

SENG 330: Project Phase 3

Due on Tuesday, November 17, 2015

George Tzanetakis 12:30am

Greg Bacic, Zac Broitman, Pimchanok Tungsiriratana, Richard Wagner

Contents

Problem 1	3
Problem 2	3
Problem 3	4
Problem 4	4

Problem 1

All our source code and related files relevant to the project are being hosted at github. The url to our github page for our project is <https://github.com/breckwagner/SENG-330>. Our project contains a file INSTALL.md which has instructions for how to build the project, what tools are needed, etc. Our build system is ...

Problem 2

Google Protocol Buffers You also need to implement the ability to serialize and store your objects. For example you should be able to create a couple of instances at run-time and then save that configuration to a file that can then be loaded when you run the program again. Google Protocol buffers are a platform and language independent way of storing structured data. Use Google Protocol Buffers (either version 2 or 3 is fine) for serializing your data. (1pts)

Listing 1: Sample Java With Highlighting

```
1  import java.util.LinkedList;
2  import java.util.ArrayList;
3
4
5  public class Room {
6      ArrayList<GameObject> listOfObjects = new ArrayList<GameObject>();
7      ArrayList<Room> neighboringRooms = new ArrayList<Room>();
8
9      public Room() {
10
11      }
12
13      public void listObjectsInRoom() {
14
15          for (GameObject object : listOfObjects) {
16              System.out.println(object + ", ");
17          }
18      }
19  }
```



Example Figure

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetur adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

Fusce mauris. Vestibulum luctus nibh at lectus. Sed bibendum, nulla a faucibus semper, leo velit ultricies tellus, ac venenatis arcu wisi vel nisl. Vestibulum diam. Aliquam pellentesque, augue quis sagittis posuere, turpis lacus congue quam, in hendrerit risus eros eget felis. Maecenas eget erat in sapien mattis porttitor. Vestibulum porttitor. Nulla facilisi. Sed a turpis eu lacus commodo facilisis. Morbi fringilla, wisi in dignissim interdum, justo lectus sagittis dui, et vehicula libero dui cursus dui. Mauris tempor ligula sed lacus. Duis cursus enim ut augue. Cras ac magna. Cras nulla. Nulla egestas. Curabitur a leo. Quisque egestas wisi eget nunc. Nam feugiat lacus vel est. Curabitur consectetur.

Problem 3

Doxygen Doxygen is software for creating browsable documentation semi-automatically from code and comments the programmer provides. Read the Doxygen tutorial and document thoroughly your code. Show snapshots of the generated documentation. (1pts)

Problem 4

Google Testing Framework Use the Google Testing Framework to develop test cases (at least 4) for your code. (1pts).