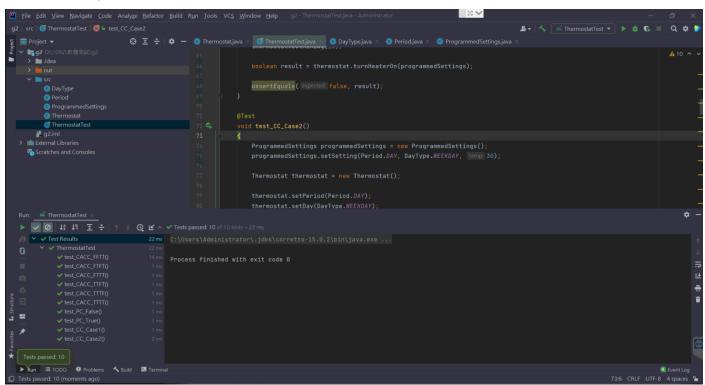
## **Groupwork 2**

Please design tests to satisfy PC (predicate coverage), CC(clause coverage), and CACC(correlated active clause coverage) for Themostat class and your proposed project (if TDD with no implementation, design tests on the requirements or specifications)

ThemostatTest.java 執行結果:



1. Complete and run the tests to satisfy PC for the Thermostat class and your project.

#### Thermostat

THETHIOStat		T	T	1
Predicate	curTemp < dTemp -	override	curTemp < overTemp -	timeSinceLastRun
	threshold Diff		thresholdDiff	> minLag
	Α	В	С	D
True	Т	Т	Т	Т
	curTemp = 20	override = True	curTemp = 20	timeSinceLastRun
	dTemp = 30		overTemp = 30	= 20
	threshold Diff = 5		thresholdDiff = 5	minLag = 10
False	F	Т	F	F
	curTemp = 40	override = True	curTemp = 40	timeSinceLastRun
	dTemp = 30		overTemp = 30	= 5
	thresholdDiff = 5		thresholdDiff = 5	minLag = 10

#### **Predicate True:**

curTemp = 20

dTemp = 30

thresholdDiff = 5

override = True

```
overTemp = 30

timeSinceLastRun = 20

minLag = 10

Predicate False:

curTemp = 40

dTemp = 35

thresholdDiff = 5

override = True

overTemp = 40

timeSinceLastRun = 5
```

### muParser.cpp

minLag = 10

Predicate	iEnd == (stringstream_	mu::TypeInfo <mu::value_< th=""><th>fEpsilon == 0</th></mu::value_<>	fEpsilon == 0
	type::pos_type) - 1	type>::IsInteger()	
	Α	В	С
True	Т	Т	Т
	iEnd = 2	mu::TypeInfo <mu::value_< td=""><td>fEpsilon = 0</td></mu::value_<>	fEpsilon = 0
	stringstream_type::pos_ty	type>::IsInteger() = True	
	pe = 1		
False	F	F	F
	iEnd = 3	mu::TypeInfo <mu::value_< td=""><td>fEpsilon = 1</td></mu::value_<>	fEpsilon = 1
	stringstream_type::pos_ty	type>::IsInteger() = False	
	pe = 1		

#### **Predicate True:**

iEnd = 2

stringstream\_type::pos\_type = 1

mu::TypeInfo<mu::value\_ type>::IsInteger() = True

fEpsilon = 0

#### Predicate False:

iEnd = 3

stringstream\_type::pos\_type = 1

mu::TypeInfo<mu::value\_ type>::IsInteger() = False

fEpsilon = 1

- 2. Complete and run the tests to satisfy CC for the Thermostat class and your project.
  - Thermostat

Predicate	curTemp < dTemp -	override	curTemp < overTemp -	timeSinceLastRun
	thresholdDiff		thresholdDiff	> minLag

	Α	В	С	D
Case1	Т	F	Т	F
	curTemp = 20	override = False	curTemp = 20	timeSinceLastRun
	dTemp = 30		overTemp = 30	= 5
	thresholdDiff = 5		thresholdDiff = 5	minLag = 10
Case2	F	Т	F	Т
	curTemp = 40	override = True	curTemp = 40	timeSinceLastRun
	dTemp = 30		overTemp = 30	= 20
	thresholdDiff = 5		thresholdDiff = 5	minLag = 10

#### Case1:

curTemp = 20

dTemp = 30

thresholdDiff = 5

override = False

overTemp = 30

timeSinceLastRun = 5

minLag = 10

### Case2:

curTemp = 40

dTemp = 30

thresholdDiff = 5

override = True

overTemp = 40

timeSinceLastRun = 20

minLag = 10

### muParser.cpp

Predicate	iEnd == (stringstream_	mu::TypeInfo <mu::value_< th=""><th>fEpsilon == 0</th></mu::value_<>	fEpsilon == 0
	type::pos_type) - 1	type>::IsInteger()	
	A	В	С
True	Т	F	Т
	iEnd = 2	mu::TypeInfo <mu::value_< td=""><td>fEpsilon = 0</td></mu::value_<>	fEpsilon = 0
	stringstream_type::pos_ty	type>::IsInteger() = False	
	pe = 1		
False	F	Т	F
	iEnd = 3	mu::TypeInfo <mu::value_< td=""><td>fEpsilon = 1</td></mu::value_<>	fEpsilon = 1
	stringstream_type::pos_ty	type>::IsInteger() = True	
	pe = 1		

### Case1:

iEnd = 2

stringstream\_type::pos\_type = 1

```
mu::TypeInfo<mu::value_ type>::IsInteger() = False
fEpsilon = 0

Case2:
iEnd = 3
stringstream_type::pos_type = 1
mu::TypeInfo<mu::value_ type>::IsInteger() = True
```

3. Complete and run the tests to satisfy CACC for the Thermostat class and your project.

### Thermostat

fEpsilon = 1

Predicate	curTemp < dTemp -	override	curTemp < overTemp -	timeSinceLastRun
	thresholdDiff		thresholdDiff	> minLag
	Α	В	С	D
Pa	Т	Т	F	Т
	Т	F	Т	Т
	Т	F	F	Т
	F	F	Т	Т
	F	Т	F	Т
	F	F	F	Т
Pb	F	Т	T	Т
	F	F	Т	Т
Pc	F	Т	T	Т
	F	Т	F	Т
Pd	Т	Т	T	Т
	Т	Т	F	Т
	Т	F	Т	Т
	Т	F	F	Т
	F	Т	Т	Т
	Т	Т	Т	F
	Т	Т	F	F
	Т	F	Т	F
	Т	F	F	F
	F	Т	Т	F

選擇上述紅線的集合,2重覆,共6筆測資。

Pa Т Τ F Τ curTemp = 20 dTemp = 30thresholdDiff = 5 override = True overTemp = 40 timeSinceLastRun = 20 minLag = 10Pa Т F Т curTemp = 40 dTemp = 30thresholdDiff = 5 override = True overTemp = 40 timeSinceLastRun = 20 minLag = 10 Pb F T T Т curTemp = 40 dTemp = 30thresholdDiff = 5 override = True overTemp = 20 timeSinceLastRun = 20 minLag = 10Pb F T Т curTemp = 40dTemp = 30thresholdDiff = 5 override = False overTemp = 20 timeSinceLastRun = 20 minLag = 10Рс F Т Т Т curTemp = 40 dTemp = 30thresholdDiff = 5 override = True overTemp = 20

timeSinceLastRun = 20 minLag = 10

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PC I	F			
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curTemp = 40

dTemp = 30

thresholdDiff = 5

override = True

overTemp = 20

timeSinceLastRun = 20

minLag = 10

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curTemp = 20

dTemp = 30

thresholdDiff = 5

override = True

overTemp = 20

timeSinceLastRun = 20

minLag = 10

Pd	T	T	Т	F	
----	---	---	---	---	--

curTemp = 20

dTemp = 30

thresholdDiff = 5

override = True

overTemp = 20

timeSinceLastRun = 5

minLag = 10

### muParser.cpp

	iEnd == (stringstream_	mu::TypeInfo <mu::value_< th=""><th>fEpsilon == 0</th></mu::value_<>	fEpsilon == 0
	type::pos_type) - 1	type>::IsInteger()	
	A	В	С
Pa	Т	Т	Т
	F	Т	Т
Pb	Т	Т	Т
	Т	F	Т
Рс	Т	Т	Т
	Т	Т	F

# (T,T,T)皆重覆。共4筆測資。

fEpsilon = 1

Pa,Pb,Pc	T	T	T			
iEnd = 2	iEnd = 2					
stringstrear	n_type::pos_type = 3					
mu::TypeIn	fo <mu::value_ type="">::IsIntege</mu::value_>	er() = True				
fEpsilon = 0						
Pa	F	T	Т			
iEnd = 3						
stringstrear	n_type::pos_type = 3					
mu::TypeIn	fo <mu::value_ type="">::IsIntege</mu::value_>	er() = True				
fEpsilon = 0						
Pa	T	F	Т			
iEnd = 3						
stringstrear	n_type::pos_type = 3					
mu::TypeIn	fo <mu::value_ type="">::IsIntege</mu::value_>	er() = False				
fEpsilon = 0	fEpsilon = 0					
Pa	T	T	F			
iEnd = 3						
stringstrear	n_type::pos_type = 3					
mu::TypeIn	mu::TypeInfo <mu::value_ type="">::IsInteger() = False</mu::value_>					