Q2. xUnit test program

<?xml version="1.0" encoding="utf-8"?>

<packages>

<package id="xunit" version="2.2.0" targetFramework="net452" />

<package id="xunit.abstractions" version="2.0.1" targetFramework="net452" />

<package id="xunit.assert" version="2.2.0" targetFramework="net452" />

<package id="xunit.core" version="2.2.0" targetFramework="net452" />

<package id="xunit.extensibility.core" version="2.2.0" targetFramework="net452" />

<package id="xunit.extensibility.execution" version="2.2.0" targetFramework="net452" />

</packages>

using Xunit;

namespace graphs

{

public partial class Form1 : Form

{

public Form1()

{

InitializeComponent();

}

private void button1\_Click(object sender, EventArgs e)

{

PassingTest();

FailingTest();

}

[Fact]

public void PassingTest()

{

Assert.Equal(8, Add(5, 3));

}

[Fact]

public void FailingTest()

{

Assert.Equal(2, Add(3, 4));

}

int Add(int x, int y)

{

return x + y;

}

}

}

TDD code

package CheckGraphConnection;

import org.testng.Assert;

import org.testng.annotations.Test;

public class CheckGraphConnection{

@Test

public Boolean connected(Graph graph)  
{  
 Boolean connected = true;  
 string str\_index = vertexMap.Keys.First();  
 Vertex x\_axis = vertexMap[str\_index];  
 LinkedList<Vertex> Ls = new LinkedList<Vertex>();  
 Dictionary<string, Vertex> Km = vertexMap;  
 foreach(Edge edge in x\_axis.adj)  
{  
 Ls.AddFirst(edge.dest);  
}  
while(Km.Count != 0)  
{  
 find and remove some vertex y in K  
 for each edge (y, z)  
 if (z is not in L)  
 add z to both L and K   
}   
if(Ls.Count < n items)  
{

return false;  
}  
else  
{  
 return true;  
}  
} }

The relationship between code bad smell and faults is that:

* They structures in the code that indicate violation of fundamental design principles
* They negatively impact design quality of the software

Bugs in CVS comment messages include

* cvs command: conflict: removed file was modified by second party.

The message indicates that someone has modified the file that you removed.

To fix the bug  run ‘cvs add file’. If you do not want to remove the file stop here otherwise run ‘cvs remove file’.

* cvs command: authorization failed: server host rejected access.

A response indicating that the server denies authorization for no specific reason

* cvs commit: Executing 'mkmodules'.

Using a CVS 1.8 or latter yet, CVS version is set to prior CVS 1.8

Classification of bugs according to smell

|  |  |
| --- | --- |
| Examples of bags | Classification according to smell |
| cvs [server aborted]: Cannot check out files into the repository itself | Message chains |
| cvs [init aborted]: cannot open CVS/Root: No such file or directory | Speculative generality |
| cvs [command aborted]: cannot start server via rcmd | Middle man |
| dying gasps from server unexpected | Middle man |
| cvs update: could not patch file; will refetch | Speculative generality |