

Object Oriented Analysis and Design with Java

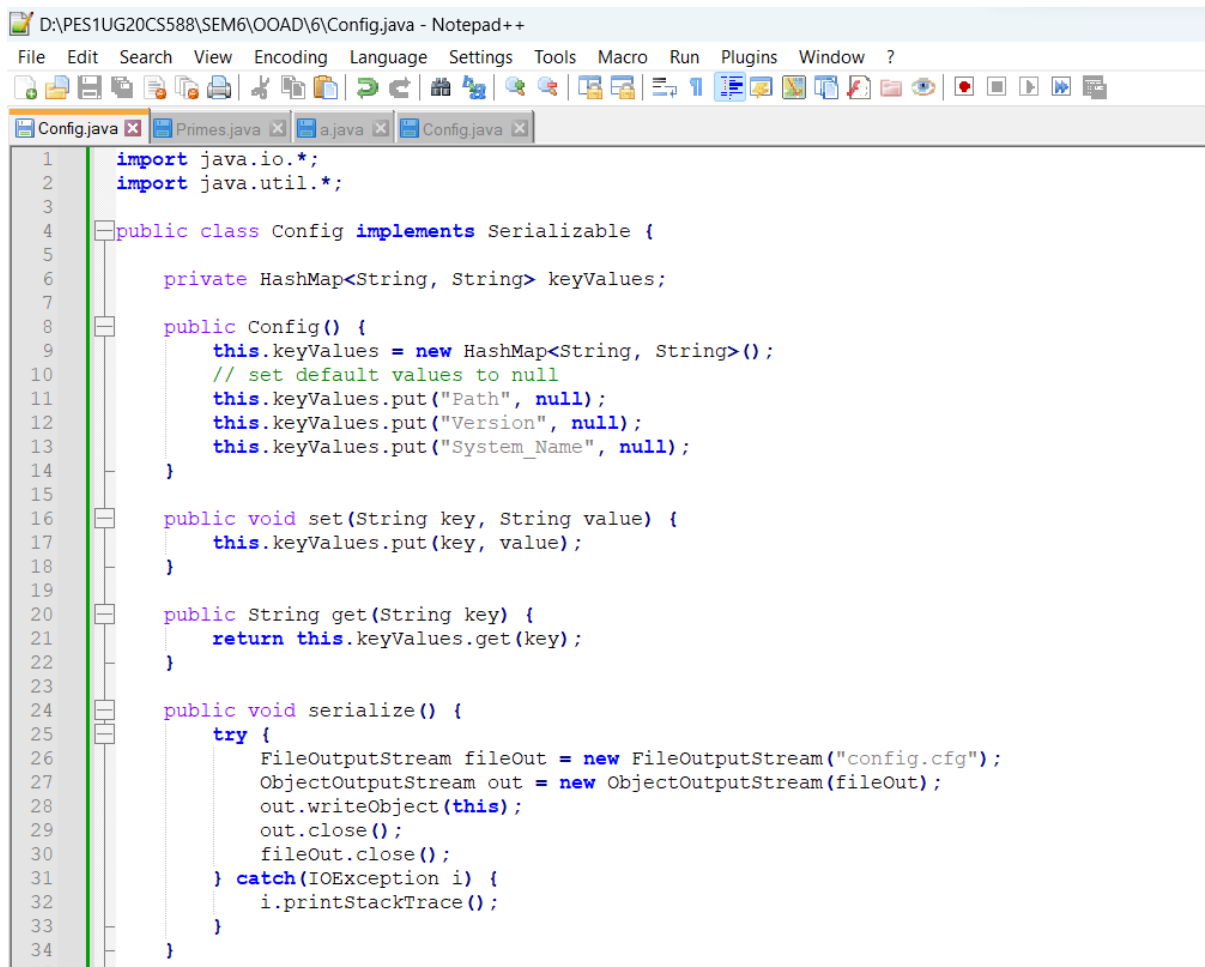
Self-Learning Component - 1

Java Serialization and Deserialization

Code Submission

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Program code:



```
D:\PES1UG20CS588\SEM6\OOAD\6\Config.java - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
Config.java Primes.java a.java Config.java
1  import java.io.*;
2  import java.util.*;
3
4  public class Config implements Serializable {
5
6      private HashMap<String, String> keyValues;
7
8      public Config() {
9          this.keyValues = new HashMap<String, String>();
10         // set default values to null
11         this.keyValues.put("Path", null);
12         this.keyValues.put("Version", null);
13         this.keyValues.put("System_Name", null);
14     }
15
16     public void set(String key, String value) {
17         this.keyValues.put(key, value);
18     }
19
20     public String get(String key) {
21         return this.keyValues.get(key);
22     }
23
24     public void serialize() {
25         try {
26             FileOutputStream fileOut = new FileOutputStream("config.cfg");
27             ObjectOutputStream out = new ObjectOutputStream(fileOut);
28             out.writeObject(this);
29             out.close();
30             fileOut.close();
31         } catch (IOException i) {
32             i.printStackTrace();
33         }
34     }
35 }
```

```

36 public static Config deserialize() {
37     Config config = null;
38     try {
39         FileInputStream fileIn = new FileInputStream("config.cfg");
40         ObjectInputStream in = new ObjectInputStream(fileIn);
41         config = (Config) in.readObject();
42         in.close();
43         fileIn.close();
44     } catch (IOException i) {
45         i.printStackTrace();
46     } catch (ClassNotFoundException c) {
47         c.printStackTrace();
48     }
49     return config;
50 }
51
52 public static void main(String[] args)
53 {
54     Config config = null;
55     File configFile = new File("config.cfg");
56     if (configFile.exists())
57     {
58         config = Config.deserialize();
59     }
60     else
61     {
62         config = new Config();
63     }
64
65     //To update/insert values by application element
66     Scanner scan=new Scanner(System.in);
67     System.out.println("Do you want to update?\n1-Yes 2-No: ");
68     int a=scan.nextInt();
69     if(a==1)
70     {
71         Scanner st=new Scanner(System.in);
72         System.out.println("Enter Path: ");
73         String s=st.nextLine();
74         config.set("Path", s);
75         System.out.println("Enter Version: ");
76         s=st.nextLine();
77         config.set("Version", s);
78         System.out.println("Enter System_Name: ");
79         s=st.nextLine();
80         config.set("System_Name", s);
81         config.serialize();
82         config = Config.deserialize();
83         System.out.println(config.keyValues);
84     }
85     else if(a==2)
86     {
87         // print updated config object
88         config.serialize();
89         config = Config.deserialize();
90         System.out.println(config.keyValues);
91     }
92     else
93     {
94         System.exit(0);
95     }
96 }
97
98 }
99
100

```

Output Screenshots:

```
D:\PES1UG20CS588\SEM6\00AD\6>javac Config.java

D:\PES1UG20CS588\SEM6\00AD\6>java Config
Do you want to update?
1-Yes 2-No:
2
{Path=null, Version=null, System_Name=null}

D:\PES1UG20CS588\SEM6\00AD\6>java Config
Do you want to update?
1-Yes 2-No:
1
Enter Path:
/local/583_588_591
Enter Version:
3.0
Enter System_Name:
Niharika Sahana Shreya
{Path=/local/583_588_591, Version=3.0, System_Name=Niharika Sahana Shreya}

D:\PES1UG20CS588\SEM6\00AD\6>javac Config.java

D:\PES1UG20CS588\SEM6\00AD\6>java Config
Do you want to update?
1-Yes 2-No:
4

D:\PES1UG20CS588\SEM6\00AD\6>|
```