

Bug Report

1.

2022/11/5 下午6:40

[Full Text Bug Listing](#)

Bug 687

Summary:	Function-GetLegalMoves() return a set of duplicate character				
Product:	River-Crossing-Puzzle-Solver				Reporter: tsunychau2-c@my.cityu.edu.hk
Component:	Logic				Assignee: tsunychau2-c@my.cityu.edu.hk
Status:	RESOLVED FIXED				
Severity:	enhancement				
Priority:	Normal				
Version:	v0.1.0				
Hardware:	PC				
OS:	Mac OS				
Time tracking:	Orig.	Est.	Actual Hours	Hours Worked	Hours Left
	0.0	0.0	0.0	0.0	0.0
	%Complete	Gain			
	0	0.0			

tsunychau2-c@my.cityu.edu.hk	2022-11-05 17:57:49 HKT	Description
Steps to Reproduce:		
1. Create a Solver object (Solver s = new Solver();)		
2. Create an ArrayList to store the moves (ArrayList <Move> result_moves = s.getLegalMoves(p, node);)		
3. Print out every moves inside the ArrayList.		
Actual Result:		
[Move [farmer, farmer] from LandA to LandB, Move [farmer, grass] from LandA to LandB, Move [farmer, tiger] from LandA to LandB]		
Expect Result:		
[Move [farmer] from LandA to LandB, Move [farmer, grass] from LandA to LandB, Move [farmer, tiger] from LandA to LandB]		

tsunychau2-c@my.cityu.edu.hk	2022-11-05 18:13:24 HKT	Comment 1
Bug is confirmed		

tsunychau2-c@my.cityu.edu.hk	2022-11-05 18:16:58 HKT	Comment 2
The bug is fixed. There is a mistake on line 91 in the Solver.java. Replace roles with role.		
Modification of code:		
<pre>public ArrayList<Move> getLegalMoves(Puzzle puzzle, Node currState) { ArrayList<Move> moves = new ArrayList<Move>(); RuleSet ruleSet = new RuleSet(puzzle); HashSet<String> travelables = puzzle.getTravelables(); PuzzleState puzzleState = currState.getPuzzleState(); int origin = puzzleState.getBoatPos(); int dest = (origin==0)?1:0;</pre>		

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```
ArrayList<String> roles = puzzleState.getLandByID(origin);

//one traveler
for(String travler : travelables)
{
    Move move = new Move(travler,null, origin, dest);
    Response res = ruleSet.isValidMove(puzzleState,
move);
    if (res.isValid())
        moves.add(move);
}

//two travelers
for(String travler : travelables)
{
    for(String role : roles)
    {
        if(travler.equals(role))
            continue;

        Move move = new Move(travler,role, origin, dest);
        Response res = ruleSet.isValidMove(puzzleState,
move);
        if (res.isValid())
            moves.add(move);
    }
}

return moves;
}
```

2.

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Full Text Bug Listing

Bug 689

Summary:	Garbled characters shown in user interface							
Product:	River-Crossing-Puzzle-Solver			Reporter:	tsunychau2-c@my.cityu.edu.hk			
Component:	UI			Assignee:	tsunychau2-c@my.cityu.edu.hk			
Status:	RESOLVED FIXED							
Severity:	critical							
Priority:	High							
Version:	v0.9.5							
Hardware:	PC							
OS:	Mac OS							
Time tracking:	Orig.	Est.	Actual	Hours Worked	Hours Left	%Complete		
	0.0	0.0	0.0	0.0	0	0.0		

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```
Please use the following command to take action:  
FULL NAME          Choose a role on the boat side and Enter the full  
role name put the role to the boat  
's'                To start the boat  
'e'                To exit the program  
'u'                To undo the action if exist  
'r'                To redo the action if exist  
You command:
```

Expect result:

```
Please enter the number to select the mode: 1-Solver 2-One Player
2
Please enter the number to select the game level: 1-easy 2-hard 3-import custom
rule json file path.
1
```

The puzzle name: Farmer-tiger-sheep-grass
The game rule: tiger eat sheep, but farmer can protect sheep. Sheep eat grass if farmer not around. Only farmer can drive the boat
The game role: [farmer, tiger, sheep, grass]

```
Please use the following command to take action:  
FULL NAME           Choose a role on the boat side and Enter the full  
role name put the role to the boat  
's'                 To start the boat  
'e'                 To exit the program  
'u'                 To undo the action if exist  
'r'                 To redo the action if exist  
You command:
```

tsunyчhau2-c@my.cityu.edu.hk 2022-11-05 18:39:07 HKT

Comment 1

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```
Bug is confirmed.

The reason should be missing "AnsiConsole.systemInstall();".

Modification of code (Main.java inside folder Puzzle.UI):

package Puzzle.UI;
import java.util.*;
import org.fusesource.jansi.AnsiConsole;

public class Main{

    public static void main(String[] args) {
        AnsiConsole.systemInstall();
        GameFlow m;
        GameFlowFactory f = new GameFlowFactory();
        Scanner s = new Scanner(System.in);

        if(args.length > 0) {
            if(args[0].equals("-s")) {
                String jsonPath = args[1];
                m = f.getGameFlow("1", jsonPath);
                m.run();
            }else if(args[0].equals("-p")) {
                String jsonPath = args[1];
                m = f.getGameFlow("2", jsonPath);
                m.run();
            }
        }else {
            ArrayList<String> commandList = new ArrayList<String>();
            commandList.add("1");
            commandList.add("2");

            String mode;
            do{
                System.out.println("Please enter the number to select the
mode: 1-Solver 2-One Player");
                mode = s.next();
            }while(!commandList.contains(mode));

            m = f.getGameFlow(mode);
            m.run();
        }
        s.close();
    }
}
```

3.

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Full Text Bug Listing

Bug 690

Summary:	A non-travelable role can across the river				
Product:	River-Crossing-Puzzle-Solver	Reporter:	tsunychau2-c@my.cityu.edu.hk		
Component:	Logic	Assignee:	tsunychau2-c@my.cityu.edu.hk		
Status:	RESOLVED FIXED				
Severity:	major				
Priority:	High				
Version:	v0.9.5				
Hardware:	PC				
OS:	Mac OS				
Time tracking:	Orig.	Est.	Actual Hours	Hours Worked	Hours Left
					%Complete
	0.0	0.0	0.0	0.0	0.0
					Gain
					0.0

tsunychau2-c@my.cityu.edu.hk	2022-11-05 19:57:10 HKT	Description
Way to Reproduce:		
1. Create a RuleSet object i.e. RuleSet rs = new RuleSet(p);		
2. Create a Move object i.e. Move m = new Move(grass,ship,0,1);		
3. Call the function - isTravelable() inside RuleSet class. i.e. boolean result = rs.isTravelable(m);		
Actual Result:		
result = True		
Expect Result:		
result = False		

tsunychau2-c@my.cityu.edu.hk	2022-11-05 19:57:58 HKT	Comment 1
Bug is confirmed		

tsunychau2-c@my.cityu.edu.hk	2022-11-05 20:00:37 HKT	Comment 2
The problem is fixed now. Since puzzle.getTravelables().containskey(role) in line 62 will always return true. It should be changed to puzzle.getTravelables().contains(role) and using hashset instead of hashmap.		
Modification of code: public boolean isTravelable(Move move) { ArrayList<String> travelers = move.getTravelers(); boolean travelFlag = false; for (String role: travelers) if(puzzle.getTravelables().contains(role) == true) travelFlag = true; return travelFlag; }		

4.

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Full Text Bug Listing

Bug 691

Summary:	Function - isIdentical() return true even though puzzleState is not identical				
Product:	River-Crossing-Puzzle-Solver				Reporter: tsunychau2-c@my.cityu.edu.hk
Component:	Logic				Assignee: tsunychau2-c@my.cityu.edu.hk
Status:	RESOLVED FIXED				
Severity:	enhancement				
Priority:	---				
Version:	v0.9.5				
Hardware:	PC				
OS:	Mac OS				
Time tracking:	Orig.	Est.	Actual Hours	Hours Worked	Hours Left
	0.0	0.0	0.0	0.0	0.0
	%Complete				
	Gain				

tsunychau2-c@my.cityu.edu.hk	2022-11-05 20:16:48 HKT	Description
Way to Reproduce:		
1. Create two unequal PuzzleState		
PuzzleState A:		
ArrayList<String> TlandA = new ArrayList<String>(Arrays.asList("tiger", "grass")); ArrayList<String> TlandB = new ArrayList<String>(Arrays.asList("farmer", "sheep")); PuzzleState tps = new PuzzleState(TlandA,TlandB,1);		
PuzzleState B:		
ArrayList<String> ClandA = new ArrayList<String>(Arrays.asList("tiger", "grass", "cow")); ArrayList<String> ClandB = new ArrayList<String>(Arrays.asList("farmer", "sheep")); PuzzleState cps = new PuzzleState(ClandA,ClandB,1);		
2. Get the return value of function isIdentical() i.e. boolean result = tps.isIdentical(cps);		
Actual Result:		
True		
Expect Result:		
False		

tsunychau2-c@my.cityu.edu.hk	2022-11-05 20:17:07 HKT	Comment 1
Bug is confirmed		

tsunychau2-c@my.cityu.edu.hk	2022-11-05 20:18:50 HKT	Comment 2
The original code inside isIdentical() does not consider the size of two puzzleState.		
public boolean isIdentical(PuzzleState state) { if(!this.landA.containsAll(state.landA)) return false; if(!this.landB.containsAll(state.landB)) return false;		

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```
        return true;
    }
```

Modification of code:

```
public boolean isIdentical(PuzzleState state) {
    if(this.landA.size() != state.landA.size())
        return false;

    if(this.landB.size() != state.landB.size())
        return false;

    if(!this.landA.containsAll(state.landA))
        return false;

    if(!this.landB.containsAll(state.landB))
        return false;

    return true;
}
```

5.

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Full Text Bug Listing

Bug 692

Summary:	Null pointer exception when try to read a json file	Reporter:	tsunychau2-c@my.cityu.edu.hk
Product:	River-Crossing-Puzzle-Solver	Assignee:	tsunychau2-c@my.cityu.edu.hk
Component:	Solver Mode		
Status:	RESOLVED FIXED		
Severity:	critical		
Priority:	High		
Version:	v1.0.0		
Hardware:	PC		
OS:	Mac OS		
Time tracking:	Orig. Est. Actual Hours	Hours Worked	Hours Left
	0.0	0.0	0.0
	0.0	0	0.0

tsunychau2-c@my.cityu.edu.hk 2022-11-05 20:44:51 HKT	Description
Way to Reproduce: 1. To Create a SolverModeController object i.e. SolverModeController smc = new SolverModeController(path); (path is the json file path) 2. Run the function getSolve() i.e. smc.getSolve(); Actual Result: java.lang.NullPointerException at Puzzle.Logic.RuleSet.<init>(RuleSet.java:24) at Puzzle.Solver.getLegalMoves(Solver.java:67) at Puzzle.Solver.solve(Solver.java:30) at TestCase.SolverTest.testHardVersion(SolverTest.java:143) at java.base/jdk.internal.reflect.NativeMethodAccessorImpl.invoke0(Native Method) at java.base/jdk.internal.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62) at java.base/jdk.internal.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43) at java.base/java.lang.reflect.Method.invoke(Method.java:566) at org.junit.platform.commons.util.ReflectionUtils.invokeMethod(ReflectionUtils.java:725) at org.junit.jupiter.engine.execution.MethodInvocation.proceed(MethodInvocation.java:60) at org.junit.jupiter.engine.execution.InvocationInterceptorChain\$ValidatingInvocation.proceed(InvocationInterceptorChain.java:131) at org.junit.jupiter.engine.extension.TimeoutExtension.intercept(TimeoutExtension.java:149) at org.junit.jupiter.engine.extension.TimeoutExtension.interceptTestableMethod(TimeoutExtension.java:140) at org.junit.jupiter.engine.extension.TimeoutExtension.interceptTestMethod(TimeoutExtension.java:84) at org.junit.jupiter.engine.execution.ExecutableInvoker\$ReflectiveInterceptorCall.lambda\$ofVoidMethod\$0(ExecutableInvoker.java:115) at org.junit.jupiter.engine.execution.ExecutableInvoker.lambda\$invoke\$0(ExecutableInvoker.java:105) at org.junit.jupiter.engine.execution.InvocationInterceptorChain\$InterceptedInvocation.proceed(InvocationInterceptorChain.java:106) at org.junit.jupiter.engine.execution.InvocationInterceptorChain.proceed(InvocationInterceptorChain.java:64) at org.junit.jupiter.engine.execution.InvocationInterceptorChain.chainAndInvoke(InvocationInterceptorChain.java:45) at org.junit.jupiter.engine.execution.InvocationInterceptorChain.invoke(InvocationInterceptorChain.java:37) at org.junit.jupiter.engine.execution.ExecutableInvoker.invoke(ExecutableInvoker.java:104) at org.junit.jupiter.engine.execution.ExecutableInvoker.invoke(ExecutableInvoker.java:98) at org.junit.jupiter.engine.descriptor.TestMethodTestDescriptor.lambda\$invokeTestMethod\$7(TestMethodTestDescriptor.java:214) at org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73) at org.junit.jupiter.engine.descriptor.TestMethodTestDescriptor.invokeTestMethod(TestMethodTestDescriptor.java:210) at org.junit.jupiter.engine.descriptor.TestMethodTestDescriptor.execute(TestMethodTestDescriptor.java:135) at org.junit.jupiter.engine.descriptor.TestMethodTestDescriptor.execute(TestMethodTestDescriptor.java:66)	

https://cs3343.cs.cityu.edu.hk/bugzilla/show_bug.cgi?format=multiple&id=692

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Full Text Bug Listing

```
org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$6(NodeTestTask.java:151)
    at org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$8(NodeTestTask.java:141)
    at org.junit.platform.engine.support.hierarchical.Node$around(Node.java:137)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$9(NodeTestTask.java:139)
    at org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.executeRecursively(NodeTestTask.java:138)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.execute(NodeTestTask.java:95)
    at java.base/java.util.ArrayList.forEach(ArrayList.java:1541)
    at org.junit.platform.engine.support.hierarchical.SameThreadHierarchicalTestExecutorService.invokeAll(SameThreadHierarchicalTestExecutorService.java:155)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$6(NodeTestTask.java:155)
    at org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$8(NodeTestTask.java:141)
    at org.junit.platform.engine.support.hierarchical.Node$around(Node.java:137)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$9(NodeTestTask.java:139)
    at org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.executeRecursively(NodeTestTask.java:138)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.execute(NodeTestTask.java:95)
    at java.base/java.util.ArrayList.forEach(ArrayList.java:1541)
    at org.junit.platform.engine.support.hierarchical.SameThreadHierarchicalTestExecutorService.invokeAll(SameThreadHierarchicalTestExecutorService.java:155)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$6(NodeTestTask.java:155)
    at org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$8(NodeTestTask.java:141)
    at org.junit.platform.engine.support.hierarchical.Node$around(Node.java:137)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$9(NodeTestTask.java:139)
    at org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.executeRecursively(NodeTestTask.java:138)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.execute(NodeTestTask.java:95)
    at org.junit.platform.engine.support.hierarchical.SameThreadHierarchicalTestExecutorService.submit(SameThreadHierarchicalTestExecutorService.java:54)
    at org.junit.platform.engine.support.hierarchical.HierarchicalTestExecutor.execute(HierarchicalTestExecutor.java:57)
    at org.junit.platform.engine.support.hierarchical.HierarchicalTestEngine.execute(HierarchicalTestEngine.java:54)
    at org.junit.platform.launcher.core.EngineExecutionOrchestrator.execute(EngineExecutionOrchestrator.java:107)
    at org.junit.platform.launcher.core.EngineExecutionOrchestrator.execute(EngineExecutionOrchestrator.java:88)
    at org.junit.platform.launcher.core.EngineExecutionOrchestrator.lambda$execute$0(EngineExecutionOrchestrator.java:54)
    at org.junit.platform.launcher.core.EngineExecutionOrchestrator.withInterceptedStreams(EngineExecutionOrchestrator.java:67)
    at org.junit.platform.launcher.core.EngineExecutionOrchestrator.execute(EngineExecutionOrchestrator.java:52)
    at org.junit.platform.launcher.core.DefaultLauncher.execute(DefaultLauncher.java:114)
    at org.junit.platform.launcher.core.DefaultLauncher.execute(DefaultLauncher.java:95)
```

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Full Text Bug Listing

```
    at
org.junit.platform.launcher.core.DefaultLauncherSession$DelegatingLauncher.execute(DefaultLauncherSession.java:91)
    at
org.junit.platform.launcher.core.SessionPerRequestLauncher.execute(SessionPerRequestLauncher.java:60)
    at
org.eclipse.jdt.internal.junit5.runner.JUnit5TestReference.run(JUnit5TestReference.java:98)
    at
org.eclipse.jdt.internal.junit.runner.TestExecution.run(TestExecution.java:40)
    at
org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.runTests(RemoteTestRunner.java:529)
    at
org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.runTests(RemoteTestRunner.java:756)
    at
org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.run(RemoteTestRunner.java:452)
    at
org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.main(RemoteTestRunner.java:210)
```

Expect Result:

No Error show

[tsunychau2-c@my.cityu.edu.hk](#) 2022-11-05 20:45:09 HKT

[Comment 1](#)

Bug is confirmed

[tsunychau2-c@my.cityu.edu.hk](#) 2022-11-05 20:46:43 HKT

[Comment 2](#)

The problem has been solved.

Inside the Puzzle.java, the Puzzle constructor miss this line of code
(this.puzzleJSON = puzzleJSON;)

Modified code:

```
public Puzzle(String name, String description, ArrayList<String> roleList,
HashSet<String> travelables, PuzzleState initialState, PuzzleState targetState,
JSONObject puzzleJSON)
{
    this.name = name;
    this.description = description;
    this.roleList = roleList;
    this.travelables = travelables;
    this.initialState = initialState;
    this.targetState = targetState;
    this.puzzleJSON = puzzleJSON;
}
```

6.

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Full Text Bug Listing

Bug 693

Summary:	JSONException cannot be resolved to a type	Reporter:	tsunychau2-c@my.cityu.edu.hk
Product:	River-Crossing-Puzzle-Solver	Assignee:	tsunychau2-c@my.cityu.edu.hk
Component:	Solver Mode		
Status:	RESOLVED FIXED		
Severity:	major		
Priority:	Highest		
Version:	v0.9.5		
Hardware:	PC		
OS:	Mac OS		
Time tracking:	Orig. Est. Actual Hours	Hours Worked	Hours Left
	0.0	0.0	0.0
		0	0.0

tsunychau2-c@my.cityu.edu.hk 2022-11-05 21:02:00 HKT	Description
Way to Reproduce:	
1. Run the Main.java inside the Default folder	
2. Input "1" in the console for choosing solver mode	
3. Input "2" in the console for choosing difficulty	
Actual Result:	
<pre>java.lang.Error: Unresolved compilation problems: The method jsonArray2ArrayList(JSONArray) from the type Puzzle refers to the missing type JSONException The method jsonArray2ArrayList(JSONArray) from the type Puzzle refers to the missing type JSONException The method jsonArray2ArrayList(JSONArray) from the type Puzzle refers to the missing type JSONException The method jsonArray2ArrayList(JSONArray) from the type Puzzle refers to the missing type JSONException The method jsonArray2ArrayList(JSONArray) from the type Puzzle refers to the missing type JSONException The method jsonArray2ArrayList(JSONArray) from the type Puzzle refers to the missing type JSONException The method jsonArray2ArrayList(JSONArray) from the type Puzzle refers to the missing type JSONException The method jsonArray2ArrayList(JSONArray) from the type Puzzle refers to the missing type JSONException JSONException cannot be resolved to a type at Puzzle.Puzzle.<init>(Puzzle.java:49) at TestCase.isTravelableTest.testIsTravelable2(isTravelableTest.java:33) at java.base/jdk.internal.reflect.NativeMethodAccessorImpl.invoke0(Native Method) at java.base/jdk.internal.reflect.NativeMethodAccessorImpl.invoke(NativeMethod AccessorImpl.java:62) at java.base/jdk.internal.reflect.DelegatingMethodAccessorImpl.invoke(Delegating MethodAccessorImpl.java:43) at java.base/java.lang.reflect.Method.invoke(Method.java:566) at org.junit.platform.commons.util.ReflectionUtils.invokeMethod(ReflectionU ils.java:725) at org.junit.jupiter.engine.execution.MethodInvocation.proceed(MethodInvocati on.java:60) at org.junit.jupiter.engine.execution.InvocationInterceptorChain\$ValidatingInv ocation.proceed(InvocationInterceptorChain.java:131) at org.junit.jupiter.engine.extension.TimeoutExtension.intercept(TimeoutExtens ion.java:149) at org.junit.jupiter.engine.extension.TimeoutExtension.interceptTestableMetho d(TimeoutExtension.java:140) at org.junit.jupiter.engine.extension.TimeoutExtension.interceptTestMethod(Timeout Extension.java:84) at org.junit.jupiter.engine.execution.ExecutableInvoker\$ReflectiveInterceptorC all.lambda\$ofVoidMethod\$0(ExecutableInvoker.java:115) at org.junit.jupiter.engine.execution.ExecutableInvoker.lambda\$invoke\$0(Executab leInvoker.java:105) at org.junit.jupiter.engine.execution.InvocationInterceptorChain\$InterceptedInv ocation.proceed(InvocationInterceptorChain.java:106) at org.junit.jupiter.engine.execution.InvocationInterceptorChain.proceed(Invoca tionInterceptorChain.java:64) at org.junit.jupiter.engine.execution.InvocationInterceptorChain.chainAndInvoke(InvocationInterceptorChain.java:45) at org.junit.jupiter.engine.execution.InvocationInterceptorChain.invoke(Invoca tionInterceptorChain.java:37) at org.junit.jupiter.engine.execution.ExecutableInvoker.invoke(ExecutableInvoker .java:104) at org.junit.jupiter.engine.execution.ExecutableInvoker.invoke(ExecutableInvoker .java:98) at org.junit.jupiter.engine.descriptor.TestMethodTestDescriptor.lambda\$invok eTestMethod\$7(TestMethodTestDescriptor.java:214) at</pre>	

https://cs3343.cs.cityu.edu.hk/bugzilla/show_bug.cgi?format=multiple&id=693

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Full Text Bug Listing

```
org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)
    at org.junit.jupiter.engine.descriptor.TestMethodTestDescriptor.invokeTestMethod(TestMethodTestDescriptor.java:210)
    at org.junit.jupiter.engine.descriptor.TestMethodTestDescriptor.execute(TestMethodTestDescriptor.java:135)
    at org.junit.jupiter.engine.descriptor.TestMethodTestDescriptor.execute(TestMethodTestDescriptor.java:66)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$6(NodeTestTask.java:151)
    at org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$8(NodeTestTask.java:141)
    at org.junit.platform.engine.support.hierarchical.Node$around(Node.java:137)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$9(NodeTestTask.java:139)
    at org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.executeRecursively(NodeTestTask.java:138)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.execute(NodeTestTask.java:95)
    at java.base/java.util.ArrayList.forEach(ArrayList.java:1541)
    at org.junit.platform.engine.support.hierarchical.SameThreadHierarchicalTestExecutorService.invokeAll(SameThreadHierarchicalTestExecutorService.java:95)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$6(NodeTestTask.java:155)
    at org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.executeRecursively(NodeTestTask.java:141)
    at org.junit.platform.engine.support.hierarchical.Node$around(Node.java:137)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$9(NodeTestTask.java:139)
    at org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.executeRecursively(NodeTestTask.java:138)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.execute(NodeTestTask.java:95)
    at java.base/java.util.ArrayList.forEach(ArrayList.java:1541)
    at org.junit.platform.engine.support.hierarchical.SameThreadHierarchicalTestExecutorService.invokeAll(SameThreadHierarchicalTestExecutorService.java:95)
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    at org.junit.platform.engine.support.hierarchical.SameThreadHierarchicalTestExecutorService.submit(SameThreadHierarchicalTestExecutorService.java:57)
    at org.junit.platform.engine.support.hierarchical.HierarchicalTestExecutor.execute(HierarchicalTestExecutor.java:57)
    at org.junit.platform.engine.support.hierarchical.HierarchicalTestEngine.execute(HierarchicalTestEngine.java:54)
    at org.junit.platform.launcher.core.EngineExecutionOrchestrator.execute(EngineExecutionOrchestrator.java:107)
    at org.junit.platform.launcher.core.EngineExecutionOrchestrator.execute(EngineExecutionOrchestrator.java:88)
    at
```

2022/11/5 晚上9:04

Full Text Bug Listing

```
org.junit.platform.launcher.core.EngineExecutionOrchestrator.lambda$execute$0(EngineExecutionOrchestrator.java:54)
    at org.junit.platform.launcher.core.EngineExecutionOrchestrator.withInterceptedStreams(EngineExecutionOrchestrator.java:67)
    at org.junit.platform.launcher.core.EngineExecutionOrchestrator.execute(EngineExecutionOrchestrator.java:52)
    at org.junit.platform.launcher.core.DefaultLauncher.execute(DefaultLauncher.java:114)
    at org.junit.platform.launcher.core.DefaultLauncher.execute(DefaultLauncher.java:95)
    at org.junit.platform.launcher.core.DefaultLauncherSession$DelegatingLauncher.execute(DefaultLauncherSession.java:91)
    at org.junit.platform.launcher.core.SessionPerRequestLauncher.execute(SessionPerRequestLauncher.java:60)
    at org.eclipse.jdt.internal.junit5.runner.JUnit5TestReference.run(JUnit5TestReference.java:98)
    at org.eclipse.jdt.internal.junit.runner.TestExecution.run(TestExecution.java:40)
    at org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.runTests(RemoteTestRunner.java:529)
    at org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.runTests(RemoteTestRunner.java:756)
    at org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.run(RemoteTestRunner.java:452)
    at org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.main(RemoteTestRunner.java:210)
```

Expect Result:

No error is shown

[tsuny chau2-c@my.cityu.edu.hk](#) 2022-11-05 21:02:32 HKT

[Comment 1](#)

Bug is confirmed.

[tsuny chau2-c@my.cityu.edu.hk](#) 2022-11-05 21:04:04 HKT

[Comment 2](#)

It seems that we does not include the JSON library.
Import org.json.JSONException in Puzzle.java

Modification of code:

```
package Puzzle;

import java.io.IOException;
import java.nio.file.Files;
import java.nio.file.Path;
import java.util.ArrayList;
import java.util.HashMap;
import java.util.HashSet;

import org.json.JSONArray;
import org.json.JSONException;
import org.json.JSONObject;

import Puzzle.Logic.*;
```

7.

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Full Text Bug Listing

Bug 694

Summary:	Unresolved compilation problem	Reporter:	tsunychau2-c@my.cityu.edu.hk
Product:	River-Crossing-Puzzle-Solver	Assignee:	tsunychau2-c@my.cityu.edu.hk
Component:	Logic		
Status:	RESOLVED FIXED		
Severity:	critical		
Priority:	Normal		
Version:	v1.0.0		
Hardware:	PC		
OS:	Mac OS		
Time tracking:	Orig. Est. Actual Hours Worked Hours Left %Complete Gain		
	0.0 0.0 0.0 0.0 0 0.0		

tsunychau2-c@my.cityu.edu.hk 2022-11-05 21:29:18 HKT	Description
Ways to ReProduce:	
1. Run the Main.java inside the default folder	
2. Input "1" in the console for choosing solver mode	
3. Input "1" in the console for choosing difficulty	
Actual Result:	
<pre>java.lang.Error: Unresolved compilation problem: Type mismatch: cannot convert from capture#1-of ? to Rule at Puzzle.Logic.RuleFactory.createRule(RuleFactory.java:12) at Puzzle.Logic.RuleSet.<init>(RuleSet.java:30) at TestCase.isTravelableTest.testIsTravelable2(isTravelableTest.java:34) at java.base/jdk.internal.reflect.NativeMethodAccessorImpl.invoke0(Native Method) at java.base/jdk.internal.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62) at java.base/jdk.internal.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43) at java.base/java.lang.reflect.Method.invoke(Method.java:566) at org.junit.platform.commons.util.ReflectionUtils.invokeMethod(ReflectionUtils.java:725) at org.junit.jupiter.engine.execution.MethodInvocation.proceed(MethodInvocation.java:60) at org.junit.jupiter.engine.execution.InvocationInterceptorChain\$ValidatingInvocation.proceed(InvocationInterceptorChain.java:131) at org.junit.jupiter.engine.extension.TimeoutExtension.intercept(TimeoutExtension.java:149) at org.junit.jupiter.engine.extension.TimeoutExtension.interceptTestableMethod(TimeoutExtension.java:140) at org.junit.jupiter.engine.extension.TimeoutExtension.interceptTestMethod(TimeoutExtension.java:84) at org.junit.jupiter.engine.execution.ExecutableInvoker\$ReflectiveInterceptorCall.lambda\$ofVoidMethod\$0(ExecutableInvoker.java:115) at org.junit.jupiter.engine.execution.ExecutableInvoker.lambda\$invoke\$0(ExecutableInvoker.java:105) at org.junit.jupiter.engine.execution.InvocationInterceptorChain\$InterceptedInvocation.proceed(InvocationInterceptorChain.java:106) at org.junit.jupiter.engine.execution.InvocationInterceptorChain.proceed(InvocationInterceptorChain.java:64) at org.junit.jupiter.engine.execution.InvocationInterceptorChain.chainAndInvoke(InvocationInterceptorChain.java:45) at org.junit.jupiter.engine.execution.InvocationInterceptorChain.invoke(InvocationInterceptorChain.java:37) at org.junit.jupiter.engine.execution.ExecutableInvoker.invoke(ExecutableInvoker.java:104) at org.junit.jupiter.engine.execution.ExecutableInvoker.invoke(ExecutableInvoker.java:98) at org.junit.jupiter.engine.descriptor.TestMethodTestDescriptor.lambda\$invokeTestMethod\$7(TestMethodTestDescriptor.java:214) at org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73) at org.junit.jupiter.engine.descriptor.TestMethodTestDescriptor.invokeTestMethod(TestMethodTestDescriptor.java:210) at org.junit.jupiter.engine.descriptor.TestMethodTestDescriptor.execute(TestMethodTestDescriptor.java:135) at org.junit.jupiter.engine.descriptor.TestMethodTestDescriptor.execute(TestMethodTestDescriptor.java:66)</pre>	
https://cs3343.cs.cityu.edu.hk/bugzilla/show_bug.cgi?format=multiple&id=694	

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Full Text Bug Listing

```
at  
org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$6(NodeTestTask.java:151)  
at  
org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)  
at  
org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$8(NodeTestTask.java:141)  
at  
org.junit.platform.engine.support.hierarchical.Node$around(Node.java:137)  
at  
org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$9(NodeTestTask.java:139)  
at  
org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)  
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org.junit.platform.engine.support.hierarchical.NodeTestTask.executeRecursively(NodeTestTask.java:138)  
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org.junit.platform.engine.support.hierarchical.NodeTestTask.execute(NodeTestTask.java:95)  
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org.junit.platform.engine.support.hierarchical.SameThreadHierarchicalTestExecutorService.invokeAll(SameThreadHierarchicalTestExecutorService.java:155)  
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org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)  
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org.junit.platform.engine.support.hierarchical.NodeTestTask.executeRecursively(NodeTestTask.java:138)  
at  
org.junit.platform.engine.support.hierarchical.NodeTestTask.execute(NodeTestTask.java:95)  
at java.base/java.util.ArrayList.forEach(ArrayList.java:1541)  
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org.junit.platform.engine.support.hierarchical.SameThreadHierarchicalTestExecutorService.invokeAll(SameThreadHierarchicalTestExecutorService.java:155)  
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at  
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at  
org.junit.platform.engine.support.hierarchical.Node$around(Node.java:137)  
at  
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at  
org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)  
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at  
org.junit.platform.engine.support.hierarchical.NodeTestTask.execute(NodeTestTask.java:95)  
at  
org.junit.platform.engine.support.hierarchical.SameThreadHierarchicalTestExecutorService.submit(SameThreadHierarchicalTestExecutorService.java:57)  
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org.junit.platform.engine.support.hierarchical.HierarchicalTestExecutor.execute(HierarchicalTestExecutor.java:57)  
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org.junit.platform.engine.support.hierarchical.HierarchicalTestEngine.execute(HierarchicalTestEngine.java:54)  
at  
org.junit.platform.launcher.core.EngineExecutionOrchestrator.execute(EngineExecutionOrchestrator.java:107)  
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at  
org.junit.platform.launcher.core.EngineExecutionOrchestrator.lambda$execute$0(EngineExecutionOrchestrator.java:54)  
at  
org.junit.platform.launcher.core.EngineExecutionOrchestrator.withInterceptedStreams(EngineExecutionOrchestrator.java:67)  
at  
org.junit.platform.launcher.core.EngineExecutionOrchestrator.execute(EngineExecutionOrchestrator.java:52)  
at  
org.junit.platform.launcher.core.DefaultLauncher.execute(DefaultLauncher.java:114)
```

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Full Text Bug Listing

```
    at
org.junit.platform.launcher.core.DefaultLauncher.execute(DefaultLauncher.java:95)
    at
org.junit.platform.launcher.core.DefaultLauncherSession$DelegatingLauncher.execute(DefaultLauncherSession.java:91)
    at
org.junit.platform.launcher.core.SessionPerRequestLauncher.execute(SessionPerRequestLauncher.java:60)
    at
org.eclipse.jdt.internal.junit5.runner.JUnit5TestReference.run(JUnit5TestReference.java:98)
    at
org.eclipse.jdt.internal.junit.runner.TestExecution.run(TestExecution.java:40)
    at
org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.runTests(RemoteTestRunner.java:529)
    at
org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.runTests(RemoteTestRunner.java:756)
    at
org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.run(RemoteTestRunner.java:452)
    at
org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.main(RemoteTestRunner.java:210)
```

Expect Result:

No error shown

[tsunychau2-c@my.cityu.edu.hk](#) 2022-11-05 21:29:50 HKT

[Comment 1](#)

Bug is confirmed

[tsunychau2-c@my.cityu.edu.hk](#) 2022-11-05 21:31:17 HKT

[Comment 2](#)

The problem is fixed now. The error exist since missing of (Rule) type on line 12 in RuleFactory.java.

Modification of code:

```
package Puzzle.Logic;
import org.json.JSONException;
import org.json.JSONObject;
public class RuleFactory {
    public Rule createRule(JSONObject json) throws JSONException,
InstantiationException, IllegalAccessException, ClassNotFoundException {
        if(json.length() == 0) //empty json object
            return null;
        String ruleType = json.getString("RuleType");
        Rule rule = (Rule)
Class.forName("Puzzle.Logic."+ruleType+"Rule").newInstance();
        rule.parseJSON(json);
        return rule;
    }
}
```

8.

2022/11/5 晚上9:41

Full Text Bug Listing

Bug 695

Summary:	Caught Index Out of Bounds Exception in ConflictRule.java				
Product:	River-Crossing-Puzzle-Solver	Reporter:	tsunychau2-c@my.cityu.edu.hk		
Component:	Logic	Assignee:	tsunychau2-c@my.cityu.edu.hk		
Status:	RESOLVED FIXED				
Severity:	major				
Priority:	High				
Version:	v1.0.0				
Hardware:	PC				
OS:	Mac OS				
Time tracking:	Orig. Est. Actual Hours	Hours Worked	Hours Left	%Complete	Gain
	0.0	0.0	0.0	0	0.0

tsunychau2-c@my.cityu.edu.hk	2022-11-05 21:39:34 HKT	Description
way to Reproduce:		
1. Create a new puzzle object i.e. Puzzle p = new Puzzle("json/noViolation.json");		
2. Create a new RuleSet object i.e. RuleSet ruleSet = new RuleSet(p);		
3. Create a new Response object i.e. Response res = ruleSet.isValidMove(p.getInitialState(), new Move("farmer", "sheep", 0, 1));		
Actual Result: java.lang.IndexOutOfBoundsException: Index 1 out of bounds for length 1 at java.base/jdk.internal.util.Preconditions.outOfBounds(Preconditions.java:64) at java.base/jdk.internal.util.Preconditions.outOfBoundsCheckIndex(Preconditions.java:70) at java.base/jdk.internal.util.Preconditions.checkIndex(Preconditions.java:248) at java.base/java.util.Objects.checkIndex(Objects.java:372) at java.base/java.util.ArrayList.get(ArrayList.java:459) at Puzzle.Logic.ConflictRule.isValid(ConflictRule.java:16) at Puzzle.Logic.RuleSet.isValidMove(RuleSet.java:47) at TestCase.IsValidMoveTest.testIsValidMove0(IValidMoveTest.java:118) at java.base/jdk.internal.reflect.NativeMethodAccessorImpl.invoke0(Native Method) at java.base/jdk.internal.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62) at java.base/jdk.internal.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43) at java.base/java.lang.reflect.Method.invoke(Method.java:566) at org.junit.platform.commons.util.ReflectionUtils.invokeMethod(ReflectionUtils.java:725) at org.junit.jupiter.engine.execution.MethodInvocation.proceed(MethodInvocation.java:60) at org.junit.jupiter.engine.execution.InvocationInterceptorChain\$ValidatingInvocation.proceed(InvocationInterceptorChain.java:131) at org.junit.jupiter.engine.extension.TimeoutExtension.intercept(TimeoutExtension.java:149) at org.junit.jupiter.engine.extension.TimeoutExtension.interceptTestableMethod(TimeoutExtension.java:140) at org.junit.jupiter.engine.extension.TimeoutExtension.interceptTestMethod(TimeoutExtension.java:84) at org.junit.jupiter.engine.execution.ExecutableInvoker\$ReflectiveInterceptorCall.lambda\$ofVoidMethod\$0(ExecutableInvoker.java:115) at org.junit.jupiter.engine.execution.ExecutableInvoker.lambda\$invoke\$0(ExecutableInvoker.java:105) at org.junit.jupiter.engine.execution.InvocationInterceptorChain\$InterceptedInvocation.proceed(InvocationInterceptorChain.java:106) at org.junit.jupiter.engine.execution.InvocationInterceptorChain.proceed(InvocationInterceptorChain.java:64) at org.junit.jupiter.engine.execution.InvocationInterceptorChain.chainAndInvoke(InvocationInterceptorChain.java:45) at org.junit.jupiter.engine.execution.InvocationInterceptorChain.invoke(InvocationInterceptorChain.java:37) at org.junit.jupiter.engine.execution.ExecutableInvoker.invoke(ExecutableInvoker.java:104) at org.junit.jupiter.engine.execution.ExecutableInvoker.invoke(ExecutableInvoker.java:98) at org.junit.jupiter.engine.descriptor.TestMethodTestDescriptor.lambda\$invokeTestMethod\$7(TestMethodTestDescriptor.java:214) at		

https://cs3343.cs.cityu.edu.hk/bugzilla/show_bug.cgi?format=multiple&id=695

1/3

2022/11/5 晚上9:41

Full Text Bug Listing

```

org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)
    at org.junit.jupiter.engine.descriptor.TestMethodTestDescriptor.invokeTestMethod(TestMethodTestDescriptor.java:210)
    at org.junit.jupiter.engine.descriptor.TestMethodTestDescriptor.execute(TestMethodTestDescriptor.java:135)
    at org.junit.jupiter.engine.descriptor.TestMethodTestDescriptor.execute(TestMethodTestDescriptor.java:66)
    at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$6(NodeTestTask.java:151)
    at org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)
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    at org.junit.platform.engine.support.hierarchical.Node$around(Node.java:137)
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    at org.junit.platform.engine.support.hierarchical.NodeTestTask.executeRecursively(NodeTestTask.java:138)
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        at java.base/java.util.ArrayList.forEach(ArrayList.java:1541)
        at org.junit.platform.engine.support.hierarchical.SameThreadHierarchicalTestExecutorService.invokeAll(SameThreadHierarchicalTestExecutorService.java:95)
        at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$6(NodeTestTask.java:155)
        at org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)
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        at org.junit.platform.engine.support.hierarchical.Node$around(Node.java:137)
        at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$9(NodeTestTask.java:139)
        at org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)
        at org.junit.platform.engine.support.hierarchical.NodeTestTask.executeRecursively(NodeTestTask.java:138)
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        at org.junit.platform.engine.support.hierarchical.SameThreadHierarchicalTestExecutorService.invokeAll(SameThreadHierarchicalTestExecutorService.java:95)
        at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$6(NodeTestTask.java:155)
        at org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)
        at org.junit.platform.engine.support.hierarchical.NodeTestTask.executeRecursively(NodeTestTask.java:141)
        at org.junit.platform.engine.support.hierarchical.Node$around(Node.java:137)
        at org.junit.platform.engine.support.hierarchical.NodeTestTask.lambda$executeRecursively$9(NodeTestTask.java:139)
        at org.junit.platform.engine.support.hierarchical.ThrowableCollector.execute(ThrowableCollector.java:73)
        at org.junit.platform.engine.support.hierarchical.NodeTestTask.executeRecursively(NodeTestTask.java:138)
        at org.junit.platform.engine.support.hierarchical.NodeTestTask.execute(NodeTestTask.java:95)
        at org.junit.platform.engine.support.hierarchical.SameThreadHierarchicalTestExecutorService.submit(SameThreadHierarchicalTestExecutorService.java:57)
        at org.junit.platform.engine.support.hierarchical.HierarchicalTestExecutor.execute(HierarchicalTestExecutor.java:54)
        at org.junit.platform.engine.support.hierarchical.HierarchicalTestEngine.execute(HierarchicalTestEngine.java:54)
        at org.junit.platform.launcher.core.EngineExecutionOrchestrator.execute(EngineExecutionOrchestrator.java:107)
        at org.junit.platform.launcher.core.EngineExecutionOrchestrator.execute(EngineExecutionOrchestrator.java:88)
    at

```

2022/11/5 晚上9:41

Full Text Bug Listing

```
org.junit.platform.launcher.core.EngineExecutionOrchestrator.lambda$execute$0(EngineExecutionOrchestrator.java:54)
    at org.junit.platform.launcher.core.EngineExecutionOrchestrator.withInterceptedStreams(EngineExecutionOrchestrator.java:67)
    at org.junit.platform.launcher.core.EngineExecutionOrchestrator.execute(EngineExecutionOrchestrator.java:52)
    at org.junit.platform.launcher.core.DefaultLauncher.execute(DefaultLauncher.java:114)
    at org.junit.platform.launcher.core.DefaultLauncher.execute(DefaultLauncher.java:95)
    at org.junit.platform.launcher.core.DefaultLauncherSession$DelegatingLauncher.execute(DefaultLauncherSession.java:91)
    at org.junit.platform.launcher.core.SessionPerRequestLauncher.execute(SessionPerRequestLauncher.java:60)
    at org.eclipse.jdt.internal.junit5.runner.JUnit5TestReference.run(JUnit5TestReference.java:98)
    at org.eclipse.jdt.internal.junit.runner.TestExecution.run(TestExecution.java:40)
    at org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.runTests(RemoteTestRunner.java:529)
    at org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.runTests(RemoteTestRunner.java:756)
    at org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.run(RemoteTestRunner.java:452)
    at org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.main(RemoteTestRunner.java:210)
```

Expect Result:

No error is shown

[tsunychau2-c@my.cityu.edu.hk](#) 2022-11-05 21:39:48 HKT

[Comment 1](#)

Bug is confirmed

[tsunychau2-c@my.cityu.edu.hk](#) 2022-11-05 21:41:23 HKT

[Comment 2](#)

Inside ConflictRule.java, on line 16, It should be "String roleA =
getGroupA().get(0);" instead of "String roleA = getGroupA().get(1);"

Modification of code:

```
public class ConflictRule extends Rule{
    @Override
    public Response isValid(PuzzleState state) {
        String roleA = getGroupA().get(0);

        //check exception first
        if(exception != null)
            if(exception.isValid(state).isValid() == true)
                return new Response(true, "");

        for(String roleB : getGroupB())
        {
            for(int i=0;i<2;i++)
            {
                if(state.getHashLandByID(i).contains(roleB))

if(state.getHashLandByID(i).contains(roleA))
                    return new Response(false, "Conflict rule violated (" + roleA + ", " + roleB + ")");
            }
        }
    }
}
```

9.

2022/11/5 晚上9:56

Full Text Bug Listing

Bug 696

Summary:	Unhandled exception type IOException when running Main.java						
Product:	River-Crossing-Puzzle-Solver		Reporter:	tsunychau2-c@my.cityu.edu.hk			
Component:	Solver Mode		Assignee:	tsunychau2-c@my.cityu.edu.hk			
Status:	RESOLVED FIXED						
Severity:	major						
Priority:	Normal						
Version:	v0.9.5						
Hardware:	PC						
OS:	Mac OS						
Time tracking:	Orig.	Est.	Actual Hours	Hours Worked	Hours Left		
	0.0	0.0	0.0	0.0	0.0		
	%Complete						
	Gain						

tsunychau2-c@my.cityu.edu.hk	2022-11-05 21:55:01 HKT	Description
Way to Reproduce:		
1. Run Main.java inside the folder Default		
2. Input "1" in the console for choosing Solver mode		
3. Input "1" in the console for choosing game level		
Actual Result:		
Exception in thread "main" java.lang.Error: Unresolved compilation problem: Unhandled exception type IOException		
at Puzzle.Puzzle.<init>(Puzzle.java:64) at Puzzle.UI.SolverModeController.<init>(SolverModeController.java:14) at Puzzle.UI.SolverMode.<init>(SolverMode.java:31) at Puzzle.UI.GameFlowFactory.getGameFlow(GameFlowFactory.java:6) at Puzzle.UI.Main.main(Main.java:34) at Default.Main.main(Default.java:5)		
Expect Result:		
No error is shown		

tsunychau2-c@my.cityu.edu.hk	2022-11-05 21:55:14 HKT	Comment 1
Bug is confirmed		

tsunychau2-c@my.cityu.edu.hk	2022-11-05 21:56:40 HKT	Comment 2
Inside Puzzle.java, Puzzle constructor should surround with "try and catch" to prevent the error shown.		
Modification of code:		
public Puzzle(String path) { JSONObject jsonObj = null; try { Path file = Path.of(path); String obj = Files.readString(file); jsonObj = new JSONObject(obj); } }		

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```
// store the JSON obj, for other classes to access
this.puzzleJSON = jsonObj;

name = (String)jsonObj.get("PuzzleName");
description = (String) jsonObj.get("Description");
roleList = jsonArray2arrayList((JSONArray)
jsonObj.get("Roles"));

JSONArray jsonArray;
jsonArray = (JSONArray) jsonObj.get("InitialState");
initialState = new
PuzzleState(jsonArray2arrayList((JSONArray) jsonArray.get(0)),
                jsonArray2arrayList((JSONArray)
jsonArray.get(1)), 0);
                jsonArray = (JSONArray) jsonObj.get("TargetState");
targetState = new
PuzzleState(jsonArray2arrayList((JSONArray) jsonArray.get(0)),
                jsonArray2arrayList((JSONArray)
jsonArray.get(1)), 0);

travelables = new HashSet<String>
(jsonArray2arrayList((JSONArray) jsonObj.get("Travelable")));
} catch (Exception e) {
    System.out.println(e.getMessage());
}

}
```

10.

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Full Text Bug Listing

Bug 697

Summary:	Cannot infer type arguments for HashMap<>				
Product:	River-Crossing-Puzzle-Solver	Reporter:	tsunychau2-c@my.cityu.edu.hk		
Component:	Solver Mode	Assignee:	tsunychau2-c@my.cityu.edu.hk		
Status:	RESOLVED FIXED				
Severity:	critical				
Priority:	Normal				
Version:	v0.1.0				
Hardware:	PC				
OS:	Mac OS				
Time tracking:	Orig. Est. Actual Hours	Hours Worked	Hours Left	%Complete	Gain
	0.0	0.0	0.0	0	0.0

tsunychau2-c@my.cityu.edu.hk	2022-11-05 22:09:41 HKT	Description
Way to Reproduce:		
1. Run Main.java inside the folder Default		
2. Input "1" in the console for choosing solver mode		
3. Input "1" in the console for choosing game level		
Actual result:		
Exception in thread "main" java.lang.Error: Unresolved compilation problems: Cannot infer type arguments for HashMap<> Cannot infer type arguments for HashMap<> at Puzzle.PuzzleState.<init>(PuzzleState.java:24) at Puzzle.Puzzle.<init>(Puzzle.java:54) at Puzzle.UI.SolverModeController.<init>(SolverModeController.java:14) at Puzzle.UI.SolverMode.<init>(SolverMode.java:31) at Puzzle.UI.GameFlowFactory.getGameFlow(GameFlowFactory.java:6) at Puzzle.UI.Main.main(Main.java:34) at Default.Main.main(Main.java:5)		
Expect Result:		
No error shown		

tsunychau2-c@my.cityu.edu.hk	2022-11-05 22:09:55 HKT	Comment 1
Bug is confirmed		

tsunychau2-c@my.cityu.edu.hk	2022-11-05 22:11:19 HKT	Comment 2
In PuzzleState.java, on line 24 and 25, HashSet should be used instead of HashMap. Modification of code: public PuzzleState(ArrayList<String> landA, ArrayList<String> landB, int boatPos) { this.landA = landA; this.landB = landB; this.boatPos = boatPos; hashLandA = new HashSet<>(landA);		

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Full Text Bug Listing

```
hashLandB = new HashSet<>(landB);
```

```
}
```

11.

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Full Text Bug Listing

Bug 698

Summary:	Redo command cannot performed after an undo command				
Product:	River-Crossing-Puzzle-Solver				Reporter: tsunychau2-c@my.cityu.edu.hk
Component:	UI				Assignee: tsunychau2-c@my.cityu.edu.hk
Status:	RESOLVED FIXED				
Severity:	normal				
Priority:	High				
Version:	v0.1.0				
Hardware:	PC				
OS:	Mac OS				
Time tracking:	Orig.	Est.	Actual Hours	Hours Worked	Hours Left
	0.0	0.0	0.0	0.0	0.0
	%Complete				
	Gain				

tsunychau2-c@my.cityu.edu.hk	2022-11-05 22:33:10 HKT	Description
Way to Reproduce:		
1. Run Main.java inside folder Default		
2. Input "2" on the console for choosing Player Mode		
3. Input "1" for choosing game level		
4. Input "farmer" on the console		
5. Input "sheep" on the console		
6. Input "s" on the console to start the boat		
7. Input "u" on the console to undo previous step		
8. Input "r" on the console to undo previous step		
Actual Result:		
Please use the following command to take action:		
FULL NAME Choose a role on the boat side and Enter the full		
role name put the role to the boat		
's'	To start the boat	
'e'	To exit the program	
'u'	To undo the action if exist	
'r'	To redo the action if exist	
You command: r		
Sorry nothing can be redo!		
= =		
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Full Text Bug Listing

```
Please use the following command to take action:  
FULL NAME           Choose a role on the boat side and Enter the full  
role name put the role to the boat  
's'                 To start the boat  
'e'                 To exit the program  
'u'                 To undo the action if exist  
'r'                 To redo the action if exist  
You command:
```

Expect Result:

You command: T

farmer sheep

```
-----  
Please use the following command to take action:  
FULL NAME           Choose a role on the boat side and Enter the full  
role name put the role to the boat  
's'                 To start the boat  
'e'                 To exit the program  
'u'                 To undo the action if exist  
'r'                 To redo the action if exist  
You command:
```

tsunychau2-c@my.cityu.edu.hk 2022-11-05 22:33:30 HKT

Comment 1

Bug is confirmed

https://cs3343.cs.cityu.edu.hk/bugzilla/show_bug.cgi?format=multiple&id=698

2/3

tsuny chau2-c@my.cityu.edu.hk 2022-11-05 22:35:39 HKT **Comment 2**

In RedoHandlerCommand.java, on line 23, gameState.undoRedoPointer should be < gameState.history.size().

Modification of code:

```
public boolean canRedo() {  
    if(gameState.undoRedoPointer < gameState.history.size() &&  
    gameState.round.getTravelers().size() == 0 && gameState.history.size() > 1)  
        return true;  
    else  
        return false;  
}
```