

Game Development - Revaluation Examination - January 31th 2019

YOUR FULL NAME:

- You have 2 hours to complete the assignment.
- Only valid text will be the one inside each box, everything else will be ignored by the teacher

1. (2 points) Find the parsing errors and suggest any chances of improving this XML:

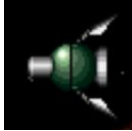
```
<entities>
  <static>
    <pylon hp=100>
      <instance1 coords=50,25/>
    </pylon>
    <base hp=500>
      <instance1 coords=40,50/>
    </base>
  </static>
  <dynamic>
    <archon hp=200 damage=25 distance=1 speed=3/>
      <instance1 coords=80,50/>
      <instance2 coords=70,80/>
    </archon>
    <dragoon hp=75 damage=10 distance=15 speed=4/>
      <instance1 coords=75,70/>
      <instance2 coords=76,80/>
    </dragoon>
  </dynamic>
```

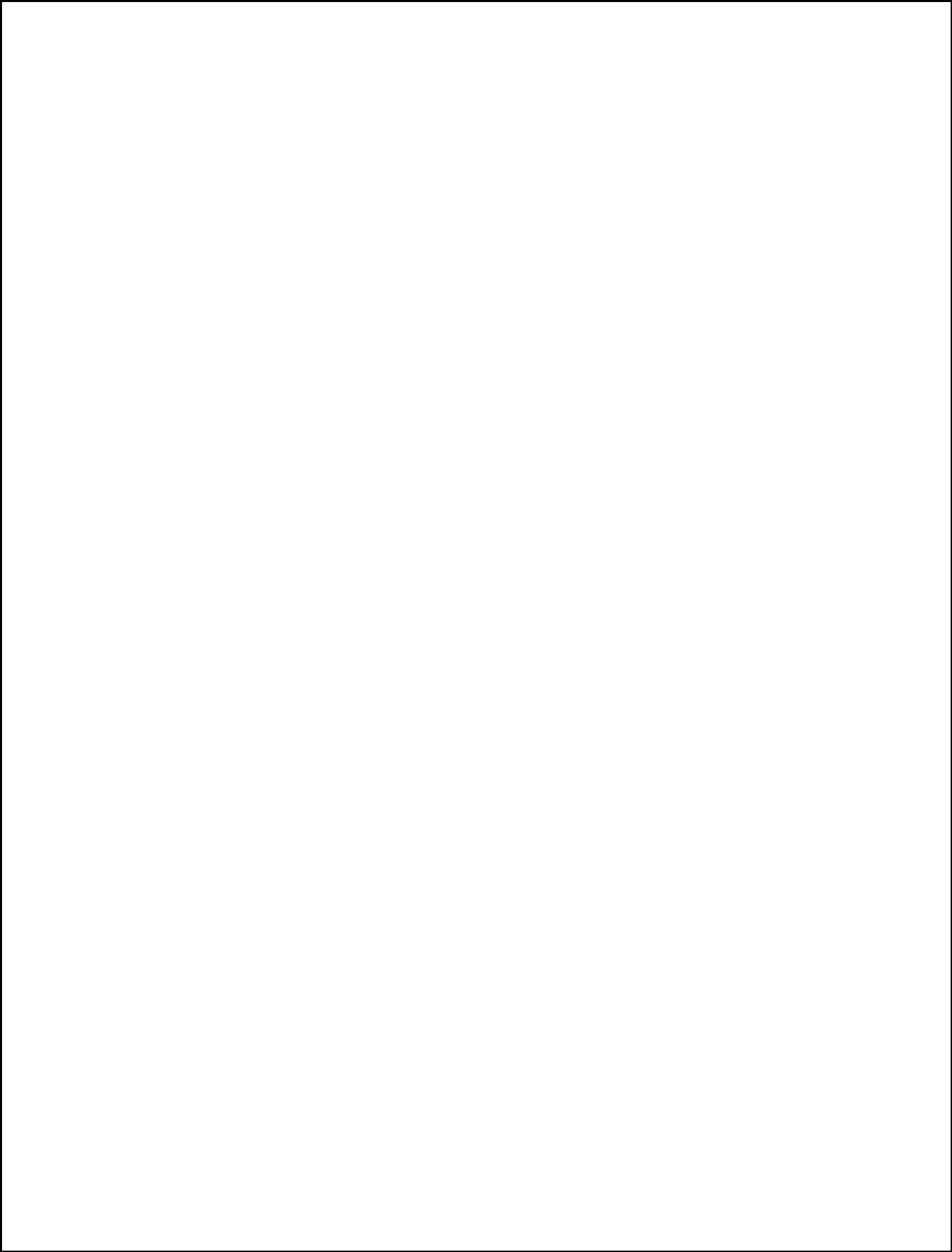
2. **(2 points)** Describe your approach to **draw** an isometric map. Use pseudocode to describe its core loop. Be specific about the math formula needed to find final screen coordinates.

3. **(3 points)** Define and explain the pros and cons of **Fixed Time Step** versus **Variable Time Step**. Why would it be interesting to limit the framerate in a video game ?

4. (3 points) Given can be seen in those two screenshot from *Final Fight*, draw the UML for an entity system that would have all those elements we can see in the picture. Take in account that:

- Two player active, yellow and red
- Notice each player can have different weapon setup and energy bar charged.
- The boss shoot and spawn smaller enemies:





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