International Tutorial on Web-based game development for beginners: A Hands-on Learning Experience

Educational games are gaining an increasing attention from researchers and practitioners since they can make learners motivated and engaged while learning. At the same time, coding is one of the 21st century skills that people need to learn. Therefore, this tutorial aims to help beginner participants start developing their own web-based educational games using game engines. Particularly, this tutorial uses "Construct2" game engine to help participants develop a mini game from scratch. It then shows them how to export and deploy the files of the game (developed using Construct2) on an online server. This allows other users to access the game from their computers using their web browsers and play it. In this tutorial, the instructor will apply the hands-on learning strategy where he codes the game on his laptop with the help of a projector, so participants can see the coding process. The participants then start doing the coding as well on their computers. The instructor can also go between the participants when needed and help them in case there are any bugs.

The flow of this tutorial is as follow:

1. The instructor provides a very short presentation about native game development and game engine development. This can help participants understand the difference between both methods. This matter is considered a basic knowledge to be known by game developers. The instructor also provides short introduction about the game engine "Construct2" to be used in this tutorial.
2. The instructor starts coding the educational mini-game with the participants by applying the hand-on learning strategy.
3. The instructor conducts at the end a discussion with participants to assess their learning knowledge during this experience. He also gives a short discussion about smart educational games as a research area to investigate.

Please note that each participant should download and install the Construct2 software. The software can be found on the official website:

https://www.scirra.com/construct2/releases

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