|  |  |  |
| --- | --- | --- |
| **Expression of Interest** | | |
| **Project Title** | Galaxian 2019 | |
| **Organisation or Supervisor** | UoN | |
| **Contact person** | Graham Hutton | |
| **Contact email** | Graham.Hutton@nottingham.ac.uk | |
| **Team Members** | | |
| **Name** | **Email Address** | |
| Kejia Wu | scykw1@nottingham.ac.uk | |
| Liam Orrill | psylo@nottingham.ac.uk | |
| Tajin Tasnuva | psytt1@nottingham.ac.uk | |
| Xuanhao Li | scyxl3@nottingham.ac.uk | |
| Nicole Millinship | psynm6@nottingham.ac.uk | |
| Gurjyot Kaur | psygk2@nottingham.ac.uk | |
|  |  | |
|  |  | |
| **Description of Team Skills (You must provide clear evidence of to what extent the team has the Highly Desirable and where possible the Desirable Skills detailed on the Original Project form)** | | |
| **Project Motivation:**  Our team’s interest towards this project has been inspired by our love of classic gaming and we want to help preserve and honour this game so that more people can enjoy it.  **Project Understanding:**  The object of this project is to use modern computer and programming languages to remake the arcade game Galaxian. Some extra custom features or bonuses of our own could be designed to add to the game as extensions.  **Team Description:**  Most of our team members have developed some small games on different platforms and languages. Liam has created several applications in a variety of different programming languages. Kejia and Tajin has developed some mini games for PC in Java and C. Gurjyot has created a Space Invaders style game in Swift during an internship.  We have a great amount of experience in working with university professors. Our team leader Kejia Wu spent most of his summer vacation doing research with professor Sheung-Hung Poon. This experience improved his communication skills in an academic environment and provided him with team management skills that make him suited to be the team leader of our group.  Each one of us has learned agile development last semester and are used to working in teams. Kejia has worked with other programmers in a business and campus environment. Tajin currently works in campus IT service, so she is good at solving problems with other team members together.  Xuanhao is an attentive and creative programmer who has developed several applications to help improve his programming. He is really interested in the game’s rule system and expects to dig out all the hidden rules underneath the original game.  We consider ourselves as the most powerful candidate of this project because we have met most of the requirement and have a clear plan.. And we ensure you that we will pour one hundred percent of effort into this project.  **Highly desirable skills and desirable skills**  *Programming in different programming languages to produce a game; Experience in game producing -*  Every member of our team has produced simple games in Java and other programming languages.  *Knowledge of arcade games’ judgement system and manipulate system; Experience of real game playing -*  Most members of our team played the original game on PC or at an arcade before and we have a good understanding of the Galaxian series. And most importantly, we love playing classic games.  *Ability to work with clients and other students; Experience in working in a team -*  Kejia’s work in a summer research project provided him with experience of team managing. His experience makes him particularly suitable for this project and his colleagues and teachers found him a reliable and responsible person to work with.  *Knowledge of agile development and version control; Experience with Git and agile methods –*  All of our team members have used Git in a previous group work project and some of them have used Git in a business environment  **Preliminary Research:**  After some research done by our team, there exists four main obstacles to conquer:   1. First, a performance problem could be observed on the former project “2084”. The program’s operating fluency decreases dramatically as the game’s elements’ number increases. In order to solve this problem, we would like to build this project in C++ and develop special data structures to store and track bullets and enemies. 2. As a result of applying C++, our team must learn one graphic library, QT is our first choice (Though it is a GUI developing pattern, it is much stronger than others). With our experience of learning graphic libraries on other languages’ platforms, this obstacle should be smoothly overcome. 3. The flying tracks set of enemies includes hovering and semi-hovering (when flying towards the player’s plane). The relationship between these two tracks, and how to reproduce the latter, are both challenging problems. 4. The hand shank’s input data structure or OS hand shank API should be considered from examining the “2048” project. However, we have some former examples from previous projects to learn from.   (Max 500 words) | | |
| **Date of Submission of EoI** | |  |
| **Date of Pitch** | |  |
| **Notification of award** | |  |

**Please make sure to attach a CV for each member of the group.**