Esports as Accelerator for Social Inclusive Education

LESSON

SYMFONY BUILDER GAME

AUTHOR

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CODEARTS SOLUTIONS

SYMFONY BUILDER GAME

Symfony Builder Game challenges learners to construct a small but complete web application through a sequence of unlockable backend missions. Routes, controllers, entities, forms and validation are introduced as connected parts of one working product rather than separate demonstrations.

Subject and level

VET learners specialising in backend or full-stack web development with previous PHP knowledge and an introductory understanding of object-oriented programming.

Connection to curriculum

The activity addresses server-side development, MVC architecture, database persistence, validation and framework-based application design. It links programming outcomes to maintainability, separation of concerns and professional use of documentation.

Didactic and pedagogic considerations

Progressive missions reduce cognitive overload by introducing one Symfony concept at a time while preserving a meaningful final goal. Teacher validation acts as a checkpoint, and optional bonus requirements support differentiation for faster learners without penalising others.

Time estimate

3 hours

SYMFONY BUILDER GAME

Group size

15-25 students

Overall introduction to exercise

Students join a simulated software studio and receive a client brief for a small application with registration, data storage and a dashboard. The application grows in stages, and each stage is unlocked only after the previous one is demonstrated to the teacher or another team.

The game emphasises architecture as well as functionality. Learners earn progress for clean controller responsibilities, sensible entity design, validation and readable code, encouraging them to see Symfony as a structured development environment rather than a collection of commands.

SYMFONY BUILDER GAME

Exercise as presented to the students

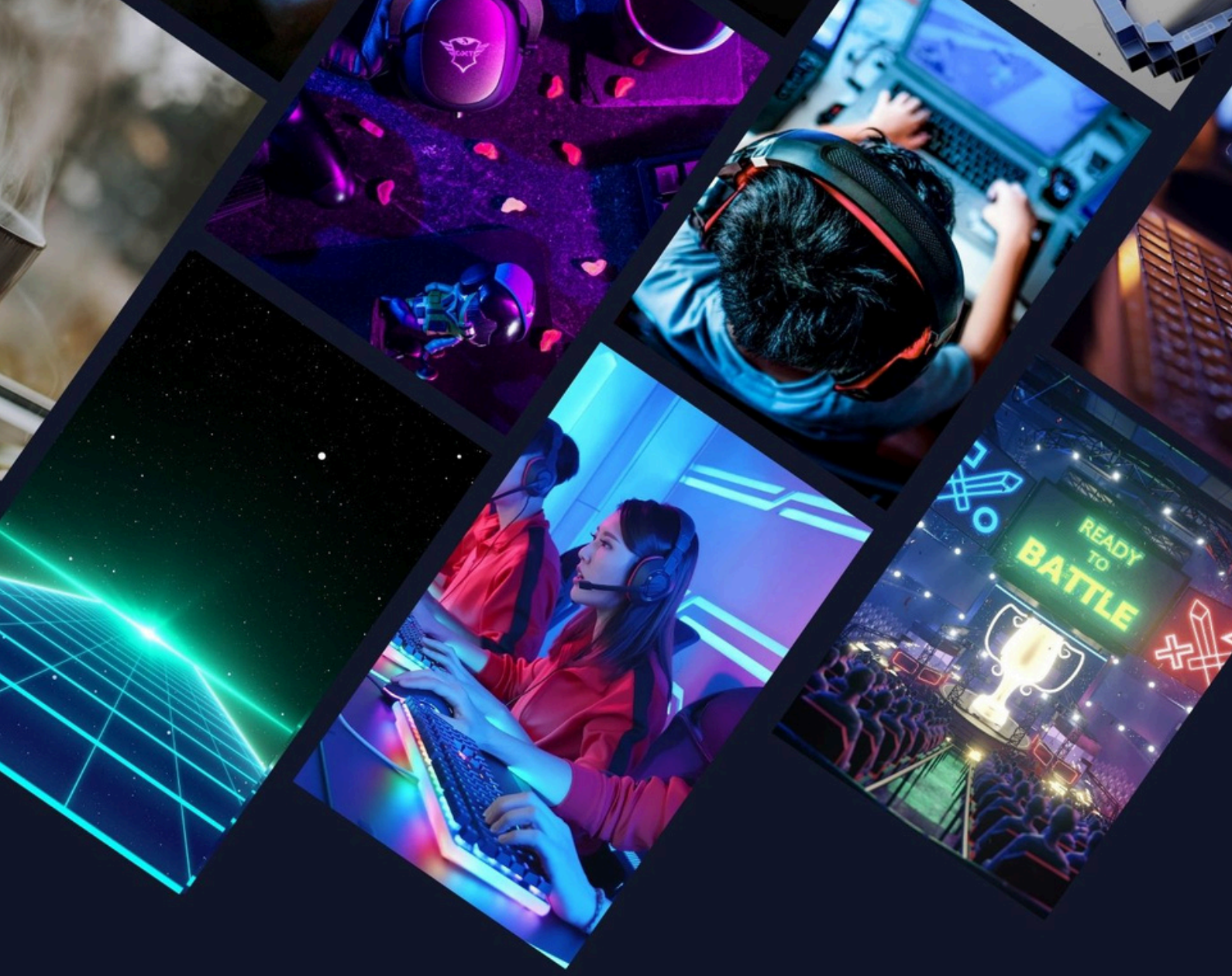
The classroom was presented as a small software studio receiving a new client request. Students worked in pairs and were given a Symfony skeleton project plus a concise brief: create a basic platform with a home page, user-facing form, stored data and a simple dashboard. The teacher acted as the client and released requirements in stages.

Mission one focused on routing and controllers. Teams had to create two routes, return valid responses and explain the relationship between a route and its controller. After a quick teacher review, mission two unlocked Doctrine: students created an entity, generated a migration and persisted sample records in the database.

The third mission introduced forms and validation. Learners built a form linked to the entity, added constraints and displayed useful validation messages. A small leaderboard rewarded completed missions, but code readability and explanation counted as much as speed, preventing the exercise from becoming a simple race.

Halfway through the session the fictional client changed one requirement, asking for an additional profile field and a clearer confirmation message. Teams had to assess what parts of the application were affected, modify the entity and migration safely, and update the form without breaking existing functionality.

At the end, each pair demonstrated the application in the browser and explained its route-controller-entity flow. The class discussed where errors occurred and how Symfony conventions helped locate them. Students finished with a working mini-application and a concrete understanding of MVC, persistence, validation and iterative client-driven development.



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