Exercise 10

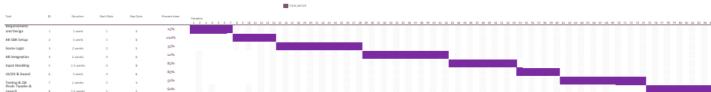
Dienstag, 1. Juli 2025 18:43

1) Project Planning for Tetris Gaming App

| Phase | Duration | Milestone |
|--------------------------|-----------|---|
| 1. Requirements & Design | 1 week | Feature list & interaction design finalized |
| 2. AR SDK Setup | 1 week | AR dev environment ready |
| 3. Game Logic | 2 weeks | Core Tetris mechanics working |
| 4. AR Integration | 2 weeks | Game objects visible on AR glasses |
| 5. Input Handling | 1.5 weeks | Gesture/gaze control implemented |
| 6. UI/UX & Sound | 1 week | Game feedback + HUD visuals complete |
| 7. Testing & QA | 2 weeks | Game fully tested on target AR devices |
| 8. Final Tweaks & Launch | 1.5 weeks | Polished version published |

Gantt Chart: project activities and dependencies (Gantt Chart.xlsx)

Gantt Chart



Summary of dependencies:

| Task | Depends On |
|----------------|-----------------------|
| Game Logic | Requirements & Design |
| AR Integration | AR SDK Setup |
| Input Handling | AR Integration |
| UI/UX & Sound | Game Logic |

Testing & QA Input Handling + UI/UX

Final Launch Testing & QA

2) Cost of the project

Cost estimation:

| Role / Item | Effort (12 weeks) | Rate (€/hr) | Cost (€) |
|--|---|-------------|----------|
| AR/Game Developer | ~30 hrs/week \rightarrow 360 hrs | 30€ | 10,800€ |
| UI/UX/Game Designer | ~12 hrs/week → 144 hrs | 25€ | 3,600€ |
| QA & Testing | $^{\sim}$ 8 hrs/week \rightarrow 96 hrs | 20€ | 1,920€ |
| Sound & Graphics Assets | One-time flat cost | _ | 300€ |
| Misc. (hardware, AR devices, licenses) | - | _ | 400€ |

⇒ Total cost ≈ 17,000 €

Selling price:

Option Price (€) Justification

Casual game price $5.99 \, \varepsilon$ Fits mobile/AR game standards

Premium version $9.99 \, \varepsilon$ If polished, with leaderboard/multiplayer

Bundle price $3-4 \in$ If offered in an AR game bundle

3) Project staff

| Role | Responsibility | Effort |
|-------------------------|---|-----------|
| 1. AR/Game Developer | Core development: game logic, AR SDK, integration | Full-time |

| 2. UI/UX Designer | Game screen layouts, controls, interaction design | Part-time (early + mid-phase) |
|--|---|---------------------------------------|
| 3. QA/Tester | Continuous testing: unit, AR interaction, UAT | Part-time (from mid- phase onward) |
| 4. Project Lead / Coordinator | Planning, prioritizing, blocking issues, stakeholder feedback | Part-time |
| 5. Asset Creator (freelance or AI-based) | Sound effects, block visuals, animations | Short-term / on- demand |

4) Which software development process

Agile development process because:

- \cdot Flexibility: Agile allows for iterative development and continuous feedback, which is crucial for innovative projects like AR apps.
- \cdot Customer Involvement: Regular feedback from potential users can be incorporated quickly.
- \cdot Risk Management: Frequent releases and testing help identify and mitigate risks early.
 - 5) 5 Options to finish the project
 - Simplify the Scope
 - Cut non-essential features and focus on a basic playable version (MVP) to reduce workload.
 - Work More Intensively (Short-Term)
 - $\circ \;\;$ Increase focus or put in more hours short-term to finish key tasks only if manageable.
 - Postpone the Launch
 - o Delay release slightly to avoid rushing and ensure stability and quality.
 - Get Help or Delegate Small Parts
 - o Ask peers for support or use ready-made assets/tools to speed things up.
 - Accept Imperfection & Finish
 - $\hspace{0.1in} \circ \hspace{0.1in} \text{Prioritize completion over perfection} \hspace{0.1in} \hspace{0.1in} \text{fix bugs and polish later if needed.}$