

Creating games using the Entity Component System data architecture requires a change in programming approach. Current .NET frameworks assume that the user is familiar with the principles of ECS. Therefore, as the interest in creating games using ECS grows, so does the need for a framework that allows intuitive learning of these principles. The result of this work is a data-driven framework with an archetypal data organization allowing for parallelization of systems. In addition, the framework makes extensive use of code generation, leading the user to a previously unexplored declarative way of creating games. Combined with platform independence, Lepenka provides the only solution for the .NET platform that takes on the aforementioned characteristics. Another important feature is code reusability across games, provided by modules allowing full abstraction of game systems and components.