# Rubric → Deliverables Matrix

This matrix maps each rubric criterion (A1–C9) to the concrete tasks, artifacts and due dates used in the Online Examination System project. It is intended as a planning and tracking aid for the Delivery & Rubric Compliance Agent and the team.

| Criterion | Description | Tasks / Deliverables | Owner | Due Date | Proof / Artifact |
| --- | --- | --- | --- | --- | --- |
| **A1 – Frontend: Beautiful UI** | Provide a consistent design system, responsive typography and spacing, and complete core pages (Home, Login, Exam List, Exam Room, Results, Admin). | Design UI kit (colors, typography, spacing). Implement core pages with loading/error/empty states. Provide 5–8 screenshots and a short demo video. | Frontend Lead | M4 | Screenshots, design document, video demo |
| **A2 – Frontend: Mobile Responsiveness** | Ensure layouts adapt for phones (≈360×640) and tablets (≈768×1024) with no horizontal overflow. | Test each core page on two breakpoints. Implement responsive navigation (drawer or bottom nav) for mobile. Capture screenshots and run Lighthouse accessibility audit. | Frontend Team | M4 | Device screenshots, Lighthouse report |
| **A3 – Backend: Functional Breadth & Correctness** | Complete end‑to‑end exam workflow: auth (JWT), question bank, exam creation/assignment, snapshot start, autosave, submit, auto grading, results. Provide standardized error handling and Swagger/OpenAPI documentation. | Implement controllers, services and EF Core models. Create Swagger documentation and Postman collection. Run integration tests. | Backend Lead | M4 | Swagger URL, Postman JSON, test results |
| **A4 – Technology Depth & Suitability** | Use SignalR for real‑time timer/monitoring, EF Core migrations for schema management, JWT for auth, Docker, and CI/CD pipelines. | Implement SignalR hubs, configure EF migrations, set up Docker Compose and GitHub Actions. Ensure all pipelines are green. | DevOps Lead | M5 | docker‑compose.yml, pipeline YAML, green build screenshot |
| **A5 – Online Deployment** | Provide publicly accessible deployment with HTTPS, domain configuration, secrets management and health endpoint. | Deploy to a cloud platform (e.g., Azure or DigitalOcean). Configure SSL certificates and environment secrets. Maintain uptime during demo week. | DevOps Team | M5 | Live URL, health endpoint screenshot, certificate details |
| **B6 – Written Report** | Produce a 10–20 page report covering problem statement, FR/NFR, 3‑tier architecture, ERD & schema, policies (snapshot, randomization, grading, timing, security, retention), test plan, deployment overview and references. | Compile the design documents into a cohesive report. Convert to PDF (docs/report.pdf). Include citations for UTC storage[[1]](https://dzone.com/articles/dates-and-times-in-sql-server-at-time-zone#:~:text=In%20the%20Azure%20SQL%20Database%2C,calculations%20at%20the%20presentation%20layer), 3rd normal form[[2]](https://learn.microsoft.com/en-us/troubleshoot/microsoft-365-apps/access/database-normalization-description#:~:text=Description%20of%20normalization) and secure password hashing[[3]](https://cheatsheetseries.owasp.org/cheatsheets/Password_Storage_Cheat_Sheet.html#:~:text=To%20sum%20up%20our%20recommendations%3A). | Documentation Lead | M4 | report.pdf |
| **B7 – Presentation & Q&A** | Prepare ≤15 slides covering the end‑to‑end solution, demo, architecture, results and future work. Deliver a 5–7 minute live demo and answer questions. | Assemble slides. Rehearse the demo. Provide a video recording if required. | Team Lead | M5 | Slide deck (PDF), demo recording |
| **C8 – Team Organization** | Maintain a Trello/Kanban board with backlog/doing/review/done columns. Log weekly work per member from week 6. Show velocity or burndown charts. | Create the board. Assign tasks. Update weekly worklogs. Export the board as PDF/CSV. | Project Manager | M2–M5 | Trello export, worklog file |
| **C9 – Frequent Commits & Code Review** | Ensure each member commits regularly (≥2 commits/week). Use pull requests with at least one reviewer. Adopt conventional commit messages and avoid committing secrets. | Configure branch protection. Monitor commit activity. Conduct code reviews. | Project Manager | Week 6–M5 | GitHub Insights screenshot, PR list, CI status |

### Notes

* **Assumptions** – The due dates refer to project milestones M1–M5 defined in the Milestone Plan. Adjust as necessary to reflect the actual semester timeline.
* **Proof** – The evidence ledger (docs/evidence/Evidence.md) specifies precisely what must be collected and where to store it for each criterion.
* **Cross‑References** – Many tasks relate to multiple criteria (e.g., real‑time features contribute to A3 and A4). This matrix shows the primary mapping for tracking purposes.

[[1]](https://dzone.com/articles/dates-and-times-in-sql-server-at-time-zone#:~:text=In%20the%20Azure%20SQL%20Database%2C,calculations%20at%20the%20presentation%20layer) Dates and Times in SQL Server: AT TIME ZONE

<https://dzone.com/articles/dates-and-times-in-sql-server-at-time-zone>

[[2]](https://learn.microsoft.com/en-us/troubleshoot/microsoft-365-apps/access/database-normalization-description#:~:text=Description%20of%20normalization) Database normalization description - Microsoft 365 Apps | Microsoft Learn

<https://learn.microsoft.com/en-us/troubleshoot/microsoft-365-apps/access/database-normalization-description>

[[3]](https://cheatsheetseries.owasp.org/cheatsheets/Password_Storage_Cheat_Sheet.html#:~:text=To%20sum%20up%20our%20recommendations%3A) Password Storage - OWASP Cheat Sheet Series

<https://cheatsheetseries.owasp.org/cheatsheets/Password_Storage_Cheat_Sheet.html>