are experienced in identifying and recording defect, you can ensure that defects are appropriately documented for resolution. Furthermore, you can provide unit testing and code assurance through system and integration tests, performing smoke testing for builds, **and utilising CI/CD to run automated system/integration tests.**
- You can think creatively to identify different use case scenarios to be tested. You can define these test cases using Gherkin syntax or any other TDL (Test Description Language) approach.
- **You can advise others on testing techniques/tools and frameworks.**
- **You have a good understanding of Shift Left² approach in testing paradigm and can contribute to implement this approach throughout the SDLC.**

Accomplished (7)

² Shift-left is the practice of moving testing, quality, logging, monitoring, and performance evaluation early in the software development process, thus the process of shifting to the “left” side of the SDLC.

- You have a diverse skill set in testing techniques, effective communication with stakeholders, and the ability to train others. Can design and execute non-functional testing techniques and can write test functional/non-functional test templates.
- You are experienced in identifying and recording defect, providing unit testing and code assurance, performing smoke testing, and utilising CI/CD. Ensures appropriate documentation of defects and resolutions.
- You can identify use case scenarios and define test cases using Gherkin syntax or any other TDL. Furthermore, you can advise on testing techniques/tools, and contributes to implementing the Shift Left approach throughout the SDLC.
- You can also Identify the best technology/test framework for different business scenarios.
- **You can maintain quality assurance traceability, execute test cases, prepare test logs, and report defects in a timely manner.**
- **You can capture and share test results to provide a comprehensive picture of software quality. Can come up with different business scenarios from requirement specification and has knowledge of various tools and techniques to create templates for team members.**

Service Support

You can maintain and support services.

Grade 7 Description: Expert

You can demonstrate a breadth of understanding of service support.

Developing (4)

- You manage user reported issues, perform initial triage, and assign them to the appropriate team member for investigation. You also have knowledge of implementing software and services health monitoring.
- You ensure that the systems and applications developed by the team are operational and sustainable by conducting effective code reviews that consider cost implications and environmental impact. Additionally, you identify and implement log monitoring requirements using various tools.

Proficient 2 – (5)

- You manage user reported issues, perform initial triage, and assign them to the appropriate team member for investigation. You also have knowledge of implementing software and services for health monitoring.
- You ensure that the systems and applications developed by the team are operational and sustainable by conducting effective code reviews that consider cost implications and environmental impact. Additionally, you identify and implement log monitoring requirements using various tools.
- **You proactively work with support teams to identify and implement new logging/monitoring requirements, reducing application Mean Time to Recover (MTTR). You have practical knowledge of setting up monitoring tools and generating proactive alerts.**

Proficient - 1 (6)

- You manage user reported issues, perform initial triage, and assign them to the appropriate team member for investigation. You also have knowledge of implementing software and services for health monitoring.
- You ensure that the systems and applications developed by the team are operational and sustainable by conducting effective code reviews that consider cost implications and environmental impact. Additionally, you identify and implement log monitoring requirements using various tools.
- You proactively work with support teams to identify and implement new logging/monitoring requirements, reducing application Mean Time to Recover (MTTR). You have practical knowledge of setting up monitoring tools and generating proactive alerts.
- **You have a good understanding of using application monitoring tools to implement automated healing processes and/or graceful management of incidents. You can also evaluate different application/system monitoring tools and define the best use of technology/tools in specific contexts.**

- **You have a strong understanding of Shift Left approach in service support paradigm and can ensure that team concentrate on the service support requirements throughout the SDLC.**

Accomplished (7)

- You manage user reported issues, perform initial triage, and assign them to the appropriate team member for investigation. You also have knowledge of implementing software and services for health monitoring.
- You ensure that the systems and applications developed by the team are operational and sustainable by conducting effective code reviews that consider cost implications and environmental impact. Additionally, you identify and implement log monitoring requirements using various tools.
- You proactively work with support teams to identify and implement new logging/monitoring requirements, reducing application Mean Time to Recover (MTTR). You have practical knowledge of setting up monitoring tools and generating proactive alerts.
- You have a good understanding of using application monitoring tools to implement automated healing processes and/or graceful management of incidents. You also evaluate different application/system monitoring tools and define the best use of technology/tools in specific contexts.
- You have a strong understanding of Shift Left approach in service support paradigm and can ensure that team concentrate on the service support requirements throughout the SDLC.
- **You have experience of implementing the DevSecOps approach and ensure solution goes into support, covers monitoring, effective logging and auditing, and security requirements.**
- **You have experience of designing/developing in-house service support tools/applications to enhance the productivity of 1st/2nd line support.**
- **You can also define code templates for logging to promote best practices within the team and software community.**

Communication between technical and non-technical

Able to communicate effectively across organisational, technical and political boundaries, understanding the context. Able to advocate and communicate what a team does to create trust and authenticity. Can successfully react and respond to challenge.

Grade 7 Description: Expert

Able to mediate and mend relationships, communicating with stakeholders at all levels. Able to manage stakeholders' expectations and facilitate discussions across high risk and complexity or under constrained timescales. Able to speak and represent the community to large audiences inside and outside of government.

Developing (4)

- You can work with Product Owners/Business Analysts and the technical team to establish a common understanding of business requirements. You can also lead discussions on different points of view regarding technical solutions among team members.
- You can facilitate a smooth onboarding of new starters to the team and coach, mentor, and develop team members.

Proficient 2 – (5)

- You work with Product Owners/Business Analysts and the technical team to establish a common understanding of business requirements. **You also provide technical guidance and explain complex requirements clearly to assist team members in implementing correct solutions.**
- You facilitate a smooth onboarding of new starters to the team and coach, mentor, and develop team members.
- **You explain solutions to your technical team as well as non-technical stakeholders and manage feedback between both parties throughout the SDLC. You also advocate and communicate the advantages of team's working practices to non-technical stakeholders.**

Proficient - 1 (6)

- You work with Product Owners/Business Analysts and the technical team to establish a common understanding of business requirements. You also provide technical guidance and explain complex requirements clearly to assist team members in implementing correct solutions.
- You facilitate a smooth onboarding of new starters to the team and coach, mentor, and develop team members. You also advocate and communicate the advantages of team's working practices to non-technical stakeholders.
- You explain solutions to your technical team as well as non-technical stakeholders and manage feedback between both parties throughout the SDLC. **You also interact with external suppliers and/or internal development teams to ensure best practices are applied in collaborative engagement.**
- **You can communicate with wider stakeholders to explain complex technical concepts explain changes to project scopes/deadlines in a manner suited to the audience.**
- **You can also mediate and mend relationships among different team members due to different views on technical solutions.**

Accomplished (7)

- You work with Product Owners/Business Analysts and the technical team to establish a common understanding of business requirements. You provide technical guidance and explain complex requirements clearly to assist team members in implementing correct solutions.
- You facilitate a smooth onboarding of new starters to the team and coach, mentor, and develop team members. You also advocate and communicate the advantages of team's working practices to non-technical stakeholders.
- You explain solutions to your technical team as well as non-technical stakeholders and manage feedback between both parties throughout the SDLC. You also interact with external suppliers and/or internal development teams to ensure best practices are applied in collaborative engagement.
- You can communicate with wider stakeholders to explain complex technical concepts, **risks, constraints** and explain changes to project scopes/deadlines in a manner suited to the audience.
- You can mediate and mend relationships among different team members due to different views on technical solutions.
- **You can define patterns/templates for documentation covering the needs of both technical and non-technical audiences. You can also advocate the use of new technology and can promote this to non-technical stakeholders.**
- **You can work with system architecture/domain experts to define Ubiquitous Language³ (or similar approach) and ensure it is implemented at different levels of SDLC.**

³ Ubiquitous language is a model that acts as a universal language to help communication between software developers and domain experts.