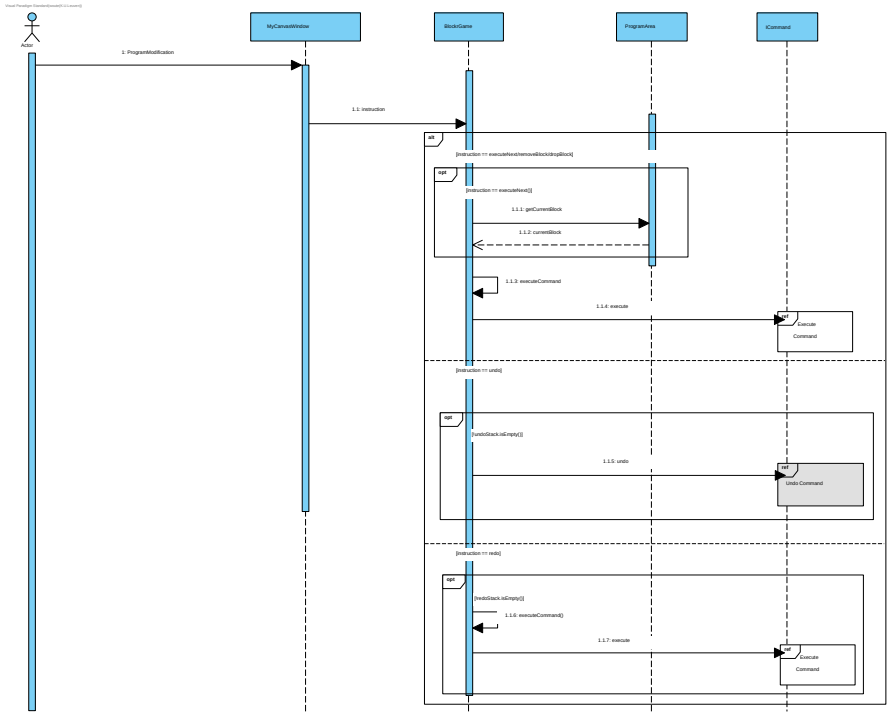
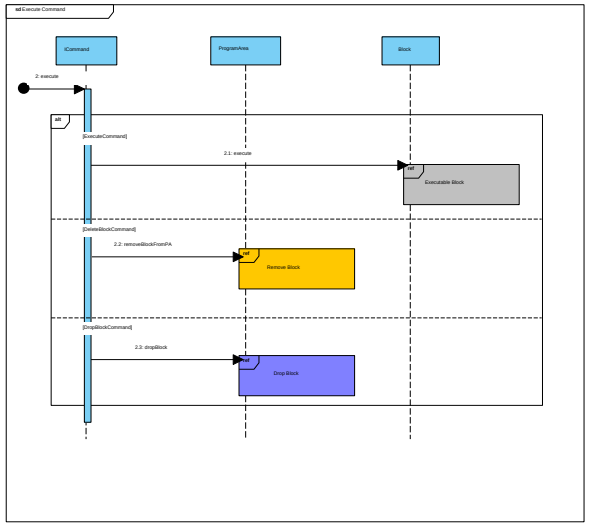
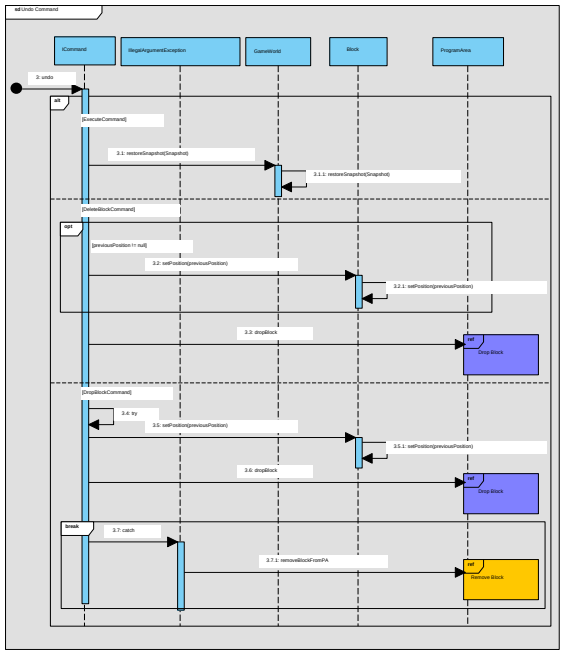
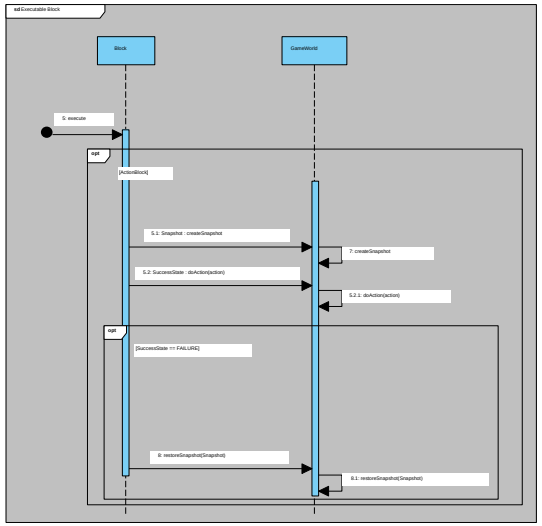
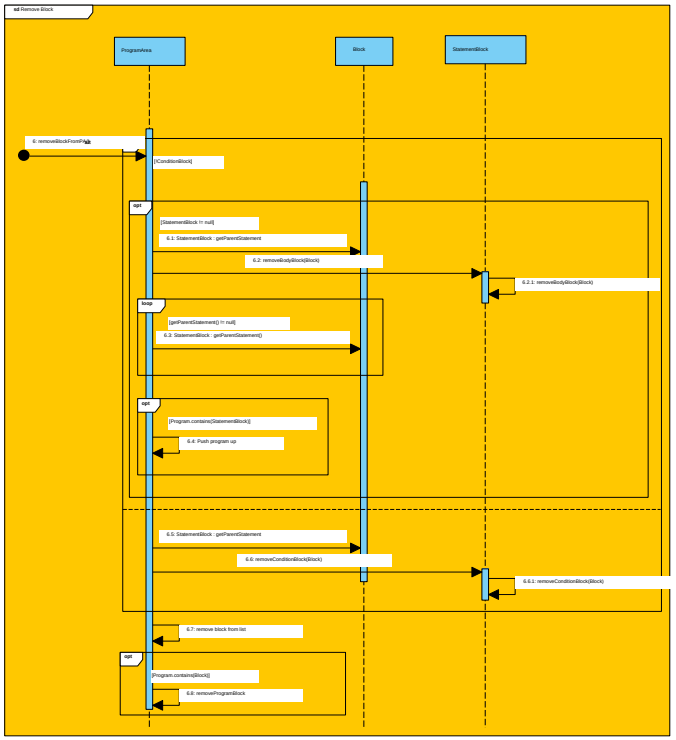
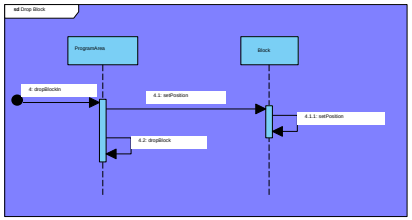

Actor
MyCanvasWindow
BlockGame
ProgramArea
ICommand
1: ProgramModification
1.1: instruction
alt
[instruction == executeNext/removeBlock/dropBlock]
opt
[instruction == executeAreas()]
1.1.1: getCurrentBlock
1.1.2: currentBlock
1.1.3: executeCommand
1.1.4: execute
ref
Execute Command
[instruction == undo]
opt
[undoStack.isEmpty()]
1.1.5: undo
ref
Undo Command
[instruction == redo]
opt
[redoStack.isEmpty()]
1.1.6: executeCommand()
1.1.7: execute
ref
Execute Command


ad Execute Command
ICommand
ProgramArea
Block
2: execute
alt
[ExecuteCommand]
2.1: execute
ref
Executable Block
[deleteBlockCommand]
2.2: removeBlockFromPA
ref
Remove Block
[dropBlockCommand]
2.3: dropBlock
ref
Drop Block


ad Undo Command
ICommand
IllegalArgumentException
GameWorld
Block
ProgramArea
2: undo
alt
[ExecuteCommand]
3.1: restoreSnapshot(Snapshot)
3.1.1: restoreSnapshot(Snapshot)
[deleteBlockCommand]
opt
[previousPosition != null]
3.2: setPosition(previousPosition)
3.2.1: setPosition(previousPosition)
3.3: dropBlock
ref
Drop Block
[dropBlockCommand]
3.4: try
3.5: setPosition(previousPosition)
3.5.1: setPosition(previousPosition)
3.6: dropBlock
ref
Drop Block
break
3.7: catch
3.7.1: removeBlockFromPA
ref
Remove Block


ad Executable Block
Block
GameWorld
5: execute
opt
[ActionBlock]
5.1: Snapshot : createSnapshot
7: createSnapshot
5.2: SuccessState : doAction(action)
5.2.1: doAction(action)
opt
[SuccessState == FAILURE]
8: restoreSnapshot(Snapshot)
8.1: restoreSnapshot(Snapshot)


ad Remove Block
ProgramArea
Block
StatementBlock
6: removeBlockFromPA
[ConditionBlock]
opt
[StatementBlock != null]
6.1: StatementBlock : getParentStatement
6.2: removeBodyBlock(Block)
6.2.1: removeBodyBlock(Block)
loop
[getParentStatement() != null]
6.3: StatementBlock : getParentStatement()
opt
[Program.contains(StatementBlock)]
6.4: Push program up
6.5: StatementBlock : getParentStatement
6.6: removeConditionBlock(Block)
6.6.1: removeConditionBlock(Block)
6.7: remove block from list
opt
[Program.contains(Block)]
6.8: removeProgramBlock


ad Drop Block
ProgramArea
Block
4: dropBlockIn
4.1: setPosition
4.1.1: setPosition
4.2: dropBlock