Game Development TRS - Revaluation Exam - January 31st 2017

YOUR FULL NAME:

1.(3 points) Adapt the A* algorithm to work on a map that can wraparound. This means that leaving to the left should be connecting you to the right (we assume the is **no** wraparound top-bottom). Describe the pathfinding phases that would be affected and how. E. g.:

	X	Start									
X	X								Dest	X	X

2. **(3 points)** Design the UML of a GUI system that could handle all elements in this image:

3. **(2 points)** If we have a game where the logic uses 25 ms with vsync turned on (monitor refresh rate of 50 Hz) and our main character moves at 200 pixels per second. How much, in average, is he moving each frame taking in account that we have <u>variable time step</u> ? How much vsync will make the application wait ?

4. **(2 points)** Explain the key concepts behind a Quake-style console. Explain the main steps that need to be taken in order to implement it (assuming we have a functional GUI system in place).