

# Skrivnostni Surini

## Mysterious Surini

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**Povzetek:** Skrivnostni Surini je izobraževalna računalniška igra, namenjena učencem in dijakom, ki se v osnovnih in srednjih šolah srečajo z iskalnimi algoritmi. Igralca popelje v gusarski svet pustolovščin, v katerem skozi izbrane aktivnosti spozna in usvoji delovanje Dijkstrovega algoritma. Algoritem reši problem iskanja najcenejših poti v grafu, v računalniškem kontekstu pa je za učence in dijake smiselno kot algoritem, ki nastopa pri usmerjanju na omrežnem sloju TCP/IP modela. Igra je postavljena v učencem prilagojeno učno okolje, v katerem so učni cilji zakriti in je v ospredje postavljeno zabavno reševanje problemov. Igralec nastopa v vlogi prijaznega pirata, ki poglavarju otoka Fantan pomaga rešiti hči Arabelo, ki jo je ugrabilo sovražno ljudstvo Tantami. To mu lahko uspe le tako, da se prebije skozi štiri sovražnikove otoke. Na teh otokih mora poiskati najmanj nevarne poti do sovražnikovih hišk, saj s tem zbira cekine, ki jih v zadnji fazi igre potrebuje, da doseže cilj. Otoki sovražnikov v igri predstavljajo posamezne učne etape, ki jih v celoten učni proces povezuje zemljevid otočja. Ta igralcu omogoča pregled nad napredovanjem v igri, ki je pogojeno z usvajanjem učnih ciljev. Skrivnostni Surini je nova priložnost za učitelje in profesorje, da v svoje pedagoško delo vključijo, tako z didaktičnega kot tudi s tehničnega vidika, posebej za njih zasnovano eno izmed izobraževalnih računalniških iger, ki so se v svetu pokazale kot dobra praksa v najrazličnejših okoljih.

**Abstract:** Mysterious Surini is an educational computer game created for children attending both elementary schools as well as high schools where they may find themselves learning the basics of search algorithms. The game gives the player a piracy-themed adventure, where he learns and internalizes the workings of the Dijkstra's algorithm through well-selected activities. Dijkstra's algorithm is used for finding the cheapest path in a given graph. The algorithm is used in various fields of science, for example computer science, where it is used for routing packages of information that travel through the Internet, making it useful for children to know about it. The design of the game is adjusted to the school environment, making its learning objectives hidden and offering a fun gaming experience. The player embarks the game as a friendly pirate, where he helps the governor of the island Fantan to find his missing daughter Arabel, who was kidnapped by a hostile tribe, the Tantams. He can only succeed if he successfully finds his way through four islands. To do that, he must find

the least dangerous paths to all hostile tribe houses on each of the four islands. In this way he collects coins, making it possible to complete the game. All the four islands together represent a complete learning process of the above mentioned algorithm, whereas an individual island is used for the representation of a single learning stage. Mysterious Surini is a new opportunity for all teachers to embed a learning game in their curriculum, making it more interesting and diverse for the children as well as simplifying the process of learning while getting better results than ever before.