**VIRLAN DANIEL**

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| Reflective Practice Journal  Student Logbook |
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**HNC Computing**

## **Essential skills for the future**

Skills Development Scotland and the Centre for Work-based Learning have produced an [**paper about Skills 4.0**](https://www.skillsdevelopmentscotland.co.uk/media/44684/skills-40_a-skills-model.pdf) identifying three key skills areas for the future:

#### **Self-management**

* **Focussing:**sorting and filtering information; paying attention to the present
* **Integrity:**managing your own emotions, strengths and weaknesses; staying true to your principles; self-control
* **Adapting:**openness to new ideas; ability to reflect; learning independently; responding positively to challenges and criticism
* **Initiative:**courage; independent thinking; risk-taking; decision-making; self-belief; self-motivation; responsibility

#### **Social intelligence**

* **Communicating:**receiving information; listening; storytelling
* **Feeling:**empathy for others; a sense of responsibility for society
* **Collaborating:** relationship-building; teamwork; social awareness; ability to adapt to new cultural settings
* **Leading:**inspiring, motivating, influencing, and developing others; the ability to ignite change

#### **Innovation**

* **Curiosity:**observation skills; asking questions; sourcing information; recognising and defining problems
* **Creativity:**imagination; generating ideas; translating thoughts, information and emotions into clear words, images and concepts; the ability to reach ideas and solutions through making, tinkering and exploring
* **Sense making**recognising patterns; seeing the big picture; finding useful structures for information and data; noticing opportunities; analysing information
* **Critical thinking:**breaking down complex problems; following a logical thought process; using your own judgement; understanding data-based reasoning

#### **Self-Assessment**

The following table should be completed on Week 1 and week 15 of your Professional Practice module. This will help you measure the distance travelled on both a personal and learning level.

This will enable you to calculate the number of points that you have improved by i.e., subtracting your abilities on week 1 (A) from your abilities on week 15 (B) and this will give you the number of points you have improved by.

For each question, score yourself a mark out of ten: 0 = being the lowest competency and 10 = being the highest competency

**Please refer to the page above when completing the following:**

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| **Week 1: Meta-Skills Proficiency** | **A** |  |  |
| **Week 16: Meta-Skills Proficiency** |  | **B** |
| **Overall Improvement** |  |  | **C** |
|  |  |
|  | **A** | **B** | **C**  **(B - A)** |
| **Focussing** | **6** | **8** |  |
| **Integrity** | **7** | **8** |  |
| **Adapting** | **6** | **8** |  |
| **Initiative** | **5** | **7** |  |
| **Communicating** | **5** | **7** |  |
| **Feeling** | **6** | **9** |  |
| **Collaborating** | **7** | **8** |  |
| **Leading** | **8** | **9** |  |
| **Curiosity** | **8** | **9** |  |
| **Creativity** | **5** | **8** |  |
| **Sense making** | **8** | **9** |  |
| **Critical thinking** | **9** | **10** |  |

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| **Weekly Reflective Log Date: 06/02/2025** **Date:**  **Reflective Learning Toolkit**    Gibbs, G. (1988) Learning by Doing: a guide to teaching and learning methods  **Description:** Describe what happened during your selected situation for reflection:  I have managed to understand better what is this computing field about. I have managed to understand better what this computing field is about. Through my studies and projects, I’ve gained insight into different areas like programming, hardware, and software development.  **Feelings**: What were you thinking and feeling at the time?  At the time, I felt both excited and overwhelmed. There was a lot to learn, and some concepts were challenging, but I was also motivated because I knew these skills would be useful for my future career.  **Evaluation**: What was GOOD and what was BAD about the experience?  **Good:** I gained a clearer understanding of computing concepts, which helped me feel more confident in my studies. I also improved my problem-solving skills. **Bad:** Some topics were difficult to grasp initially, and I sometimes felt frustrated when I couldn’t understand something right away.  **Analysis:** What sense can you make out of the situation? What else could you have done? What should you not have done?  This experience helped me realize that learning computing requires patience and practice. I could have asked more questions or sought help sooner instead of struggling alone. I should not have ignored difficult topics, assuming I would understand them later without extra effort.  **Action Plan**: If it happened again, what would you do differently?  If I encounter this situation again, I will take a more proactive approach by breaking down complex topics into smaller parts, seeking help from classmates or tutors, and using additional resources like online tutorials.  **Meta-skills:** Which competencies, do you feel have improved for you as a result, and why?  I feel that my **self-management** skills have improved, especially in **adapting** to new challenges and learning independently. I have also developed **critical thinking** skills by analysing problems and finding solutions. Additionally, my **collaborating** skills have improved as I have worked with classmates on projects. |
| **Weekly Reflective Log Date:13/02/2025** **Date:**  **Reflective Learning Toolkit**    Gibbs, G. (1988) Learning by Doing: a guide to teaching and learning methods  **Description:** Describe what happened during your selected situation for reflection:  We had an activity with two teams, Team A and Team B.  First, he had to sort a game with some wood tiles arranged in the form of 4 squares.  We had to collaborate to solve that wood figure.  We all tried individually to do some parts of the puzzle but without any connection and we rapidly failed.  We stopped and thought for a second that we must collaborate and solve this. We all sat on one side of the table to have the same view of the puzzle and started again.  We measured all the pieces and soon I started to think if there must be parts missing.  We counted them and realised that 2 of the parts were missing. We then started to collaborate with Team B and asked them to give us the 2 missing pieces. We finished the piece and after we started to help team b for them to finish too.  After this game, we had another two games that were very engaging.  **Feelings**: What were you thinking and feeling at the time?  The first time we all started to speak and no one was really collaborating.  I realised that we cannot do this all speaking same time and we need a leader to sort the tasks. I have asked everyone to give me the right pieces and this helped.  When I asked the other team to give me the 2 missing pieces it was quite difficult to handle because they already used them in their structure.  **Evaluation**: What was GOOD and what was BAD about the experience?  It was good that we learned how to collaborate, and what skills are necessary in these situations.  It was good that at the last game some members of the team, who didn’t collaborate at all at the previous games, had a good understanding of the rules of the 3rd game and sorted fast and we won.  It was bad that because of the lack of understanding and knowledge of the other members, the team was moving very slowly and I lost in the second game because of lack of synchronisation.  **Analysis:** What sense can you make out of the situation? What else could you have done? What should you not have done?  I realised that everyone has different skills and in different situations they are better than me even if they failed previously.  **Action Plan**: If it happened again, what would you do differently?  I would rapidly ask for a leader and a few minutes of silence for everyone to study the rules.  I would assign tasks to everyone for a faster approach.  **Meta-skills:** Which competencies, do you feel have improved for you as a result, and why?  Team collaboration, leadership and ability to understand each one point of view because at some point I had to speak with the other members of the team and even with the other team besides the fact that if I knew from the beginning what we have to do, and they were acting without a having a clue. |
| **Weekly Reflective Log Date: 20/02/2025** **Date:**  **Reflective Learning Toolkit**    Gibbs, G. (1988) Learning by Doing: a guide to teaching and learning methods  **Description:** Describe what happened during your selected situation for reflection:  We had to plan a journey for the Easter Vacation.  We split into groups of three and worked together.  **Feelings**: What were you thinking and feeling at the time?  I felt it was a good occasion to work as a team, on a project that seemed engaging and constructive.  We all three had to decide on the same destination and started to look for prices that suits our budget.  It was a bit challenging for me to agree with some of the ideas from group.  **Evaluation**: What was GOOD and what was BAD about the experience?  It was a good experience because we shared a lot of information and managed to agree on all the points on the list.  No bad experiences from this project.  **Analysis:** What sense can you make out of the situation? What else could you have done? What should you not have done?  We could have chosen other destinations but we agreed to go to Wroclaw, Poland because one member of the group has a lot of relatives there and can be very helpful in some situations.  **Action Plan**: If it happened again, what would you do differently?  I would search for warmer locations like Tenerife or Nord African Countries.  **Meta-skills:** Which competencies, do you feel have improved for you as a result, and why?  Team collaboration - Because I had to listen and agree with other team members.  Communication – I had to present in English the PowerPoint and answer the questions from class.  Critical – thinking – because I had to make some calculations to fit in the budget and based on these calculations we had to make decisions about which things to add or remove from the journey.  Time management – I had to plan to minute the journey because we had a limited time frame to be at the hotel and bus. |
| **Weekly Reflective Log Date: 27/02/2025** **Date:**  **Reflective Learning Toolkit**    Gibbs, G. (1988) Learning by Doing: a guide to teaching and learning methods  **Description:** Describe what happened during your selected situation for reflection:  We began the initial phase of planning the SmartHire IQ Quiz App.  Drafted the wireframe, prepared the PowerPoint presentation, and finalised the project brief.  I researched and selected appropriate IQ questions tailored for capital and trading industry roles.  **Feelings**: What were you thinking and feeling at the time?  I felt confident about starting a meaningful and professional project.  There was some uncertainty about balancing creativity with functionality.  I was excited to work as part of a collaborative team.  **Evaluation**: What was GOOD and what was BAD about the experience?  Good: Effective communication and alignment on project goals.  Bad: Time-consuming research for industry-relevant IQ questions.  Good: Everyone contributed meaningfully from the start.  **Analysis:** What sense can you make out of the situation? What else could you have done? What should you not have done?  I realised early planning is crucial to the success of a technical project.  I could have proposed clearer timelines for content approval.  I should not have assumed others would be familiar with technical quiz criteria  **Action Plan**: If it happened again, what would you do differently?  Next time, I will suggest setting team-wide research benchmarks.  I’ll make space for a mini-review before moving to development.  I would ensure regular feedback loops during research tasks.  **Meta-skills:** Which competencies, do you feel have improved for you as a result, and why?  Project planning, industry research, and communication skills improved.  I gained confidence in choosing content based on target audience needs.  Developed stronger skills in structuring collaborative work effectively |
| **Weekly Reflective Log Date: 06/03/2025** **Date:**  **Reflective Learning Toolkit**    Gibbs, G. (1988) Learning by Doing: a guide to teaching and learning methods  **Description:** Describe what happened during your selected situation for reflection:  Started implementing the Swing UI and user interface logic.  Helped with login, navigation (Next button), and account creation screens.  Focused on integrating researched questions into the application structure.  **Feelings**: What were you thinking and feeling at the time?  I felt technically challenged and motivated.  Excitement grew as the first parts of the interface came together.  Some stress due to coordinating team members' tasks and tools.  **Evaluation**: What was GOOD and what was BAD about the experience?  Good: Great progress in setting up the structure.  Bad: Small bugs emerged due to unfamiliarity with Swing UI.  Good: Account screen and rules section started to function properly.  **Analysis:** What sense can you make out of the situation? What else could you have done? What should you not have done?  I learned the importance of UI/UX in quiz delivery.  Could have done more testing before integrating the screens.  Should have practised more Java GUI before starting development.  **Action Plan**: If it happened again, what would you do differently?  Will prototype using smaller chunks in future GUI builds.  Plan code walkthroughs with the team for shared learning.  Implement version control checkpoints more frequently.  **Meta-skills:** Which competencies, do you feel have improved for you as a result, and why?  Strengthened Java and Swing GUI skills.  Improved teamwork and task distribution.  Enhanced understanding of frontend logic and design constraints. |
| **Reflective Learning Toolkit** **Weekly Reflective Log Date: 13/03/2025** **Date:**    Gibbs, G. (1988) Learning by Doing: a guide to teaching and learning methods  **Description:** Describe what happened during your selected situation for reflection:  Added and tested the progress bar, password generator, and design elements.  Integrated the music button and began linking functionality.  Worked on refining visual and accessibility features.  **Feelings**: What were you thinking and feeling at the time?  I felt creative and engaged.  Enjoyed experimenting with UI personalisation.  Slightly overwhelmed managing different UI elements.  **Evaluation**: What was GOOD and what was BAD about the experience?  Good: Password generation and music button were functional.  Bad: Time management became tricky with overlapping tasks.  Good: The layout began to reflect user-friendly design  **Analysis:** What sense can you make out of the situation? What else could you have done? What should you not have done?  Realised that even small elements like buttons impact user experience.  Could have created a UI checklist to track each feature.  Should not have multitasked with multiple screens at once.  **Action Plan**: If it happened again, what would you do differently?  Use design mock-ups as guidance during development.  Split UI development over multiple days for clarity.  Use more feedback from the team about visual consistency.  **Meta-skills:** Which competencies do you feel have improved for you as a result, and why?  UI design competency improved.  Better time prioritisation through structured task division.  Communication grew through feedback sessions. |
| **Weekly Reflective Log Date: 20/03/2025** **Date:**  **Reflective Learning Toolkit**    Gibbs, G. (1988) Learning by Doing: a guide to teaching and learning methods  **Description:** Describe what happened during your selected situation for reflection:  Implemented result screen, timer, and music integration.  Finalised the navigation between different panels.  Began optimisation of screen loading and response times.  **Feelings**: What were you thinking and feeling at the time?  Felt technically capable and confident.  Satisfied seeing multiple modules come together.  Some fatigue due to the increasing workload.  **Evaluation**: What was GOOD and what was BAD about the experience?  Good: Completed high-functionality features.  Bad: GUI delays when switching between panels.  Good: Result logic now working with scoring algorithm.  **Analysis:** What sense can you make out of the situation? What else could you have done? What should you not have done?  GUI optimisation is critical for smooth user flow.  Could have conducted component-level testing sooner.  Should not delay small performance issues.  **Action Plan**: If it happened again, what would you do differently?  Apply profiling tools earlier in the process.  Use test-user input to guide performance enhancements.  Improve system responsiveness using feedback loops.  **Meta-skills:** Which competencies, do you feel have improved for you as a result, and why?  System thinking and optimisation skills.  Gained insights into performance testing in UI design.  Enhanced the use of version control tools collaboratively. |
| **Weekly Reflective Log Date: 27/03/2025** **Date:**  **Reflective Learning Toolkit**    Gibbs, G. (1988) Learning by Doing: a guide to teaching and learning methods  **Description:** Describe what happened during your selected situation for reflection:  Setup background customisation and integrated SQL database.  Connected the database to store scores and user data.  Expanded database, created BLOBs, and set up Azure storage.  **Feelings**: What were you thinking and feeling at the time?  Felt challenged by backend connections.  Slightly anxious about losing data or errors.  Proud to see the database integrate successfully.  **Evaluation**: What was GOOD and what was BAD about the experience?  Good: BLOB and storage setup were smooth.  Bad: Initial connection issues and delays.  Good: Achieved a secure and functional data pipeline.  **Analysis:** What sense can you make out of the situation? What else could you have done? What should you not have done?  Realised Azure can be powerful when configured correctly.  Could have double-checked SQL queries before testing.  Should not skip the environment documentation.  **Action Plan**: If it happened again, what would you do differently?  Automate SQL scripts for future integration.  Test the database locally before full cloud deployment.  Plan Azure tasks with a backup plan.  **Meta-skills:** Which competencies, do you feel have improved for you as a result, and why?  Cloud storage, backend, and SQL skills advanced.  Better risk management during integration phases.  Improved logical debugging and data flow analysis. |
| **Weekly Reflective Log Date: 03/04/2025** **Date:**  **Reflective Learning Toolkit**    Gibbs, G. (1988) Learning by Doing: a guide to teaching and learning methods  **Description:** Describe what happened during your selected situation for reflection:  Linked Leaderboard to database, set result comparison logic.  Added print and opt-out buttons.  Developed the celebrity comparison image function.  **Feelings**: What were you thinking and feeling at the time?  Felt satisfied seeing the app’s core features finalised.  Motivated to polish design and testing elements.  Confident in delivering a functional and attractive tool.  **Evaluation**: What was GOOD and what was BAD about the experience?  Good: Leaderboard works seamlessly.  Bad: Celebrity logic took extra time to tweak.  Good: All results features completed successfully.  **Analysis:** What sense can you make out of the situation? What else could you have done? What should you not have done?  Learned how end-of-quiz feedback enhances the app.  Could have reused more UI components.  Should not hardcode logic for future reusability.  **Action Plan**: If it happened again, what would you do differently?  Use JSON or external files for configurable logic.  Focus more on modular code structure.  Add user feedback popup for insights.  **Meta-skills:** Which competencies, do you feel have improved for you as a result, and why?  Enhanced design thinking and implementation.  Gained better logical structuring skills.  Practised advanced control flow in Java. |
| **Weekly Reflective Log Date: 24/04/2025** **Date:**  **Reflective Learning Toolkit**    Gibbs, G. (1988) Learning by Doing: a guide to teaching and learning methods  **Description:** Describe what happened during your selected situation for reflection:  Performed normal, boundary, and exception testing.  Focused on UI responsiveness and logic validation.  Documented issues and fixed identified bugs.  **Feelings**: What were you thinking and feeling at the time?  Felt methodical and focused.  Frustration when bugs were hard to track.  Relief when all cases passed.  **Evaluation**: What was GOOD and what was BAD about the experience?  Good: Identified hidden bugs.  Bad: Limited time for deeper usability testing.  Good: Codebase stabilised for deployment.  **Analysis:** What sense can you make out of the situation? What else could you have done? What should you not have done?  Testing is essential to ensure robustness.  Could have scheduled user testing in earlier sprints.  Should not rush the final testing phase.  **Action Plan**: If it happened again, what would you do differently?  Plan test cycles in future projects.  Include peer review in testing stages.  Automate common test cases.  **Meta-skills:** Which competencies do you feel have improved for you as a result, and why?  Testing, debugging, and documentation improved.  Developed systematic and disciplined testing habits.  Increased appreciation for QA processes. |
| **Weekly Reflective Log Date: 01/05/2025** **Date:**  **Reflective Learning Toolkit**    Gibbs, G. (1988) Learning by Doing: a guide to teaching and learning methods  **Description:** Describe what happened during your selected situation for reflection:  Finalised and reviewed the full project brief.  Prepared documentation for code, testing, and setup.  Scheduled and rehearsed presentation flow.  **Feelings**: What were you thinking and feeling at the time?  Proud of the final result.  A bit nervous about the upcoming presentation.  Confident in the quality and effort.  **Evaluation**: What was GOOD and what was BAD about the experience?  Good: The Project brief was detailed.  Bad: Some sections could use more visual aids.  Good: Communication during deployment was clear.  **Analysis:** What sense can you make out of the situation? What else could you have done? What should you not have done?  Recognised the value of great documentation.  Could have included a video walkthrough.  Should not overlook visual formatting.  **Action Plan**: If it happened again, what would you do differently?  Add summary infographics.  Standardise document formatting.  Keep a documentation checklist.  **Meta-skills:** Which competencies do you feel have improved for you as a result, and why?  Technical writing and deployment readiness.  Organisational skills sharpened.  Presentation planning has been enhanced. |
| **Weekly Reflective Log Final Fixes Date: 08/05/2025** **Date:**  **Reflective Learning Toolkit**    Gibbs, G. (1988) Learning by Doing: a guide to teaching and learning methods  **Description:** Describe what happened during your selected situation for reflection:  Fixed minor bugs related to scoring and UI alignment.  Polished app design based on the team's suggestions.  Prepared the app for portfolio inclusion.  **Feelings**: What were you thinking and feeling at the time?  Proud of the near-finished product.  Focused and satisfied with final tweaks.  Felt a sense of closure on the project.  **Evaluation**: What was GOOD and what was BAD about the experience?  Good: Final fixes improved app stability.  Bad: Some last-minute edits were time-sensitive.  Good: Interface consistency was enhanced.  **Analysis:** What sense can you make out of the situation? What else could you have done? What should you not have done?  Realised the impact of subtle UI changes.  Could have left more buffer time for polishing.  Should not rely only on internal team feedback, and ask other people too.  **Action Plan**: If it happened again, what would you do differently?  Use external testers for final reviews.  Include padding time for polish in future timelines.  Maintain a changelog for project iterations.  **Meta-skills:** Which competencies do you feel have improved for you as a result, and why?  UI refinement and user feedback interpretation improved.  Developed time management under deadline pressure.  Strengthened ability to finalise projects professionally. |
| **Reflective Learning Toolkit** **Weekly Reflective Log Presentation DAY Date: 15/05/2025** **Date:**    Gibbs, G. (1988) Learning by Doing: a guide to teaching and learning methods  **Description:** Describe what happened during your selected situation for reflection:  Presented the final SmartHire app.  Explained key features and workflow.  Responded to audience questions and feedback.  **Feelings**: What were you thinking and feeling at the time?  Felt emotional and not so well-prepared for speaking  Slightly anxious before speaking.  Felt like the presentation was not so well prepared.  **Evaluation**: What was GOOD and what was BAD about the experience?  Good: Delivered a complete demonstration.  Bad: Our speaking was not quite good; instead of speaking freely, we read from the papers most of the time  Good: Questions were handled effectively.  **Analysis:** What sense can you make out of the situation? What else could you have done? What should you not have done?  Presentation skills were vital for showcasing work.  Could have been more photos from the app for the PowerPoint presentation.  Should not assume the app will run immediately after download and deployment.  **Action Plan**: If it happened again, what would you do differently?  Practice more before the presentation.  Learn the content of the presentation and speak without reading from papers.  Include more backup screens.  Prepare better for public questions.  **Meta-skills:** Which competencies do you feel have improved for you as a result, and why?  Public speaking and controlling emotions.  Learned how to present technical products.  Boosted self-confidence by answering the questions. |
| **Weekly Reflective Log Post-Presentation Date: 22/05/2025** **Date:**  **Reflective Learning Toolkit**  Gibbs, G. (1988) Learning by Doing: a guide to teaching and learning methods  **Description:** Describe what happened during your selected situation for reflection:  Reflected on feedback received from the presentation.  Reviewed app performance and user impressions.  Made the final documents for uploading to Moodle.  **Feelings**: What were you thinking and feeling at the time?  Felt relieved that the presentation was completed.  Appreciated the constructive criticism.  Slight disappointment with my speaking skills.  **Evaluation**: What was GOOD and what was BAD about the experience?  Good: Feedback was generally positive.  Bad: We didn’t spend more time creating a better presentation  Good: Engagement and interest from the audience were high.  **Analysis:** What sense can you make out of the situation? What else could you have done? What should you not have done?  Feedback highlighted the importance of good communication skills in the presentations.  Could have tested the app deployment more before.  Should not have underestimated the number of questions of the public.  **Action Plan**: If it happened again, what would you do differently?  Include more photos in the PowerPoint presentation and more examples from the app.  Learn the content better for the presentation and don’t read from the papers.    **Meta-skills:** Which competencies do you feel have improved for you as a result, and why?  Public speaking.  Learned how to better control emotions when speaking.  Learned from audience response analysis.  Developed a continuous improvement mindset. |
| **Weekly Reflective Log Portfolio Date: 29/05/2025** **Date:**  **Reflective Learning Toolkit**    Gibbs, G. (1988) Learning by Doing: a guide to teaching and learning methods  **Description:** Describe what happened during your selected situation for reflection:  Compiled personal reflections and project learnings in a portfolio  Explored how the SmartHire app could support my career goals.  Updated CV and LinkedIn with project highlights from the portfolio.  **Feelings**: What were you thinking and feeling at the time?  Grateful for the learning journey.  Motivated to build more complex applications.  Reflective about personal and professional growth.  **Evaluation**: What was GOOD and what was BAD about the experience?  Good: The Portfolio helped clarify strengths and interests.  Bad: Some stress during adding all the skills and documents.  Good: Produced a portfolio-ready application.  **Analysis:** What sense can you make out of the situation? What else could you have done? What should you not have done?  Recognised value of documentation and planning.  Could have started to create the portfolio earlier.  Should not forget to celebrate achievements.  **Action Plan**: If it happened again, what would you do differently?  Set quarterly goals for skill development.  Continue sharing projects on professional platforms.  Would try to add more skills and take more opportunities to improve my portfolio.  **Meta-skills:** Which competencies do you feel have improved for you as a result, and why?  Self-assessment and goal-setting were strengthened.  Organisational skills.  Professional branding and personal reflection improved.  Career strategy planning. |